



Fiscal Year 2006
Vol. 4 No. 9

Fish Lines

Region 3 - Great Lakes/Big Rivers

Leadership in Conserving, Enhancing, and Restoring Aquatic Ecosystems

Partnerships, Accountability, and Outreach are Essential to the Fisheries Program

(See the "Feature Story" on Page 5)



-USFWS

Series of photos depicting partnerships, accountability, and outreach at the Iron River National Fish Hatchery (NFH) (Top row, Lt. to Rt.): Project Leader Dale Bast addresses visitors to the Iron River NFH Open House; Iron River NFH's Open House offered activities for all ages; Clark Bartelt (top) and Nikolas Gruenis chat with a visitor at the Trout Unlimited Expo; (Middle Row) Children enjoy a "Kids Fishing Day," with fish complements of the Iron River NFH; Biologist Angela Baran assists students with egg counting techniques at Ashland Elementary School; Iron River NFH displays their fish transport truck in the local Blueberry Festival parade; (Bottom Row) Duane Simpson, Experience Works employee, plants a flower bed around the entrance sign; The Reel Women group assists biologists with coaster brook trout spawning; Bayfield County Community Service worker assists with staining of the hatchery sign.

To view other issues of "Fish Lines", see our Regional website at: (<http://www.fws.gov/midwest/Fisheries/>)



Region 3 - Great Lakes/Big Rivers Region

The Mission of the U.S. Fish & Wildlife Service: working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people

Region 3 Focus Areas

1. Partnerships and Accountability

Partnerships are essential for effective fisheries conservation. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, these stakeholders combine efforts and expertise to tackle challenges facing fisheries conservation. The success of these partnerships will depend on strong, two-way communications and accountability.

2. Aquatic Species Conservation and Management

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts.

3. Aquatic Invasive Species

Aquatic invasive species are one of the most significant threats to fish and wildlife and their habitats. Local and regional economies are severely affected with control costs exceeding \$123 billion annually. The Fisheries Program has focused its efforts on preventing introductions of new aquatic invasive species, detecting and monitoring new and established invasives, controlling established invasives, providing coordination and technical assistance to organizations that respond to invasive species problems, and developing comprehensive, integrated plans to fight aquatic invasive species.

4. Public Use

As the population in the United States continues to grow, the potential for adverse impacts on aquatic resources, including habitat will increase. At the same time, demands for responsible, quality recreational fishing experiences will also increase. The Service has a long tradition of providing opportunities for public enjoyment of aquatic resources through recreational fishing, habitat restoration, and education programs and through mitigating impacts of Federal water projects. The Service also recognizes that some aquatic habitats have been irreversibly altered by human activity (i.e. - dam building). To compensate for these significant changes in habitat and lost fishing opportunities, managers often introduce non-native species when native species can no longer survive in the altered habitat.

5. Cooperation with Native Americans

Conserving this Nation's fish and other aquatic resources cannot be successful without the partnership of Tribes; they manage or influence some of the most important aquatic habitats both on and off reservations. In addition, the Federal government and the Service have distinct and unique obligations toward Tribes based on trust responsibility, treaty provisions, and statutory mandates. The Fisheries Program plays an important role in providing help and support to Tribes as they exercise their sovereignty in the management of their fish and wildlife resources on more than 55 million acres of Federal Indian trust land and in treaty reserved areas.

6. Leadership in Science and Technology

Science and technology form the foundation of successful fish and aquatic resource conservation and are used to structure and implement monitoring and evaluation programs that are critical to determine the success of management actions. The Service is committed to following established principles of sound science.

7. Aquatic Habitat Conservation and Management

Loss and alteration of aquatic habitats are principal factors in the decline of native fish and other aquatic resources and the loss of biodiversity. Seventy percent of the Nation's rivers have altered flows, and 50 percent of waterways fail to meet minimum biological criteria.

8. Workforce Management

The Fisheries Program relies on a broad range of professionals to accomplish its mission: biologists, managers, administrators, clerks, animal caretakers, and maintenance workers. Without their skills and dedication, the Fisheries Program cannot succeed. Employees must be trained, equipped and supported in order to perform their jobs safely, often under demanding environmental conditions, and to keep current with the constantly expanding science of fish and aquatic resource management and conservation.

The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public.

Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

Inside this Issue

Great Lakes - Big Rivers Region Fisheries Field Offices (Page 4)



- National Fish Hatcheries
- Sea Lamprey Control Stations
- Fishery Resources Offices
- Fish Health Center

Great Lakes - Big Rivers Regional Fisheries Program (Page 5)



Feature Story:

Partnerships, Accountability, and Outreach are Essential to the Fisheries Program

Partnerships and Accountability (Page 7)



Cedar River Mussel Partnership Efforts: The Next Step

Aquatic Species Conservation and Management (Page 10)



Biologists Help with Collaborative Pallid Sturgeon Sampling in Louisiana

Aquatic Invasive Species (Page 13)



2006 Goby Round-Up and Asian Carp Corral Shows Mixed Results

Public Use (Page 15)



Carterville FRO completes Annual Survey of Lake Greenwood

Cooperation with Native Americans (Page 20)



Shoreline Surveyed for Coaster Brook Trout

Leadership in Science and Technology (Page 22)



Elastomer Tag Update

Aquatic Habitat Conservation and Management (Page 24)



Carterville FRO Completes First Year of Sampling for Stone Dike Alteration Project

Workforce Management (Page 25)



Columbia FRO Biologists Participate in Pallid Sturgeon Training

Click here to visit our Fisheries Web Site

Great Lakes - Big Rivers Region Fisheries Field Offices

National Fish Hatcheries

The Region's National Fish Hatcheries primarily focus on native fish restoration/rehabilitation by stocking fish and eggs, such as pallid and lake sturgeon and by developing and maintaining brood stocks of selected fish strains, such as lake trout and brook trout. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, stock rainbow trout in fulfillment of federal mitigation obligations and assist with recovery of native mussels and other native aquatic species.

Sea Lamprey Control Stations

Sea Lamprey Control Stations assess and control sea lamprey populations throughout the Great Lakes. The U.S. Department of State and Canadian Department of Fisheries and Oceans fund this program through the Great Lakes Fishery Commission.

Fishery Resources Offices

Fishery Resources Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportu-

nities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities. In other Regions of the Service, FRO's are also referred to as Fish and Wildlife Management Assistance Offices.

Fish Health Center

The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state, tribal and private hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health throughout the region; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.

Great Lakes - Big Rivers Region Fisheries Field Offices



List of Acronyms

DNR- Department of Natural Resources
 FHC- Fish Health Center
 FRO- Fishery Resources Office
 NFH- National Fish Hatchery
 NWR- National Wildlife Refuge

Feature Story - Partnerships, Accountability, and Outreach are Essential to the Fisheries Program

The Great Lakes/Big Rivers Region's Fisheries Program partners with states, tribes, other Federal agencies, private organizations, public institutions, and citizens to conserve our valuable aquatic resources. Each Fisheries office in the region seeks ways to develop, maintain, and expand partnerships to fulfill its responsibility to the American people.

The Iron River National Fish Hatchery (NFH) is no exception. Recent partnering efforts have paid large dividends to the region's aquatic resources.

The hatchery has completed in 2005 five, two year Memorandum of Understanding (MOU) agreements with the Keweenaw Bay Indian Community's (KBIC) Natural Resources Department. Through the MOU, the KBIC hatched, isolated, and reared wild trout for incorporation into the region's hatchery brood stock programs. Wild eggs, collected and fertilized at various sites in the Upper Great Lakes, are held in isolation at a KBIC facility until health inspections clear the fish for transfer to Fish and Wildlife Service facilities. Because of this partnership, numerous wild year classes of trout brood stock and millions of trout eggs will benefit restoration programs for many years to come.

A grant agreement with the Federation of Fly Fishers allowed for the purchase of elastomer tagging supplies and equipment. Iron River NFH, Whittlesey Creek National Wildlife Refuge (NWR), and the Ashland Fishery Resources Office (FRO) tagged two strains of yearling coaster brook trout with elastomer material. Staff evaluated tag retention and released the fish into Whittlesey Creek, a tributary of Lake Superior. Trout Unlimited and Wisconsin Department of Natural Resources staff participated in the releases. This technique has been used extensively in the Western United States and brings the latest technology into practice as part of an on-going evaluation of coaster brook trout survival in Whittlesey Creek.

Many offices within the region have established Friends groups. The Friends of the Iron River National Fish Hatchery was established in the fall of 2005. Like many existing Friends groups, Iron River's support group is a non-profit, citizen-led organization dedicated to preserving and protecting public resources and providing support to the programs conducted by Fisheries field stations. Many activities would not get accomplished without the support and partnerships that Friends groups provide.

The Friends of the Iron River National Fish Hatchery has been instrumental in expanding public access to the 1,200 acre land base surrounding the hatchery. Several miles of hiking and cross country ski trails have been developed, along with trail maps and a field guide. The trails also allow access to the public for bird watching and hunting.



-USFWS

Members of the Friends of the Iron River National Fish Hatchery enjoy a hike on the hatchery property. Many of our friends spent countless hours developing trails for enjoyment by the public.

Partnerships can often provide labor at no cost to a Fisheries office, freeing up operational dollars to be spent on aquatic resource conservation programs. Many field offices use volunteers to complete all manner of tasks. The volunteers gain valuable work experience and a chance to work with the resource.

State and county agencies partner with field offices as well. A verbal agreement with the Bayfield County, Wisconsin, Sheriff's Department allows Iron River NFH to function as a community service worksite. The hatchery benefits from the free labor while Bayfield County has an additional work site for individuals to complete their required hours of work.

A State of Wisconsin program called Experience Works has allowed Iron River NFH to provide employment and training opportunities to low income senior citizens. Funding is provided by the State of Wisconsin Senior's Program. Participants gain additional income, skills for future re-employment, and the hatchery saves dollars to put back into aquatic resource management.

All Fisheries offices in the Great Lakes/Big Rivers Region are extremely active in outreach. Holding open houses, attending public meetings, hosting fishing days, attending expos and trade shows, and giving tours are just some of the examples of what stations do to get their message out.

Iron River NFH continually works to keep the public informed. Numerous tour groups visit the hatchery. Schools also bring students to the hatchery for educational opportunities, hands-on work, and tours. Biologists go to local schools to give talks and hold classroom events that give students a chance to learn and experience what we do.



-USFWS

Biologist Kurt Schilling talks with visitors at the Iron River National Fish Hatchery.

Fish stocking events are occasionally coordinated with local schools, individuals, and groups giving them the chance to help place fish into a real stream. The Reel Women, a local angling group, annually assists the hatchery personnel spawn fish in the fall. It gives basic experience to interested anglers and develops local support for our programs.

