U.S. Fish & Wildlife Service

Fish Lines

Region 3 - Great Lakes/Big Rivers

Leadership in Conserving, Enhancing, and Restoring Aquatic Ecosystems

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New Plan Aims to Rehabilitate Wisconsin Lake Superior Brook Trout

(See the "*Feature Story*" on Page 5)

-Greg Alexander

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

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 opportunities; 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 hydropower 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 referrred 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 - New Plan Aims to Rehabilitate Wisconsin Lake Superior Brook Trout

With the aim of protecting and rehabilitating dwindling populations of brook trout, the Wisconsin Department of Natural Resources (DNR) and the Fish and Wildlife Service this summer released the Wisconsin Lake Superior Brook Trout Plan.

The plan's goal is "to protect and improve the self-sustaining brook trout populations and their habitat in Wisconsin's Lake Superior Basin, and attempt to rehabilitate or establish several populations that exhibit life history diversity (both stream resident and migratory 'coaster' life history types)."

The Red Cliff and Bad River tribes assisted the Wisconsin DNR and Fish and Wildlife Service in developing the plan by recommending two of the five priority Northern Wisconsin locations for brook trout restoration identified in the plan. The five priority locations are the Brule, Bark, and Raspberry rivers, and Whittlesey and Graveyard creeks. At each of these locations, the plan proposes a variety of objectives and activities to rehabilitate brook trout.

The objective for Whittlesey Creek is to establish a self-sustaining brook trout population that exhibits a migrating life history. Activities to accomplish this objective include repeating a 1977 Wisconsin DNR comprehensive fish survey in 2001, establishing annual index stations in the stream and lake, stocking various life stages (egg, fry, yearlings, adults) over seven years with two strains that originated from Isle Royale, and no harvest regulations. An engineered log jam was installed to test its effectiveness in reducing stream velocity and providing habitat. To date, 50,000 eggs, 20,000 fingerlings, 2,000 yearlings, and 125 adults have been stocked. Biologists have evaluated the stocking efforts through annual sampling of the index stations and by monitoring the fishes' movements using radio telemetry and an underwater camera. Surveys have indicated an increase in the abundance of juvenile brook trout.

The plan's objective for the Brule and Bark rivers and Graveyard Creek is to increase brook trout abundance to reconnect the stream population with the lake habitat. Activities conducted by the Wisconsin DNR to achieve this objective include adding spawning gravel, controlling beaver to allow unimpeded flow and re-expose spawning gravel, adding large wood to improve stream hydrology and fish habitat, and restrictive angling regulations. Biologists improved fish passage in the Brule and Bark rivers by replacing perched culverts and in Graveyard Creek by removing a barrier log jam.

-USFWS photos

(Lt. to Rt.; Top) Henry Quinlan (left) and Bill Blust stock brook trout eggs into a gravel bed in Whittlesey Creek; Stream habitat is improved by adding engineered log jams; (Bottom) Horses provide low impact labor for a stream habitat improvement project; Jess Krajniak (center) demonstrates the use of telemetry equipment to students.

The goal for the Raspberry River is to rehabilitate brook trout and their habitat. Activities by the Red Cliff Band have included a habitat survey that identified target areas for restoration, reclamation, and remediation using bio-engineering. In addition, the Band has been stocking all life stages of the Nipigon strain brook trout in Buffalo and Raspberry bays with expectation that fish will migrate up the river. Currently, the tribe and the Fish and Wildlife Service are conducting assessment activities along the lakeshore to evaluate the effectiveness of stocking activities.

To evaluate stocking, crews electrofished a 13 km transect of shoreline four times in 2004 and seven times in 2005. A total of 38 brook trout were caught, examined for a fin clip (indicating hatchery origin), tagged with a numbered Floy tag, and measured and released. A tissue sample was collected from unmarked fish for genetic analysis to determine origin.

The partners plan to continue as much as personnel and funding allow until the goal is reached.

A copy of the ***Wisconsin Lake Superior Brook Trout Plan*** can be viewed on the Ashland FRO website at: http://www.fws.gov/midwest/ashland/basinbktplan/Final_WI_Brook_Trout_Plan_May_2005.pdf

Partnerships and Accountability

International Cooperation Helps Obtain Valuable Lake Trout Strain

In October, John Johnston of Jordan River National Fish Hatchery (NFH) traveled to Parry Sound, on the Canadian side of Lake Huron, to help the Ontario Ministry of Natural Resources capture and spawn 49 pair of wild Parry Sound strain lake trout. The eggs were sent to Ontario's Chatsworth Fish Culture Station for incubation, and the resulting fish will be kept in quarantine there for a year and a half. If the fish do not test positive for certain disease pathogens during or after their quarantine, they will be transferred to Sullivan Creek NFH, where they will contribute to future lake trout rehabilitation efforts in Lake Huron.
Wayne Talo, Jordan River NFH

-photo by the Ontario Ministry of Natural Resources
John Johnston (right) from Jordan River National Fish Hatchery assisted the Ontario Ministry of Natural Resources with egg collection of Parry Sound strain of wild lake trout. Resultant disease-free offspring will become a brood stock and will be held at the Sullivan Creek National Fish Hatchery.

Jordan River NFH Gains Support for Friends Group

Project Leader Rick Westerhof and biologist Tim Smigielski of Jordan River NFH hosted a meeting in September to organize new and existing hatchery supporters and partners into a Friends group. A dozen local community members attended the meeting in response to personal invitations. Westerhof and Smigielski described their Friends group initiative and explained why they considered it to be a priority for the hatchery. The attendees were full of ideas and supported forming a hatchery support group. One of the twelve people in attendance has committed to board membership for the group, as have several others who were unable to attend the meeting that night.

"It will take a few more meetings and some additional legwork in the community to firm the whole thing up," Smigielski said. "In order to do it right, we need self-starters who are passionate about the hatchery as a focal point in the community. It is evident that many of the most capable and talented folks already have 'full plates' but still, there they were, at the hatchery until nine o'clock at night being our Friends."
Tim Smigielski, Jordan River NFH

Jordan River NFH Partners with Antrim County Parks and Recreation

During the September Friends group meeting at Jordan River NFH, Allen Pecar of Mancelona, Michigan, suggested to biologist Tim Smigielski that the hatchery give a presentation to the Antrim County Parks and Recreation Board about efforts to develop its own Friends group. Pecar thought several board members may be interested in helping the hatchery or know of others who might. In response, hatchery manager Rick Westerhof gave a presentation to the parks and recreation board focusing on lake trout rehabilitation efforts in the Great Lakes, increased outreach efforts, and the development of a hatchery Friends group. The meeting went very well and attendees made several suggestions that may generate more interest in the Friends group, including adding information about the hatchery to the parks and recreation board's searchable website with a link to the hatchery website.

After the meeting, Pecar introduced Westerhof to other board staff, including Marc Randolph, director of the Grass River Natural Area, to discuss ways to partner and draw from their volunteer pool. Westerhof was surprised to learn that many of the board members were familiar with the hatchery but hadn't visited in years. One gentleman told Westerhof stories about developing the Five and Six Tile creek water supplies and said he used to hang out in the area. As the hatchery continues to expand its efforts to develop a Friends group, one thing is certain: more people are realizing that the hatchery does not just raise fish anymore. We are expanding our efforts by providing snowmobile access, environmental education, and sponsoring outreach events.
Rick Westerhof, Jordan River NFH