The hatchery staff attends several expos annually. Information booths and fish displays are set up that allow the visiting public to be informed of program activities. At a recent event, the hatchery donated the chance to experience a day of hatchery work to two different attendees. The two winners will be coming this fall to participate in fish spawning and fish production activities, and get the opportunity to interact with hatchery biologists at a hosted luncheon. In addition, an annual open house is held at the hatchery that brings the public on-site where direct program activities can be explained and demonstrated.

The hatchery works at an annual kids fishing day held at the Upper Great Lakes Visitor Center near Ashland, Wisconsin. The National Park Service, Forest Service, Whittlesey Creek NWR, Ashland FRO, Wisconsin Historical Society, University of Wisconsin Extension, Trout Unlimited, and Friends of the Center Alliance are also represented. The event features fishing for stocked trout, clinics, lectures, informational booths, and other activities to keep everyone active, informed, and involved.

Fish and Wildlife Service employees are public servants. We establish programs, fulfill legislative mandates, and conserve aquatic resources. The American public expects us to do our job well. We must listen to their needs and balance those needs with sound scientific principles. We must explain what we are doing and why. This could not be done without outreach which keeps the public informed, and makes fulfilling our mission much easier because we can seek feedback and adjust our operations to accomplish what the public desires.

Kurt Schilling, Iron River NFH

For additional information about visitation and outreach opportunities at the Iron River National Fish Hatchery, contact the hatchery at:

Phone 715/372-8510

or **visit their website** at:

<http://www.fws.gov/midwest/ironriver/>

Partnerships and Accountability

Cedar River Mussel Partnership Efforts: The Next Step

Genoa National Fish Hatchery (NFH) began a mussel restoration partnership with the Hartman Reserve Nature Center in Waterloo, Iowa, in April to educate the public and restore native freshwater mussels to the Upper Cedar River. The first step of this program was taken when 100 walleye were inoculated with glochidia, or larval mussels, from black sandshell mussels and 200 largemouth bass were inoculated with glochidia from the plain pocketbook mussel. These inoculations are part of the natural life cycle of freshwater mussels, and are estimated to have added 32,300 black sandshell juveniles and 99,640 plain pocketbook juveniles to the Cedar River.

The second step of this program is to attempt cage production of plain pocketbook sub-adults in George Wyth Lake in George Wyth State Park, across the Cedar River from Hartman Reserve. Two floating racks were placed in George Wyth Lake on June 1. Each rack contained four cages that each held approximately 36 inoculated largemouth bass. The racks were anchored away from the shore where we hope that juvenile plain pocketbooks will settle in the bottom of the cages and begin to grow into sub-adults. Any mussels recovered from the cages will be marked and released into the Cedar River this fall. Stay tuned for then next installment of *Mussel News from the Cedar River*.

Tony Brady, Genoa NFH



-USFWS

Staff from Genoa National Fish Hatchery and Hartman Reserve Nature Center in Waterloo, Iowa, place fish inoculated with native mussels into cages at George Wyth State Park.

Missouri Department of Conservation Gets a Hand with Fish Health Inspection

During the week of June 26, Ken Phillips from the La Crosse Fish Health Center (FHC) traveled to Warsaw, Missouri, to provide fish health inspection assistance and training to the new Missouri Department of Conservation (MDC) fish health pathologist. A fish health inspection was conducted at Bennett Spring State Fish Hatchery, including determining fish lots to be sampled and the collection of tissue samples from two groups of rainbow trout. Tissue samples were collected for bacterial, viral, and parasitic pathogens. As part of an agreement between the two agencies, the La Crosse FHC has been providing assistance with fish health inspections to MDC during transition to a new pathologist during FY 2006.

Ken Phillips, La Crosse FHC

Friends of Pendills Creek Hatchery conduct their First Work Bee

The Friends of Pendills Creek Hatchery were busy the first weekend in June with a work bee that contributed to the group's long-term goal of improving the hatchery's public access area to Lake Superior. This site, known for its rustic natural beauty, recently had a major face lift when hatchery staff and Friends group volunteers received funding through the Coastal Program to replace an unsafe, deteriorated foot bridge that crossed the hatchery effluent channel with a new fish-friendly, maintenance-free culvert. This was the initial phase of work. Now the Friends group is in the process of cleaning up an area east of the parking lot that will be a picnic area. So far on this first work bee, several old fallen trees were removed and cleaned up. This will be a major volunteer project but our Friends are willing to put in the time and effort to see their dreams materialize. This hatchery public access site is the second most visited site along Lake Shore Drive, with annual public use exceeding 160,000 hours.

Curt Friez, Pendills Creek NFH

River Resources Action Team Floats down the Upper Mississippi River

Project Leader Rob Simmonds of the Carterville Fishery Resources Office (FRO) participated in an annual boat trip down the Mississippi River in the St. Louis District of the U.S. Army Corps of Engineers. The purpose of the trip was for the River Resources Action Team (RRAT) to see first hand and discuss both

navigation and restoration projects and issues. The RRAT is made up of a number of state and Federal agencies who regularly gather to work in partnership to creatively address navigation and natural resources issues. It not only brings together different agencies, but also different disciplines within those agencies. It is an opportunity for engineers, biologists, and others to work collectively to come up with solutions. These types of interactions have been successful in developing innovative solutions that have met navigation needs and improved habitat for fish and other aquatic organisms. You just never know when the right people will be floating down the river kicking around issues and come up with the next “out of the box” idea.

Rob Simmonds, Carterville FRO

River Management Society Symposium and Missouri River Natural Resources Conference

Biologists Jennifer Johnson and Jeff Finley and Branch Chief of Corps Operations Wyatt Doyle attended the 2006 River Management Society Symposium and Missouri River Natural Resources Conference in South Sioux City, Nebraska. The conference theme, “Collaborating in the Current,” provided a forum to exchange information, share perspectives, and solve problems.

Johnson presented a poster titled *Reproductive Development of Missouri River Chubs in Relation to Environmental Variables* and *Reproductive Development of the Sicklefins Chub (*Macrhybopsis meeki*) in the Lower Missouri River*. She also attended presentations on biology, habitat, and environmental assessment and monitoring programs. The poster presentation provided a valuable

opportunity to interact with other graduate students as well as scientists and decision makers from Federal and state agencies, to answer questions regarding Johnson’s research, and provide information to interested parties.

Finley presented a session on the push trawl developed at Columbia FRO and implications for collecting fish in shallow water habitats. The idea of pushing a net ahead of the boat intrigued many attendees allowing for further discussion for using this setup in other areas of the Missouri River and nationwide. The conference was attended by many cooperators, and meetings concerning Missouri River mitigation and U.S. Army Corps of Engineers funded projects were held simultaneously. Doyle and Finley represented the Columbia FRO at these meetings to resolve issues and discuss future monitoring efforts along the river.

Jennifer Johnson and Jeff Finley, Columbia FRO



Columbia FRO Partners with Bass Pro Shops

Have you ever wondered where the fish that inhabit the tanks of mega-outdoor stores such as Bass Pro Shops come from? Wonder no more; the Fish and Wildlife Service is responsible for many of those very fish! In early May, biologists Corey Lee, Geno Adams, and Cliff Wilson, along with science aid Breanna Hicks electrofished specimens for Bass Pro Shops in the Osage River in Central Missouri. Bass Pro Shop employees were present to determine fish species and sizes needed for their

living exhibits. Fish captured included sauger, crappie, channel catfish, redhorse, and largemouth bass. The most interesting catches of the day included multiple 10+ pound hybrid white bass/striped bass.

Captured fish were transported to the Bass Pro Shops headquarters in Springfield, Missouri, where they were quarantined and treated for infections and disease. Holding fish also allows them to acclimate to aquarium life, aquarium feeding, and human activities that will take place in a retail store setting. Once individual fish are cleared by Bass Pro Shops employees, they are dispersed to stores throughout the United States. These aquariums allow the general public a chance to view species they do not typically see. It also serves as an educational tool allowing for programs dealing with fish feeding and fish behavior as well as invasive species identification. Strengthening the partnership with Bass Pro Shops allows for yet another avenue for the Fish and Wildlife Service message to reach the general public.

Geno Adams, Columbia FRO



-USFWS

Columbia Fishery Resources Office and Bass Pro Shops staff collect fish at a low head dam on the Osage River. The fish will be used for living exhibits at the company’s retail stores.

Mississippi Interstate Cooperative Resource Association Holds Executive Board Meeting

Project Leader Tracy Hill and Branch Chief of Corps Operations Wyatt Doyle attended the spring meeting of the Mississippi Interstate Cooperative Resource Association (MICRA) Executive Board in Vicksburg, Mississippi, on April 11. The purpose for the meeting was to review the activities of the various committees of MICRA (Paddlefish, Gamefish, and Mussel) and plot the group's direction for the coming year. In addition to establishing and approving a working budget for the committee's activities during Fiscal Year 2006 (October 1, 2005 – September 30, 2006), the meeting provided an excellent opportunity for the Executive Board to address issues related to Asian carp and to be informed about the National Fish Habitat Initiative. *Tracy Hill, Columbia FRO*

Fisheries Program Represented at International Conference on Rivers and Civilization

The 3rd International Conference on Rivers and Civilization convened June 25-28 within a stone's throw of the Upper Mississippi River in La Crosse, Wisconsin. Hosted by the University of Wisconsin-La Crosse, it was the first in this series of international multidisciplinary conferences on large river basins to be held in North America; preceding conferences were hosted by Dubna University along the Volga River in Russia (2002) and Assuit University along the Nile River in Egypt (2003). Given the proximity of several Fisheries program field offices to La Crosse and the work that these offices perform on “old-

man river” and many of its tributaries, participation by representatives from the La Crosse FRO, Columbia FRO, and Genoa NFH was a natural fit.

The La Crosse FRO made arrangements for space in the conference exhibition hall where staff displayed a variety of informational materials from each of these offices, providing the international audience with a region-wide perspective of Fisheries program activities. Participation in the conference also gave staff a better understanding of current challenges facing many major river basins around the globe, how similar challenges have affected past civilizations, and strategies needed to reverse the continued decline of these rivers and the diverse cultures and societies they support.

Genoa NFH also hosted a tour of the station's facilities and programs. Those on the tour, facilitated by the Wisconsin Department of Natural Resources (DNR), were visiting international scientists, academics, and regional natural resource agency personnel. The group was presented an overview of Genoa NFH's restoration and recovery programs including lake sturgeon restoration on the Mississippi and Missouri rivers and freshwater mussel recovery efforts across the Upper Midwest. The information exchange between Fish and Wildlife Service staff and visitors (some of whom came from as far away as China, Australia, and the United Kingdom) was very lively and informative for all involved.

Mark Steingraeber, La Crosse FRO

Roger Gordon, Genoa NFH



-USFWS

Project Leader Pam Thiel (far right) speaks to a visitor to the La Crosse Fishery Resources Office exhibition booth during the 3rd International Conference on Rivers and Civilization held in La Crosse, Wisconsin.

Binational Program Lake Superior Work Group/Committees

Ashland FRO staff attended the Binational Program's Lake Superior Work Group (LSWG) and Committees meeting in Duluth, Minnesota. Basin-wide natural resource coordination took place in the areas of aquatics, chemical, habitat, wildlife, and communications. Work plans for 2006-2007 were discussed and updated. Updates and discussion took place on recent work on the status of Areas of Concern, U.S. Great Lakes Regional Collaboration, and binational cooperative monitoring. Preparations were made for upcoming meetings with the Task Force, Forum, State of Lake Superior Conference 2007, and 2006 State of the Lakes Ecosystem Conference. The U.S. Environmental Protection Agency's research vessel the *Lake Guardian* was in port for tours and the group learned about its contributions to monitoring and protection of the Great Lakes. The LSWG also toured the Hartley Nature Center, which has used state of the art “green” building techniques in most aspects of construction and maintenance of the grounds.

Ted Koehler, Ashland FRO

Aquatic Species Conservation and Management

Biologists Help with Collaborative Pallid Sturgeon Sampling in Louisiana

Pallid sturgeon range from the Yellowstone River in Montana to the Mississippi River in Louisiana; as such, they exhibit a range of morphometric differences. Biologists who have never witnessed these variations first hand have long debated the differences. For several years, biologists on the Atchafalaya River in Louisiana have been reporting extremely high catches of pallid and hybrid pallid sturgeon below a control structure dividing the Mississippi and Atchafalaya rivers.

Wyatt Doyle and Tracy Hill of the Columbia FRO visited with biologists on the Lower Mississippi and Atchafalaya rivers this spring to verify whether pure pallid sturgeon exhibited the same traits as those found in the Lower Missouri River, and the extent to which hybridization was occurring. Local biologists coordinated with the U.S. Army Corps of Engineers to manipulate water flows below the old river control structure that cause pallid sturgeon to move closer. When the Corps turned the water off, commercial fishermen were ready to lay down nets to intercept the fish moving back from the structure, targeting a 100-foot deep hole. During the April sampling, biologists captured, tagged, and released 20 pallid sturgeons and hybrids.

Having worked on pallid sturgeon issues on the Lower Missouri River for over four years and seen dozens of individuals and their hybrids on that system, Doyle conferred with State of Louisiana biologist Bobby Reed and Fish and Wildlife Service biologists Paul Hartfield (Ecological Services) and

Jan Dean (Natchitoches NFH) about similarities among their fish. Geneticists have cautioned that the fish appear different genetically and that mixed stockings should not occur. Despite some disagreement on the magnitude of hybridization, there was a consensus among the biologists that the purest pallid sturgeon looked very similar to those in the Missouri River. Efforts are now underway to increase funding for the area below the structure, to get a comprehensive mark and recapture study funded. Additional efforts have been made to spawn the fish and raise them at Neosho NFH in Missouri so that researchers can perform bioenergetics studies comparing pallid sturgeon from different regions.

Wyatt Doyle, Columbia FRO



-USFWS
(Lt. to Rt.) Biologists Paul Hartfield (Ecological Services), Wyatt Doyle (Columbia Fishery Resources Office), and Bobby Reed (State of Louisiana) verify a pallid sturgeon from the Atchafalaya River.

Fish Disease of International Concern Found in Lake Erie

Viral Hemorrhagic Septicemia Virus (VHSV), a fish disease of international concern that was first reported in the Great Lakes basin (Lake Ontario and Lake St. Claire) in 2005, was identified as the cause of significant freshwater drum mortality in Western Lake

Erie in April. Following this initial event, a significant kill of yellow perch in the central basin of Lake Erie was reported to the Ohio Division of Wildlife (DOW) in late May. After preliminary results indicated that VHSV was also responsible for the yellow perch kill, the La Crosse FHC and Ohio DOW coordinated efforts to sample other species from Ohio waters of Lake Erie in an effort to determine whether other species carry the virus.

On May 31 and June 1, staff from the La Crosse FHC worked with fisheries crews from the Ohio DOW to conduct surveillance for VHSV. A total of 321 fish, representing 11 species, were examined from the central and western basins of Lake Erie in Ohio, with results pending. In addition to screening for VHSV, samples were also collected to screen for other viral and bacterial pathogens as part of the National Wild Fish Health Survey.

Ken Phillips, La Crosse FHC



-USFWS
La Crosse Fish Health Center biologist Ken Phillips samples Lake Erie walleye for Viral Hemorrhagic Septicemia Virus.

Fish Kill on the Illinois River

The La Crosse FHC was contacted by the Illinois DNR regarding a large kill of invasive silver carp on the Illinois River. On June 6, Eric Leis and Ryan Katona traveled to Jake Wolf Memorial Fish Hatchery (MFH) to screen

samples of silver carp for any bacterial or viral pathogens which may have been causing the fish kill. The Spring Viremia of Carp Virus (SVCV) was considered to be a possible culprit. SVCV has been known to cause fish kills, although primarily in young-of-the-year carp. The virus is also a cause of concern because if it were to be found it may have trade implications in the aquaculture industry; however, the results from the laboratory work did not detect SVCV. A reporter from The Jim Lehr Report and ABC news affiliate HOI 19 were present at Jake Wolf MFH to ask questions regarding the incident.

Eric Leis, La Crosse FHC

Fort McCoy Fish Health Assessment Conducted

The La Crosse FHC has been assisting with a fish health assessment at Fort McCoy, a 60,000 acre military installation in Southwestern Wisconsin. FHC staff have been working with biologist John Noble from Fort McCoy, and base staff plan to remove a small dam and restore the stream to a cold water trout habitat. This would kill all the warm water species living in the current impoundment. Fort employees plan to net warm water species and transfer them to other lakes on the base. Before this transfer occurs, a fish health assessment was performed to make certain there were no harmful fish pathogens present.

FHC staff examined almost 200 fish from four different lakes and impoundments over a span of three months. The main pathogen of concern was Largemouth Bass Virus, which only affects largemouth bass but is carried by most members of the sunfish family and some members of the perch family.

The fish were also screened for other viruses and bacterial pathogens. All samples came back negative for viral and bacterial pathogens.

Corey Puzach, La Crosse FHC

Coaster Abundance Climbs at Isle Royale National Park

Since 1993, Ashland FRO has provided management assistance to Michigan DNR and Isle Royale National Park to protect and stabilize self-sustaining coaster brook trout populations and rehabilitate depleted populations at the park. Using data gathered and analyzed by Ashland FRO, the state and National Park Service (NPS) have implemented various management actions over the years, including size and bag limit, seasonal harvest regulations, gear and bait changes, and educational programs. As a result of low or declining abundance over the last six years, both agencies implemented "catch and release only" regulations for brook trout at the island in 2005. While it is too early to determine whether these management actions will increase coaster abundance, results from the June 2006 survey were very promising.

Jessica Krajniak of the Ashland FRO and Jay Glase of the NPS were busy netting coasters during recent electrofishing surveys in Tobin Harbor. They caught 10 fish per hour, up significantly from the six-year average of three fish per hour. Particularly promising were the distribution of coasters throughout Tobin Harbor as they were caught in 13 of 16 sampling stations and the abundance of one- and two-year old fish that will mature and spawn in a few years.

The work was conducted in cooperation with the National Park Service and Michigan DNR and

was the seventh consecutive spring coaster index survey in Tobin Harbor. Partners also surveyed Siskiwit Bay, where a total of 430,000 brook trout reared at Iron River and Genoa NFH's have been stocked since 1999. Two coasters were captured under difficult survey conditions. One hatchery-reared coaster brook trout (stocked in 2004) and a wild (unclipped) coaster brook trout were captured and released. Specific objectives of the spring work are to determine the relative abundance of wild and stocked coasters, to describe population demographics, to mark and recapture fish for population estimates and to determine of growth and movement, and to collect tissue samples for genetic analysis.

Henry Quinlan, Ashland FRO

Fish Relocated at Shacte Creek

Frank Stone of the Ashland FRO provided technical assistance to the staff of the Iron River NFH during their effort to capture, via back pack shocking, and transfer wild trout from Northern Wisconsin's Shacte Creek. This collection effort targeted brook trout found within a ¾-mile section of the creek up-stream of the hatchery. As a result of this effort, 70 brook trout were moved to a lower section of the creek below the dam. Shacte Creek is the primary source of water for the hatchery, making it imperative to maintain wild fish stocks to a minimum to reduce the potential for transferring disease pathogens to the hatchery fish.

Frank Stone, Ashland FRO

Genoa Does the Wild Thing! Hatchery Plays Role in Enhancing Brood Stock Program

Captive coaster brook trout populations received a shot in the arm this spring when fish collected from wild parents off the coast of Isle Royale National Park received a clean bill of health at the Genoa NFH, and were then sent to the Iron River NFH. The fish were first collected as eggs by a concerted effort from Wisconsin facilities at Genoa NFH, Iron River NFH, and Ashland FRO in the fall of 2005. Eggs were sent to the Wild Fish Isolation Facility at Genoa NFH where they endured three fish health exams and grew to 10-inch brook trout, ready to spawn this fall. Genoa NFH's warm water temperature also has the added benefit of growing the fish faster, which allows them to be incorporated into existing spawning stocks sooner. This will assist in restoration of this valuable species by increasing the genetic diversity of the existing brood stock.

Capturing fish from wild parents also reduces the chance of loss of genetic material that may occur over time in a closed, captive population. Currently there are two strains of coaster brook trout used in Federal restoration programs, both originating off the shores of Isle Royale. Brood stock management plans for both strains call for intermittent infusions of wild fish into existing captive brood populations held at Iron River NFH over 10 years. Genoa NFH's role in the management and health of captive populations has allowed Federal brood stock facilities to bolster stocks of the two strains of coaster brook trout and one valuable strain of lake trout in the past four years. Brood stock management is an important

component in ongoing Great Lakes fisheries restoration efforts. Proper management of brood stock groups will allow released fish to have the best chance to survive and contribute to efforts to rehabilitate populations.

Doug Aloisi, Genoa NFH



-USFWS

This coaster brook trout was reared in Genoa National Fish Hatchery's (NFH) isolation facility and will eventually be used as brood stock at the Iron River NFH.

2006 Walleye Crop Yields Excellent Returns

In order to support ongoing endangered mussel propagation programs and cooperative assistance programs with Native American tribes and state partners in Region 3, Genoa NFH stocked 4 hatchery ponds with 350,000 walleye fry in early May. The fry came from the hatchery's April spawning operation carried out on the Upper Mississippi River. After 44 days, the walleye had grown to approximately 1.5 inches. The ponds were drained in mid-June with a total harvest of 194,629 fish, indicating a 56 percent survival rate.

Approximately 88,000 walleyes were stocked in Iowa waters, 60,000 were stocked in Legend Lake of the Menominee Indian Reservation, and 5,000 were provided to the Upper Mississippi River Science Center for research. The remaining fish (47,000) were retained on the station to support

requests for advanced fingerlings (6 inch fish) for several tribal governments and to provide host fish for endangered Higgins' eye pearl mussel culture as well as for other state listed mussel species.

Nick Starzl, Genoa NFH



-USFWS

A culture pond is being drained into a collection basin. A biologist "herds" the last walleye fingerlings out of the pond.

Pallid Sturgeon Culture

The last of this year's pallid sturgeon production fish were stocked by Neosho NFH into the Missouri River. Soon after the stocking, Project Leader David Hendrix picked up pallid sturgeon eggs from Gavins Point NFH, which will become next year's production. Assistant Manager Roderick May and biologist Ralph Simmons assisted the Gavins Point NFH crew with spawning operations.

Roderick May, Neosho NFH

Rainbow Trout Mitigation

Neosho NFH stocked 17,115 rainbow trout into Lake Taneycomo during June as part of a mitigation plan. Several stockings were made into local waters also, including some 14 inch fish that were left over from a derby.

Roderick May, Neosho NFH

Aquatic Invasive Species

2006 Goby Round-Up and Asian Carp Corral Shows Mixed Results

Sunny skies and mild temperatures greeted La Crosse FRO staff Pam Thiel, Scott Yess, Mark Steingraeber, Dave Wedan, Heidi Keuler, Pat Polzin, Jeff Dahl, and volunteer Don Schroeder during the *2006 Annual Goby Round-Up and Asian Carp Corral*. From June 13 to 16, 14 crews—including staff from 8 Fish and Wildlife Service offices, Illinois-Indiana Sea Grant, Cook County Forest Preserve, U.S. Army, Illinois DNR, U.S. Army Corps of Engineers, Shedd Aquarium, Field Museum, U.S. Geological Survey, Illinois Natural History Survey, Southern Illinois University, Joliet Community College, Discovery World from Milwaukee, Wisconsin, and The Nature Conservancy—sampled over 180 miles of the Illinois Waterway from Blue Island to Havana to determine the downstream leading edge and abundance of invasive round goby and the upstream distribution of the bighead and silver carp, and collect fish health samples of carp. These samples will determine whether disease pathogens such as the non-native Spring Viremia of Carp Virus (SVCV) exist in the different carp species. The SVCV virus is common in Europe and the Middle East. Although it poses no threat to humans, it is highly contagious to carp, goldfish, koi, and minnows and could cause locally significant mortalities in these fish populations.

Since 2002, an electrical fish barrier in the Chicago Ship and Sanitary Canal near Romeoville, Illinois, has prevented and slowed the spread of invasive aquatic

species. The electrodes in the current barrier are starting to wear out due to corrosion and a new, more powerful barrier just downstream from the first barrier is able to repel small fish more effectively than the old barrier. The new barrier will also have a longer lifespan. Currently, the new barrier is being tested for commercial barge and recreational boater safety before it is fully operational.

Results of the 2006 survey indicate that the distribution of the round goby and Asian carp species (silver and bighead carp) did not advance downstream or upstream of last year's location; however, abundance of round goby seemed to decrease from last year in the stretch of the Chicago Ship and Sanitary Canal from Lockport to Brandon Road. Additionally, abundance of the bighead and silver carp has increased in the Starved Rock State Park to Illinois River Mile 223 for the past four years. The crew netted 100 bighead and 20 silver carp and collected 8 silvers that jumped into the boat. Several nets were so loaded with fish that they floated downstream and had to be retrieved elsewhere.

Currently the round goby's leading edge is below the Peoria Lock and Dam (nearly 170 miles from Lake Michigan and half the distance to the Mississippi River). The most upstream collection of a bighead carp is below Brandon Road Lock and Dam at River Mile 275 (21 miles below the electrical barrier and about 50 miles from Lake Michigan).

Heidi Keuler, La Crosse FRO
Eric Leis, La Crosse FHC



-USFWS

Hundreds of invasive silver carp leap into the air on the Illinois River after a paddlewheeler passes by.

Asian Carp Live and Die on the Crab Orchard NWR

Crab Orchard National Wildlife Refuge (NWR) biologist Mike Brown and Carterville FRO biologist Greg Conover investigated reports of invasive Asian carp in the tailwaters below Crab Orchard Lake in Southern Illinois. Bowfishers had reported harvesting bighead carp from Crab Orchard Creek just below the lake's spillway. The biologists confirmed that bighead and silver carps were present in the creek and abundant at the base of the spillway. Several fish were crowded on a rock ledge several feet above the bottom of the spillway and could be seen swimming and jumping in attempt to move further up the rock spillway. The fish were likely migrants from the Mississippi River, moving up tributaries until their movements were blocked by the lake's spillway. A few days later water stopped flowing over the spillway and fish became trapped in the plunge pool at the base of the spillway. Thousands of fish died as a result of depleted oxygen levels in the pool. Most fish appeared to be common carp, bighead carp, and silver carp. The three species were estimated to comprise more than 90 percent of the fish. Some live Asian carps could still be seen swimming in the plunge pool.

Greg Conover, Carterville FRO

Bowhunting for Asian carps – Is it catching on?

Concerns about the impacts of aquatic invasive species, particularly four species of Asian carps and the common carp, have led to a unique partnership. The Nativefish Conservancy has developed “Carpbusters,” a program designed to get sportsmen involved in the removal of invasive fish from the wild. Individual Carpbusters events have resulted in 10,000 or more pounds of harvested carps. Carpbusters has partnered with the Campbell Outdoor Challenge TV Show to televise bowfishing tournaments for carp. Campbell Outdoor Challenge filmed its first bowfishing event in early June 2006, a four-day tournament at Kentucky and Barkley lakes in Kentucky. Campbell Outdoor Challenge will air three 30-minute programs about the tournament on regional cable stations and nationally on two satellite networks, The Sportsman’s Channel and The Men’s Channel. An interview with biologist Greg Conover of the Carterville FRO about Asian carps will be included in the three programs. Carterville FRO has also worked closely with the Campbell Outdoor Challenge to include informational material about Asian carps throughout the three programs. Campbell Outdoor Challenge may televise as many as six bowfishing tournaments during 2007.

Greg Conover, Carterville FRO



-USFWS

A bowfisher offloads one of the invasive bighead carp from a recent “hunt” in Kentucky. With about 10,000 pounds of fish harvested during bowfishing tournaments, this might prove to be an effective tool to address the growing number of Asian carps in the wild.

Task Force Briefed on Asian Carp Management Plan; Provisional Approval Given for Public Review

Carterville FRO biologist Greg Conover attended the Aquatic Nuisance Species Task Force meeting in May to brief task force members about the draft *Management and Control Plan for Asian Carps in the United States* and to request approval of the plan for public review and comment. The draft plan, developed by the Asian Carp Working Group, was submitted to the task force by the Region 3 Fisheries program in April 2006. The collaborative process used to develop the plan in partnership with the Asian Carp Working Group was highly successful and nearly all issues were resolved. The draft plan identifies 7 goals, 46 strategies, and 129 recommendations to protect the nation’s natural resources. Although this collaborative process was highly successful, the working group did not reach agreement on recommendations regarding the use of triploid (sterile) black carp on aquaculture facilities and commercial, domestic transport of live farm-raised bighead and grass carps. The task

force granted provisional approval to release the draft plan following an additional review period. The Fish and Wildlife Service began addressing Task Force comments on the draft plan in July in preparation for the public review period.
Greg Conover, Carterville FRO

Sea Lamprey Control Program Destroys Lampreys to Save Lake Trout

From April to July 2006, the Fish and Wildlife Service’s Sea Lamprey Control program treated 21 Great Lakes streams (3 in Lake Erie, 1 in Lake Huron, 10 in Lake Michigan, and 7 in Lake Superior) with lampricide to eliminate larval invasive sea lamprey populations. These treatments destroyed an estimated 1,410,000 sea lampreys, including about 54,200 that would have metamorphosed to the parasitic phase in 2006 and entered the Great Lakes. There, each parasitic phase sea lamprey would have been capable of killing upwards of 40 pounds of lake trout and salmon during its year long life in the lakes. The Fish and Wildlife Service’s Sea Lamprey Control program is conducted under contract with the Great Lakes Fishery Commission. The successful control program continues to ensure sport fish rehabilitation in the Great Lakes and protects a fishery valued at more than \$4 billion.

*Sea Lamprey Control staff,
Marquette Biological Station*

Public Use

Carterville FRO completes Annual Survey of Lake Greenwood

Carterville FRO biologist Colby Wrasse and technician Adam McDaniel completed the annual fishery survey at Crane Naval Support Activity (NSA), a large military establishment that contains a vast wealth of natural resources including several small ponds and a 800-acre reservoir, Lake Greenwood, which provides a variety of sport fishing opportunities to base employees. As in past years, Carterville FRO was assisted by Crane natural resources manager Steve Andrews and Scott Montgomery, a base employee and avid bass angler.

Staff used nighttime electrofishing and gill nets to survey the Lake Greenwood fishery. The survey indicated that Lake Greenwood has a dense population of largemouth bass and also contains good numbers of quality sized bluegill. Other species that call the lake home include walleye, channel catfish, crappie, white bass, and yellow perch. Data gathered from this spring's survey will be used to analyze trends in the fish community and then formulate management recommendations.

Colby Wrasse, Carterville FRO



-USFWS

Adam McDaniel of the Carterville Fishery Resources Office displays a channel catfish collected during an annual fish survey on Lake Greenwood at Crane Naval Support Activity

Carterville FRO Provides Management Assistance to Scott Air Force Base

Carterville FRO biologists Colby Wrasse and Nate Caswell completed the annual fishery survey for Scott Air Force Base (AFB) in May. This military base, located in Southwestern Illinois, is home to two small impoundments that provide quality sport fishing for military personnel and civilian base employees. They used electrofishing to sample fish and measured water quality to assess the status of the base's fishery. The larger impoundment was found to contain a healthy population of one- to two-pound largemouth bass, large sunfish, and some hefty channel catfish. Many anglers and other interested base employees came out to the lake to watch the electrofishing survey, ask questions and voice concerns.

The input provided by those who actually use the fishery is a crucial component in determining how the fishery should be managed. The day also gave Carterville FRO biologists and the Scott AFB natural resources manager the chance to informally discuss current issues and brainstorm on plans for the future. The data gathered from this survey will be used by Carterville FRO to make management recommendations regarding fish stocking, fishing regulations, and watershed manipulations. Carterville FRO has performed this service for Scott AFB for several years and this relationship has led to quality sport fishing that has been enjoyed by thousands of anglers. With wise resource management, Scott AFB should continue to be a good place to wet a line for years to come.

Colby Wrasse, Carterville FRO

Partners Pull Together For Kid's Fishing Derby at Crab Orchard NWR

Carterville FRO, Illinois DNR, and numerous other partners assisted Crab Orchard NWR with the 33rd Annual Kid's Fishing Derby at Crab Orchard Lake. The family-oriented event saw greater success than ever, with 326 children registering and more than 50 volunteers assisting. More than 500 people were estimated to have attended. Carterville FRO stocked a 1,000 gallon water tank with fish captured from Crab Orchard Lake. The tank was also "stocked" with magnetic fish for the youngest anglers to catch. The "Toddler Tank," as it is called, is always a crowd favorite. Carterville FRO and Illinois DNR biologists also gave an electrofishing demonstration following the fishing derby.

Greg Conover, Carterville FRO



-USFWS

Youngsters enjoy "fishing" for magnetic fish in the toddler tank at the Crab Orchard National Wildlife Refuge Lake Kid's Fishing Derby.

Environmental Awareness Promoted at River Days

Staff from the La Crosse FRO participated in Upper Mississippi River Education Days at the Trempealeau NWR in Trempealeau, Wisconsin, and at the Upper Mississippi River Lock and Dam 9 near Lynxville, Wisconsin. These annual events are organized by local offices of the National Wildlife Refuge System in Minnesota, Wisconsin, and Iowa and the U.S. Army Corps of Engineers St. Paul District. It is designed to inform 5th and 6th-grade students from invited schools about a diverse range of Upper Mississippi River topics including aspects of cultural and natural history, physical and biological science, natural resource management, and current events to promote awareness of this resource in a riverside classroom that is "big-as-all outdoors."

Students who visited the La Crosse FRO aquatic invasive species "tail-gate pavilion" at the Trempealeau event came from as far away as Eau Claire, Wisconsin. The following week at the Lynxville event, students who saw a La Crosse FRO electrofishing boat in action along the river bank came from as far away as Dubuque, Iowa, and returned home with a better appreciation that mixing electricity and water is not a wise choice unless you intend to sample fish communities with this type of equipment and are trained to do so in a safe manner. As a result of this annual four-day outdoor educational event, more than 1,700 youth are now more aware of the Mighty Mississippi and its significance in their lives.
Mark Steingraeber, La Crosse FRO



-USFWS

Students gather around biologist Mark Steingraeber and a display of aquatic invasive species during Upper Mississippi River Education Days.

Refuge Fest 2006 Draws a Crowd

Technician Tammy Knecht and biologists Geno Adams and Jennifer Johnson traveled to DeSoto NWR near Council Bluffs, Iowa, on May 31 to take part in the yearly sampling effort at DeSoto Lake. The Fish and Wildlife Service has partnered with the Iowa DNR and the Nebraska Game and Parks Commission to sample the fish community and offer management strategies to improve sport fishing opportunities. Due to the shallow nature of the oxbow lake, DeSoto has battled common carp for a number of years. To bring this problem to the forefront, the refuge puts on a yearly carp fishing tournament called Refuge Fest. Tagged common carp in DeSoto Lake captured during the tournament were worth \$200, which bolstered interest in the event.

Bass Pro Shops, U.S. Army Corp of Engineers, and various Fish and Wildlife Service employees helped with activities and displays for the public. Columbia FRO displayed sampling gears including hoop nets, trap nets, and trammel nets, along with boat electrofishing equipment. Live fish were also displayed for kids and parents to handle. This gave

biologists a chance to improve public relations and educate people on fish biology and identification. Information on the role of the Fish and Wildlife Service in natural resources was dispersed along with fact sheets for invasive species. Through sampling of DeSoto Lake and this outreach event, partnerships with state and other Federal agencies were strengthened along with the Fish and Wildlife Service's relationship with the general public.

Geno Adams and Jennifer Johnson, Columbia FRO



-USFWS

A young lady gets her hands around the carp problem in Desoto Lake during the annual Refuge Fest at Desoto National Wildlife Refuge.

Show Us Your Fish

On April 9, Iron River NFH attended the Trout Unlimited Fishing Expo in Ashland, Wisconsin, for the fourth year in a row. The Wild Rivers Chapter of Trout Unlimited held their annual event to raise awareness about local and national fisheries and environmental issues. The auction raises funds to support projects such as stream habitat restoration and environmental education programs. The Iron River NFH is an annual participant along with other state, Federal, non-profit, and private groups who provide information, entertainment, and educational materials to all attendees. The hatchery set up a booth with information about the Federal

hatchery system, national fisheries issues, stocking information, and employment opportunities with the Fish and Wildlife Service.

The biggest draw to the booth was the live fish display. Two aquariums were set up with fry in one and yearlings in the other. In addition, adult brood fish were anesthetized and placed on damp towels for people to handle and see. Two hatchery employees answered questions and dispensed information.

Nikolas Grueneis, Iron River NFH

Iron River NFH Shows Its Wares in Local Parades

In an attempt to expand our exposure and show off our fish hauling truck, Iron River NFH biologists participated in two local parades. One was held on the Fourth of July in Superior, Wisconsin, and the other was held July 22 during the Blueberry Festival in Iron River, Wis. This marks the second year the hatchery has participated in the Iron River parade.

Many locals don't even know there is a National Fish Hatchery in the area. Having our truck out in the community shows we are really here and allows us a chance to "toot our horn," literally. Biologists Steve Redman and Kurt Schilling handled the truck driving responsibilities while volunteers handed out candy and fish shaped crackers. As a bonus, it was a great way to advertise our open house scheduled for August 5. We hope to continue to participate in these events, and hopefully more events in the future.

Kurt Schilling, Iron River NFH



-USFWS
Kurt Schilling of the Iron River National Fish Hatchery proudly displays a Superior, Wisconsin, 4th of July parade participation award.

Iron River NFH Expands its Exposure at a New Event

The Iron River NFH staffed a booth at the First Annual Fisherman's Expo in Poplar, Wisconsin. The expo was hosted by the Mission Covenant Church and sponsored by local community businesses, numerous angling clubs and organizations, the Wisconsin DNR, and the Douglas County Fish and Game League. A total of 17 booths were set up by various groups and vendors. Mounted fish displays donned the walls, a live trout fishing pond and minnow races occupied the kids, and charter fishing trip opportunities peaked many interests.

The hatchery booth was a big success. Nearly 1,000 people attended the event, and numerous new contacts were made. Each vendor provided door prizes to the expo attendees. Iron River NFH gave away a day of fish spawning and lunch to two eager new supporters. They will have their choice of handling and spawning lake trout or brook trout brood stock and participate in all aspects of a day at the hatchery.

Interestingly, this event was discovered somewhat by accident. Biologist Steve Redman was fishing at a local lake when he was approached by a couple of anglers

who mentioned the expo. During subsequent conversations, they revealed that they were looking for participants. Luckily, Steve was at the right place at the right time (at least for outreach, not necessarily for catching fish)! It just goes to show that station outreach can be a 24/7 endeavor!
Kurt Schilling, Iron River NFH

Students Get the Grand Tour

The bright yellow school bus pulled up to the Iron River NFH on March 21. Twenty students from the Ashland High School, accompanied by their teacher, arrived to take a tour of the hatchery. They were quite impressed by the number of fish on station (1.2 million yearlings, approximately 1.6 million fry, and several thousand brood stock) and wondered what we do with all the fish. Biologist Angela Baran guided the class and explained where the hatchery gets its water supply (Schaete Creek), what happens to the fish (spawning brood stock in the fall and stocking yearlings in the spring), and why the hatchery only raises lake trout and coaster brook trout (restoring naturally reproducing native populations in the Great Lakes). The students were able to get a close look at the "big" distribution trucks and peek inside the smaller tanks used for hauling fry. Many questions were asked about how to get a job with the Fish and Wildlife Service and what types of classes to take in college, so hopefully we will have some new recruits someday!

Angela Baran, Iron River NFH

Catfish 101, Part II

Since 2003, the Missouri Department of Conservation (MDC) has sponsored a course every May on how to catch catfish in the Missouri River. Columbia FRO participated in last year's event by hosting a fish fry during the classroom portion of the course and providing guides and boats for the field portion of the course. Once again Columbia FRO provided guides to take out registered students to deploy the gear they created during the classroom session.

During the second day of the course, instructors from MDC and Columbia FRO set sample gear at the Overton Bottoms Unit of the Big Muddy National Fish and Wildlife Refuge (NF&WR) for students to check that evening. At 6 p.m., the participants arrived with their own gear, boarded the boats to check the previously set gear, and to set their own gear. Branch Chief of Corps Operations Wyatt Doyle and biologists Andy Starostka and Jeff Finley each guided a crew to set trot lines, bank poles, and throw lines. The crews then fished late into the night using rods and reels and discussed the finer points of Missouri River management and the adjacent mitigation projects on the Big Muddy NF&WR. The participants returned Saturday to check and pull their lines, attend a fish cleaning class, take pictures, and swap stories. The 2006 Catfish 101 course was an overwhelming success luring in a record number of people from across the state who normally do not participate in river related activities, to discover a deeper appreciation of the "Big Muddy."

Jeff Finley, Columbia FRO

Columbia FRO Attends Aquatic Day at Hallsville, Missouri

On May 19, biologists Jennifer Johnson and Geno Adams of the Columbia FRO attended "Aquatic Day" at Hallsville Elementary, where fourth grade students had recently finished a unit of study on aquatic organisms. The students were divided into groups of eight and rotated through stations where they could get up-close-and-personal with white crappie, gizzard shad, shortnose gar, freshwater drum, shovelnose sturgeon, channel catfish, river carpsucker, bigmouth buffalo, carp, and invasive silver carp.

At each station, students were quizzed on fish identification and given an overview of the fish's anatomy, diet, and habitat requirements along with fun facts. 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. The children were especially curious about feeding methods of fish, how they "breathe", and their unique anatomical structures. They enjoyed touching the fish and seeing first hand an example of living organisms from the Missouri River.

Jennifer Johnson and Geno Adams, Columbia FRO



-USFWS photo by Jennifer Johnson
Columbia Fishery Resources Office biologist Geno Adams shows 4th grade students from Hallsville Elementary, Missouri, a shortnose gar.

You Just Can't Beat Live Fish!

How do you impress first graders? Show them a picture of a big fish! How do you make 100 first graders turn into a screaming, chaotic mob? Show them LIVE fish! That's exactly how biologists Jennifer Johnson, Nick Frohnauer, and Geno Adams and technician Derrick Eisenbrei introduced Paxton-Keeley students in Columbia, Missouri, to the wonderful world of Missouri River fish. Students and teachers got hands-on experience with smallmouth buffalo, shovelnose sturgeon, blue catfish, and other native riverine species, as well as invasive silver carp. It gave the Fish and Wildlife Service another opportunity to educate the public on issues dealing with the Missouri River as well as invasive species and their affects on the ecosystem. Inquisitive students had the opportunity to launch a barrage of questions ranging from "Can this fish bite me?" to "What is the biggest fish in the world?" Hopefully students and teachers alike came away with a greater appreciation for the creatures that swim in the waters of the Missouri River.

Geno Adams, Columbia FRO



-USFWS
1st graders enjoy handling live river fish, compliments of the Columbia Fishery Resources Office.

Sea Lamprey Staff Participate in Fish and Wildlife Service Festival

Personnel from the Sea Lamprey Control program hosted an integrated sea lamprey management program display during a Lower Great Lakes Fishery Resources Office "Fish and Wildlife Festival", their biggest outreach event of the year. More than 1,300 children and adults attended this year's festival which was located at Hyde Park in Niagara Falls, New York. Activities included Fishing Day and a scavenger hunt. Other displays included invasive species, reptiles and mammals, Niagara Falls Zoo, Beaver Valley Nature Center, Sea Grant, Federal agents with confiscated wildlife, and Allegheny NFH. *Sea Lamprey Control staff, Marquette Biological Station*



-GLFC

Bob Kahl of the Marquette Biological Station staffed the sea lamprey display at the Lower Great Lakes Fishery Resources Office festival. More than 1,300 people attended the event which was located at Hyde park in Niagara Falls, New York.

Hatchery Participates in Local Parade

Pendills Creek NFH staff once again participated in the local Brimley, Michigan, Fourth of July Parade. This year the parade was larger and the public turnout greater than ever before. Hatchery manager Curt Friez drove a patriotically decorated Fish and Wildlife Service pickup on the parade route while several members of the Friends of Pendills Creek Hatchery walked behind the truck distributing candy to the crowd. The hatchery, with sponsorship from the Friends group, has participated in this parade the past three years. Plans are already being made for next year's parade with even more goodies to distribute. A special thanks to the Friends of Pendills Creek Hatchery for candy contribution, time, and the leg work, all in support of the hatchery.

Curt Friez, Pendills Creek NFH

Annual Fishing Events

More than 160 kids and 35 volunteers participated in Neosho NFH's annual clinic and derby this year. The kids attended five different stations which included knot-tying, casting, fish identification, fish conservation, and boating safety. In addition, fire safety was taught by the local fire department. Everyone was served lunch and then fishing started. The fish were even cleaned, if desired. The very next week a derby for the handicapped and elderly was conducted. This derby is getting bigger and bigger every year. To highlight the fishing events, manager Dave Hendrix gave several radio interviews and one television interview leading up to the derby activities.

Roderick May, Neosho NFH

Ashland FRO Participates in Migratory Bird Day at Whittlesey Creek NWR

Glenn Miller of the Ashland FRO helped celebrate International Migratory Bird Day at the Whittlesey Creek NWR. The general public had a variety of activities to attend during the celebration including auto tours of the refuge and neighboring Fish Creek estuary, and bird watching in the tower at the Northern Great Lakes Visitor Center, home of Whittlesey Creek NWR. There were also guided nature trail walks, and for the kids, a coloring contest, bird mask construction, and building of blue bird houses and robin nesting platforms. Glenn was in charge of the blue bird and robin platform building and ended up constructing over two dozen houses/platforms with the participants. Ages of the participants ranged from 3 to 63 years old for the Saturday morning carpenters. *Glenn Miller, Ashland FRO*



-USFWS

Some volunteers construct blue bird houses as part of Migratory Bird Day at Whittlesey Creek National Wildlife Refuge.

Cooperation with Native Americans

Shoreline Surveyed for Coaster Brook Trout

A fishery survey was conducted on the Grand Portage Indian Reservation in Minnesota to determine the presence and relative abundance of coaster brook trout. Coaster brook trout were once abundant throughout the nearshore waters of Lake Superior, but due to overfishing and habitat degradation, there are only a handful of waters around Lake Superior that still have spawning populations of coaster brook trout left.

The three-night survey was conducted using an electrofishing boat starting from the mouth of the Pigeon River moving southward along the north shore. This nearshore survey was part of a Lake Superior restoration plan sponsored by the Grand Portage Band of Lake Superior Chippewa. Biological data collected included species caught, length, numbered Floy tag, tissue sample (for genetic analysis), and scale samples (for age determination). The information obtained will help Grand Portage fishery managers gain a broader understanding of the abundance of coaster brook along the Minnesota north shore.

During the survey, the two person crew focused on netting only brook trout. Other fish species observed during the study were noted as few in numbers (1-4 fish), common (5-25 fish) or abundant (>26 fish). Over the 33 miles covered during the survey, four coaster brook trout were collected. Additional yearly assessments will be scheduled to help determine if these fish are beginning to re-establish.

Frank Stone, Ashland FRO



-USFWS
Grand Portage Band of Lake Superior Chippewa employees prepare for shoreline surveys for coaster brook trout with assistance from the Ashland Fishery Resources Office.

Red Cliff Fisheries Department and Ashland FRO Complete Siscowet/Predator Survey

Biologists Glenn Miller and Jonathan Pyatskowitz assisted the Red Cliff Band of Lake Superior Chippewa Indians Fisheries Department in conducting the Siscowet/deepwater predator survey in the MI-2 Unit waters of Lake Superior. The goal of assessing Siscowet populations throughout Lake Superior is to gain a broader understanding of their ecological role in Lake Superior and to determine fish abundance in the offshore areas of the lake. This survey is conducted every three years.

All work was conducted off the *R/V Chub*, Ashland FRO's gill net vessel. A total of six lifts were needed to complete the survey. Twenty seven hundred feet of graded mesh, multifilament nylon gill net were set in 6 different depth strata, with the shallow set being 0 – 19 fathoms (1 fathom = 6 feet) to 100 – 119 fathoms. The crew deployed the gill net in the deepest and shallowest set on the first day and worked through the other four depth strata over the course of the work. Biological data

collected included fish species, length, weight, age structures, sex and stage of maturity, sea lamprey markings, and food analysis of stomach contents. All data collected will be worked up by the Red Cliff Fisheries Department and reported to the Lake Superior Technical Committee.

Glenn Miller, Ashland FRO



-USFWS
Ashland Fishery Resources Office staff assisted the Red Cliff Fisheries Department with a Siscowet/deepwater predator survey in Lake Superior. Biological data collected included food analysis of stomach contents.

Fish Transferred for Keweenaw Bay "All American Fishing Derby"

With the help of the Keweenaw Bay Indian Community (KBIC), Frank Stone collected 25 largemouth bass (15-18 inches) from 3rd Lake in preparation for the community's "All American Fishing Derby." With assistance from KBIC biologist Gene Mensch and technician Mike LaPointe, the fish were collected using an electrofishing boat and then placed in a transport tank and stocked into Lighthouse Pond.

The KBIC is interested in developing Lighthouse Pond into a family-oriented largemouth bass fishery. Currently the surrounding area is used for picnicking and other tribal activities, including a yearly Pow-Wow. Because of the lakes convenient proximity to

this recreation area, the KBIC has initiated management plans to enhance this fishery; however, Lighthouse Pond is subjected to winterkill conditions and options for enhancing the angling potential are limited. A fountain type aeration system has been permanently installed in the pond in hopes of providing a more stable oxygen regime that should greatly enhance the over-winter survival of stocked fish.

Frank Stone, Ashland FRO



-USFWS
Keweenaw Bay Indian Community staff transported 25 largemouth bass to a pond in preparation of the All American Fishing Derby.

The Rainy River, a Beautiful Place to Spawn Sturgeon

Lake Sturgeon once inhabited the Red River of the North and its tributaries in northwest Minnesota. In 1926 a lake sturgeon weighing 176 pounds was caught in nearby White Earth Lake; however, since the turn of the century lake sturgeon populations have declined due to over-harvest, pollution, and water development projects. The last record of a lake sturgeon in this area came from Lake Lida in 1957. In 1997, the White Earth Natural Resources Department, assisted by the Fish and Wildlife Service, Rainy River First Nations, and Minnesota DNR, entered into an agreement to restore lake sturgeon in White Earth Lake and Round Lake on the White Earth Reservation.

It is a goal of natural resource agencies to restore lake sturgeon to this part of its original range. The management plan calls for 8,000 fingerlings to be stocked in White Earth Lake and another 5,000 fingerling to be stocked in Round Lake. Prior to stocking fingerlings, a significant team effort takes place. One huge hurdle is to test the sturgeon for viral infections prior to shipping the eggs. It took a true team effort to accomplish this goal. First, Scott Yess (La Crosse FRO) traveled to Baudette, Minnesota, to collect fin clips from 30 lake sturgeons held by Mike Larson's staff (Minnesota DNR). The fin clips were delivered to Becky Lasee (La Crosse FHC) on April 28th. Results of the viral tests proved negative and were completed on Thursday, May 11th. On May 8th Randy Zortman and Tom McCully (White Earth Natural Resources Department) along with Scott Yess assisted Joe Hunter and his staff with spawning nine lake sturgeons. Yess delivered approximately 50,000 eggs to the Genoa NFH on May 12. In late summer the sturgeon will be tagged and then transported to the White Earth Reservation. This was an incredible team effort and thanks to all who participated.

Scott Yess, La Crosse FRO

Red Cliff Fish Health Inspection Conducted

Staff from the La Crosse FHC completed the annual fish health inspection at the Red Cliff Tribal Fish Hatchery on June 21. During the inspection, FHC staff observed the hatchery facilities and collected tissue samples from the four lots of brook trout present at the hatchery. The tissue samples will be screened for bacteria, viral, and parasitic pathogens at the FHC's laboratory facilities in Onalaska, Wisconsin. Brook trout raised at the hatchery are stocked in streams on tribal lands.

Ken Phillips, La Crosse FHC



-USFWS
La Crosse Fish Health Center biologist Kenneth Phillips performs a fish health inspection at the Red Cliff Tribal Fish Hatchery.

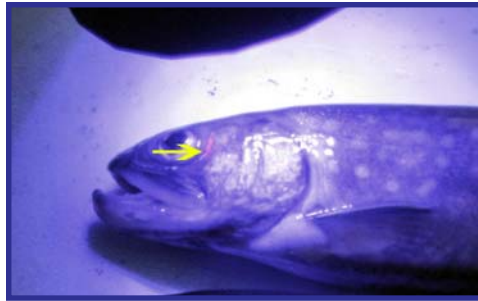
Leadership in Science and Technology

Elastomer Tag Update

Iron River NFH staff elastomer tagged two groups (a brood lot and a production lot) of fish in March. The tagged brood stock were fully inventoried on March 31 to determine tag retention after 30 days. The inventory showed that 10 percent of the fish lost their tags completely with no visible remnants. The fish will be inventoried again during spawning later this fall to see if there is any further loss of tags.

On May 17, a length/weight and tag check inventory was performed on 100 fish of each strain of production fish. The fish were crowded and then a random sample was taken from the group. The fish were weighed and measured and then a tag check was performed to see if the tag was still visible, how much remained, and the quality of the tag placement. For the Tobin Harbor strain coaster brook trout, the overall tag retention was 93 percent. In six of those fish, approximately half of the tag was lost, but the remaining half was still very visible. For the Siskiwit Bay strain coaster brook trout, the overall retention was 98 percent. Of the 98 percent, nine fish lost half of the tag, but enough remained to still be highly visible. In four fish, the tag placement was very deep and required the use of the flashlight to see the intact tags. Two fish lost tags completely. This tagging procedure seems to be successful and we will continue to evaluate the possible use of elastomer tags.

Angela Baran, Iron River NFH



-USFWS

The arrow points to an elastomer tag that glows under a special light. This tag is being tested at the Iron River National Fish Hatchery.

Smallmouth Bass Spawn in the Most Unusual Places

Smallmouth bass are among the many species reared at the Genoa NFH for its ongoing endangered mussel program as well as Federal, state, and tribal commitments throughout the Upper Mississippi River basin. In any given year, the production of smallmouth bass may range from a stellar year of 200,000 to a bust.

The variability in years is primarily due to weather inconsistencies. For example, during May 2005 the temperature in the spawning ponds dropped to around 45 degrees Fahrenheit, which resulted in reduced spawning activity, lack of nest protection by the males, and fry mortality. An entire year-class of smallmouth was lost, and the Genoa NFH's endangered mussel program had to adjust. Due to these inconsistencies, the hatchery crew researched alternative spawning methods. A controlled water temperature was needed to alleviate low fry survival, and therefore an indoor raceway spawning method was selected. Spawning beds were built and placed in an 8 foot x 80 foot indoor raceway along with 4 pair of adult smallmouth bass. The indoor raceway smallmouth produced 15,000 fry (3,750 fry per

pair), compared to 60,000 fry which were able to be harvested from the 140 pond fish (857 fry per pair). Overall, the indoor method proved to be more efficient primarily due to the ease of fry collection, and will be used along with the outdoor method in the future to help ensure enough fry will be produced for the hatchery's mussel and fishery management requests.
Nick Starzl, Genoa NFH



-USFWS

A smallmouth bass uses an artificial spawning bed to deposit her eggs in an indoor raceway at the Genoa National Fish Hatchery.

Columbia FRO Develops and Implements Coded Wire Tag Processing Protocol

The Mississippi Interstate Cooperative Resource Association (MICRA) paddlefish stock assessment project is a multi-state cooperative study designed to assess the abundance, distribution, and movement of paddlefish in the Mississippi River basin. Twenty-two state agencies, four FRO's, and eight NFH's are involved in the stocking, tagging, release, and recapture of these paddlefish. Commercial and sport anglers also lend a hand by returning samples and capture location information to their local fish and game offices.

In 1995, field biologists and technicians throughout the Mississippi River basin began sampling

and tagging efforts designed to gather information on the abundance and movement of paddlefish. The data gathered during these sampling trips is recorded on datasheets which are mailed to the Columbia FRO for processing and assimilation into a basin-wide database. Biologists use this information to track the movement and abundance of paddlefish throughout the Mississippi River basin.

At the 2006 MICRA meeting, Columbia FRO technician Casey Bergthold presented a standardized protocol that has now been implemented to aid technicians in processing the MICRA paddlefish stock assessment data. The protocol consists of a large flow chart that walks technicians through each step of tag processing and data entry, from the initial receipt of the data to the final proofing in the electronic database. This protocol will reduce database errors and increase the efficiency of data processing. These advances will allow state and Federal biologists access to more current and accurate data on the movement and abundance of paddlefish in their region. It will also aid in the assessment of paddlefish population trends in the Mississippi River and its tributaries.

Casey Bergthold, Columbia FRO



-USFWS

A biologist checks a paddlefish's rostrum with a tag reader for the presence of a coded-wire tag.

Independent Scientific Review of Missouri River Habitat Assessment Program

Wyatt Doyle and Andy Starostka of the Columbia FRO participated in their fifth Habitat Assessment meeting in Omaha, Nebraska. This meeting represents the culmination of efforts from multiple state and Federal agencies over the last two years to build a sampling program for evaluating shallow water habitat created on the Missouri River by the U.S. Army Corps (Corps) of Engineers. The meeting was overseen by an independent panel of scientists from Sustainable Ecosystems Institute, which was hired to evaluate the program design. The panel confirmed that the design proposed would address the goals and objectives of the program. Efforts will now move forward to expand monitoring in additional reaches of the river. Biological data in this program is being combined with physical data collected by the Corps to describe creation of sand bars from flow and dike modification changes.

The increase in biological diversity and presence of sturgeon in these sites will be a gauge of the Corps' success over time. This is a

collaborative approach undertaken by numerous state resource offices, the Corps, and the U.S. Geological Survey in an effort to recover endangered pallid sturgeon habitat and to restore the overall health of the Missouri River. As a result of the rigorous review process, the data should be more meaningful to researchers and provide publishable results quickly.

Wyatt Doyle and Andrew Starostka, Columbia FRO

Peer-Review of Asian Carp Study Completed

At the request of Quality Assurance Officer Dr. David Kennedy of the U.S. Geological Survey's Upper Midwest Environmental Sciences Center (UMESC), La Crosse FRO biologist Mark Steingraeber completed a peer-review of a study plan by UMESC colleagues who want to study the effect of water hardness on egg hatching success of invasive big-head and silver carps. Based on career experiences including that as a research fishery biologist at the UMESC where he conducted laboratory tests to determine the effects of altered water quality on early life stage development for a variety of native fishes, Steingraeber provided several detailed suggestions to improve the design of this investigation, including the use of less toxic chemicals to fix and preserve tissue samples. If successfully completed, the proposed study may yield results that could be used to predict the potential distribution of self-sustaining populations of these invasive species around the country based on water hardness, a commonly reported water quality parameter.

Mark Steingraeber, La Crosse FRO

Aquatic Habitat Conservation and Management

Carterville FRO Completes First Year of Sampling for Stone Dike Alteration Project

The Middle Mississippi River has been greatly altered in order to maintain the navigation channel and to reduce flooding. These modifications have taken the form of channel dredging, levees, and stone dikes. An unfortunate consequence of these actions has been a loss of floodplain and side channel habitat, which were historically important to the native flora and fauna. In recent years, biologists and river engineers have searched for means to restore these vital habitats while still maintaining river commerce. One promising compromise is stone dike alterations, which can lead to an increase in island, side channel, and backwater habitats.

The Carterville FRO is currently in the pre-project monitoring stage of a proposed stone dike alteration project on the Middle Mississippi River. The study area includes an experimental site south of St. Louis (River Mile 151-155) and a control site north of Cape Girardeau, Missouri, (River Mile 64-69). The Carterville FRO has been sampling the fish community using a variety of standard fish capture gears including hoop nets, gill nets, trawling, electrofishing, and mini-fyke nets. In addition, the FRO has recorded water quality parameters and taken water samples for further lab analysis. The overall objectives of the study are to determine what fish communities use habitat provided by dikes and whether these communities change as a result of dike modification, identify water physical and environmental conditions seasonally at dikes, and determine the seasonality of fish use of dikes. The

fieldwork was accomplished with help from the Missouri Department of Conservation volunteer Ray Wild, Columbia FRO biologist Andy Plauck, and La Crosse FRO biologists Ann Runstrom and Louise Mauldin.

Colby Wrasse, Carterville FRO



-USFWS

Technician Adam McDaniel and biologist Ann Runstrom display a longnose gar collected during pre-project sampling on the Middle Mississippi River to evaluate the effect of habitat restoration on fish populations.

Blow That Dam Up!

Recent discussions regarding fish passage and removal of the Vermilion River Dam got quite interesting when the U.S. Army Corps of Engineers mentioned the possibility of blowing up the dam as a military training exercise. This was just one small part of a larger discussion on how to address the aging dam in Danville, Illinois, that blocks fish passage to about 1,100 miles of stream and has also claimed several lives due to drowning (three in the past 10 years alone). Project Leader Rob Simmonds of the Carterville FRO met with representatives from the City of Danville, Lieutenant Governor Pat Quinn's Office, Illinois DNR, Illinois Environmental Protection Agency, U.S. Geological Survey, and others to discuss the problem and solutions, but primarily steps the city would need to go through and possible funding sources to deal with the Vermilion River Dam. Like many dams, it is deteriorating and no longer serves its intended purpose.

The Vermilion River is a tributary to the Wabash River which is the longest undammed river east of the Mississippi River. The Vermilion River watershed is also a favorite for canoeists and others who can enjoy the only Illinois-designated Wild and Scenic River (Middle Fork of the Vermilion River). Lt. Governor Quinn's Office and City of Danville Mayor Eisenhower are committed to seeing this problem addressed and were both very impressed and appreciative of all the interest, support, and good ideas generated from the meeting.

Rob Simmonds, Carterville FRO

Workforce Management

Columbia FRO Biologists Participate in Pallid Sturgeon Training

Biologists Andrew Plauck, Andy Staroska, and Nick Utrup attended a training meeting for the Pallid Sturgeon Population Assessment Team, which samples for endangered pallid sturgeon on 2,300 miles of the Missouri River. As one would expect, a project that stretches from Montana to Missouri involves a fair number of people and requires close cooperation with multiple agencies. Crews from the Columbia FRO; Missouri Department of Conservation (MDC); Great Plains Fish and Wildlife Management Assistance Office (FWMAO); Missouri River FWMAO; Nebraska Game and Parks Commission; South Dakota Game, Fish and Parks; North Dakota Game and Fish; Montana Fish, Wildlife and Parks; and the Army Corps of Engineers met at the confluence of the Yellowstone and Missouri rivers for this training.

The team meets once a year to standardize procedures and train crews on the sampling protocol for this large-scale project, ensuring crews are conducting field work in a comparable manner throughout the basin. These coordination trips are an excellent way to bring new members up to speed quickly, promote new ideas, and ensure that methodologies and protocols are followed. The location of the coordination day is moved each year to allow participants to see various portions and the vast habitat differences of the Missouri River.

The training was held in Williston, North Dakota, so crews could assist Garrison Dam NFH personnel in brood stock collection. This stretch of the river is known

to hold a remnant population of mature pallid sturgeon. These hefty wild fish are captured using large mesh trammel nets and taken to the hatchery if they are ready to spawn. The group witnessed a 54-pounder en route to the hatchery. In addition to this giant pallid sturgeon, the group also captured several paddlefish which weighed up to 90 pounds.

Later in the month, field crews from the three sturgeon related projects traveled to Hamburg Bend, Nebraska, and Chillicothe, Missouri, to attend in-depth field training in the similar habitats found on the lower reaches of the river. Crews from the Columbia FRO, MDC, Nebraska Game and Parks Commission, and the Corps attended this trip. Crews met both in the class room as well as in the field at Hamburg Chute (an engineered side chute on the Missouri River) and Cranberry Island (a natural chute near Miami, Missouri). Similar to the coordination meeting on the upper river, these teams review the differences and the unique sampling issues that each office encounters in their reach of the river and provide an in-depth focus on local issues.

Andrew Starostka and Andy Plauck, Columbia FRO



-USFWS photo by Andy Starostka
Members of the Pallid Sturgeon population Assessment Team compare sampling between push trawl and seining during a field training session.

La Crosse FRO Welcomes Environmental Careers Organization Student

The La Crosse FRO welcomes a new summer intern, Patricia Polzin. She is taking part in the Conservation Career Diversity Intern Program through the Environmental Careers Organization (ECO). ECO and the Fish and Wildlife Service have a cooperative agreement to provide opportunities for students and recent graduates to experience environmental conservation, particularly for those from culturally diverse backgrounds. Ever since Patricia was young she was inspired by knowing about life and its wonders. Her intention was always to work in nature or with nature. That is why she interned last summer at the Creston NFH in Montana as an ECO intern. Part of her job as a "Bull Trout Ranger" was to conduct a creel survey to determine whether anglers can identify native from non-native game fish. Her other duties include helping a field survey crew in field sampling, electrofishing, and gillnetting. She also cultured and stocked fish from the hatchery. This summer, Patricia will be helping with invasive Asian carp management, vegetation surveys, and the conservation of endangered species.

Before Patricia came to La Crosse FRO, she studied marine biology at the University of Aberdeen (Scotland) where she graduated with a Bachelor of Science degree in June 2006. She grew up in Munich, Germany, but also has United States citizenship. In her spare time, Patricia enjoys traveling, working with children, and outdoor activities such as rafting and jet-skiing. Her career goals are to accumulate more profes-

sional work experience before gaining a Masters Degree in wildlife management and conservation next fall in the United States.
Patricia Polzin, La Crosse FRO



-USFWS
Environmental Careers Organization intern Patricia Polzin holds a catfish she netted during the Goby Round-up/Carp Corral.

Environmental Careers Organization Students Gather

Megan Von Rotz attended the Annual regional Environmental Careers Organization (ECO) conference in Minneapolis, Minnesota. Many regional Fish and Wildlife Service employees spoke about a variety of career options within the Fish and Wildlife Service. Each ECO intern gave a presentation about their experiences as an ECO intern at their summer work site. Von Rotz presented information about her experiences in the laboratory and in the field at the La Crosse FHC.
Megan Von Rotz, La Crosse FHC



-USFWS
Group photo from the annual Environmental Careers Organization conference held in Minneapolis, Minnesota. Megan Von Rotz (5th from the right) is an intern at the La Crosse Fish Health Center.

La Crosse FRO Biologist Shows Girl Scouts How Dreams Became Reality

Biologist Heidi Keuler of the La Crosse FRO presented the career of a fishery biologist to approximately 25 Girl Scouts of the Riverland Council during their "From Dreams to Reality" Program on May 20. This program provides Girl Scouts an opportunity to learn how working women have made their dreams a reality. Six other careers presented by women included: Conservation Warden, Lawmaker, Insurance Agent, Interior Designer, Meteorologist/Broadcaster, and Public Relations Manager. Girl Scouts learned what type of education and training is needed for different careers as well as what it took to "get the job done." Most interesting to the Girl Scouts were women that were the minority in their field and women who balanced a career with a family. After interviewing the presenters, Girl Scouts earned badges by applying what they learned to a project related to the fields of the local career women.
Heidi Keuler, La Crosse FRO

Safety Training Attendees Pull Instructor from the Water

A Department of the Interior Motorboat Operator Certification Course (MOCC) was hosted by the Ludington Biological Station in Ludington, Michigan. Seven participants from the Ludington Biological Station and Carterville FRO attended this important training course, where students learn many new skills and are reminded of some basic safety information. The course was led by Aaron Woldt with additional lectures given by Kevin Butterfield, Dave Wedan, and Deb Winkler. We gained hands-on experience with trailering and transportation of watercraft, motorboat operation and maintenance, emergency procedures, and water survival. Classroom lectures covered proper navigational procedures, nautical knots/rigging, and aquatic invasive species, among others.

This was a great opportunity to practice emergency scenarios such as water rescues where an instructor was recovered from the water, demonstrations on the proper discharge of safety flares, and operation of motorboats in inclement weather. We feel more prepared for averting dangerous situations and how to properly react should an emergency situation occur. This was an invaluable course and the information learned will not only benefit Fish and Wildlife Service employees but also the boating public.

*Ludington Biological Station staff,
Ludington Biological Station
Patty Herman, Carterville FRO*

Great Lakes - Big Rivers Regional Fisheries Offices

Regional Office, 1 Federal Drive, Fort Snelling, MN 55111-4056; 612/713-5111

Gerry Jackson (gerry_jackson@fws.gov)

Michigan

Alpena Fishery Resources Office
Federal Building; 145 Water Street
Alpena, MI 49707
Jerry McClain (jerry_mcclain@fws.gov)
989/356-3052

Jordan River National Fish Hatchery
6623 Turner Road
Elmira, MI 49730
Rick Westerhof (rick_westerhof@fws.gov)
231/584-2461

Ludington Biological Station
229 South Jebavy Drive
Ludington, MI 49431
Dennis Lavis (dennis_lavis@fws.gov)
231/845-6205

Marquette Biological Station
1924 Industrial Parkway
Marquette, MI 49855
Katherine Mullet (katherine_mullet@fws.gov)
906/226-6571

Pendills Creek/Sullivan Creek
National Fish Hatchery
21990 West Trout Lane
Brimley, MI 49715
Curt Friez (curt_friez@fws.gov)
906/437-5231

Missouri

Columbia Fishery Resources Office
101 Park Deville Drive; Suite A
Columbia, MO 65203
Tracy Hill (tracy_hill@fws.gov)
573/234-2132

Neosho National Fish Hatchery
East Park Street
Neosho, MO 64850
David Hendrix (david_hendrix@fws.gov)
417/451-0554

Illinois

Carterville Fishery Resources Office
9053 Route 148, Suite A
Marion, Illinois 62959
Rob Simmonds (rob_simmonds@fws.gov)
618/997-6869

Wisconsin

Ashland Fishery Resources Office
2800 Lake Shore Drive East
Ashland, WI 54806
Henry Quinlan (henry_quinlan@fws.gov)
715/682-6185

Genoa National Fish Hatchery
S5689 State Road 35
Genoa, WI 54632-8836
Doug Aloisi (doug_aloisi@fws.gov)
608/689-2605

Green Bay Fishery Resources Office
2661 Scott Tower Drive
New Franklin, WI 54229
Mark Holey (mark_holey@fws.gov)
920/866-1717

Iron River National Fish Hatchery
10325 Fairview Road
Iron River, WI 54847
Dale Bast (dale_bast@fws.gov)
715/372-8510

LaCrosse Fish Health Center
555 Lester Avenue
Onalaska, WI 54650
Richard Nelson (rick_nelson@fws.gov)
608/783-8441

LaCrosse Fishery Resources Office
555 Lester Avenue
Onalaska, WI 54650
Pamella Thiel (pam_thiel@fws.gov)
608/783-8431



Fish Lines
Region 3, Great Lakes/Big Rivers
2006 Vol. 4 No. 9

U.S. Fish & Wildlife Service
Region 3
Division of Fisheries
1 Federal Drive
Ft. Snelling, MN 55111

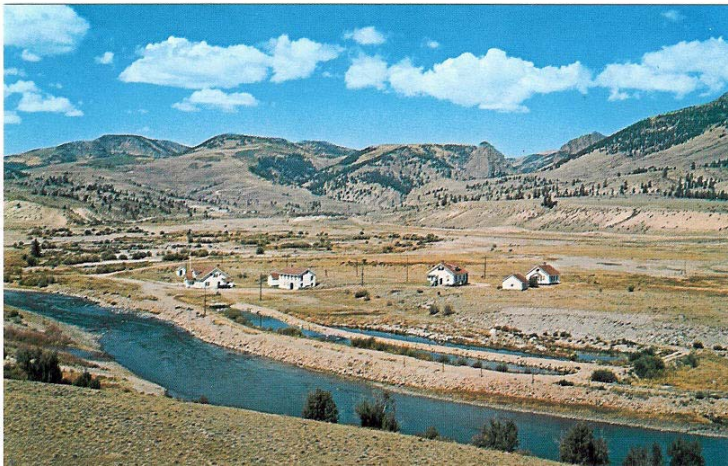
Phone: 612/713-5111

Questions or comments concerning *Fish Lines* can be addressed to Dave Radloff, 612/713-5158 or email at david_radloff@fws.gov



RECYCLED PAPER

Printed on 30% Recycled
 by Fiber Weight Paper



-Jerry French Postcard Collection; U.S. Fish Hatchery, Creede, Colorado

Windows in time

A Glimpse into our Proud Past:

The Creede Fish Hatchery was established in 1929 near the town of Creede in Mineral County, Colorado. The hatchery operated until 1965 and was transferred to the State of Colorado in 1966. The hatchery was located along the Rio Grande, shown here in the foreground as it flows from left to right. The buildings are identified, from left to right, as the hatchery building, ice house, maintenance shop, superintendent's house, garage, and maintenance man's house. (circa 1960)

Fish Lines is produced by the Fisheries Program, Region 3, U.S. Fish & Wildlife Service, Ft. Snelling, Minn. Items included are selected from monthly reports submitted by Region 3 fisheries offices. Photos included are used by permission and may be copyrighted.

Questions or comments concerning *Fish Lines* should be addressed to Dave Radloff, 612/713-5158 or email at david_radloff@fws.gov

Equal opportunity to participate in, and benefit from programs and activities of the U.S. Fish and Wildlife Service is available to all individuals regardless of race, color, national origin, sex, age, disability, religion, sexual orientation, status as a parent and genetic information. For information contact the U.S. Department of Interior, Office for Equal Opportunity, 1849 C Street N.W., Washington, DC 20240