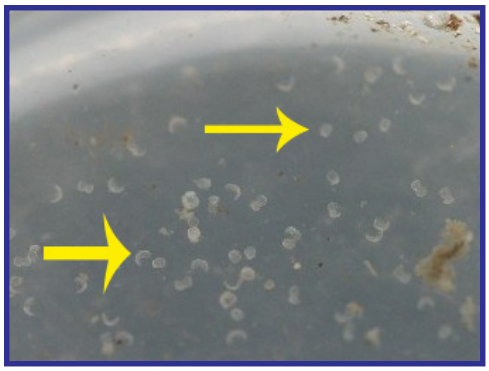
Endangered Mussel Recovery Project Reaches Milestone

A consortium of Federal and state partners, led by Region 3 Fisheries and Ecological Services, has confirmed that mussels produced under artificial culture techniques have reached maturity, bred, and produced viable larvae under natural conditions. This consortium has been involved in an active range-wide recovery effort for the Higgins' eye pearlymussel since 1999. Samples collected from several recovery sites by divers from the Minnesota Department of Natural Resources (DNR) showed all of the previously stocked female mussels were holding viable larval mussels, marking a milestone in this recovery effort.

From its humble beginnings in a small rearing area at Genoa NFH, the program has produced millions of young mussels that were placed in recovery areas throughout the species' current and former range. Additionally, thousands of advanced growth mussels—those mussels over a year old and ranging in size from one inch to three inches—were stocked in areas in the Upper Mississippi River to create new breeding populations of this endangered species. During scheduled assessments in early fall of 2005, biologists detected viable larvae in propagated mussels in the wild, the offspring of mussels reared at Genoa NFH in cooperation with state partners and the U.S. Army Corps of Engineers.

This exciting news is confirmation that a major hurdle in recovery has been reached for this species. The next step that biologists hope to detect is second generation mussels located at the recovery sites that can be attributed to the initial stockings.

Roger Gordon, Genoa NFH



-photo by Mike Davis, Minnesota DNR

Arrows are pointing to the microscopic larvae that have been collected in a Petri dish. These larvae are from a Federally endangered Higgins' eye pearlymussel.

Fish and Wildlife Service Honored With "Outstanding Agency Partner" Award

Biologists Heather Rawlings of Alpena Fishery Resources Office (FRO) and Stewart Cogswell of Green Bay FRO, and East Lansing Field Office Project Leader Craig Czarnecki received the "Outstanding Agency Partner" award from the Conservation Resource Alliance (CRA), a non-profit resource, conservation, and development organization in Traverse City, Michigan. CRA works in the Northwest Lower Peninsula of Michigan to improve the natural resources of the area through the creation of partnerships to restore habitat and educate the general public and local policy-makers. The Fish and Wildlife Service has provided funding for numerous CRA projects through the Partners for Fish and Wildlife, Fish Habitat Restoration, Coastal, and Fish Passage programs. We value our partnership with CRA, and will continue to work with them to restore riverine, riparian, and upland habitats for the betterment of our natural resources, especially native brook trout.

Heather Rawlings, Alpena FRO

-USFWS photo by Heather Rawlings

Heather Rawlings (Alpena Fishery Resources Office), Stewart Cogswell (Green Bay FRO), and Craig Czarnecki (East Lansing FO; not pictured) received the "Outstanding Agency Partner" award from the Conservation Resource Alliance.

First Pallid Sturgeon Genetics Advisory and Population Status Meeting Held

Project Leader Tracy Hill and biologist Wyatt Doyle of the Columbia FRO attended the first Mississippi River and Missouri River pallid sturgeon informational meeting, designed for state and Federal agencies to share their work on this Federally endangered fish. The culmination of a decade of research and monitoring associated with pallid sturgeon gave attendees, including genetic experts, a complete picture of the pallid sturgeon's history and current status. Information will be used to make decisions about future stocking and potential concerns related to sub-populations that may exist throughout 2,000 miles of water. Attendees discussed their years of work related to commercial harvest, stocking success, and basic life-history of pallid sturgeon in different reaches of the river. This collection of information over a large range is vital to continued efforts to recover the pallid sturgeon.

Wyatt Doyle, Columbia FRO

Biologists Pitch In for Missouri River Relief

Columbia FRO biologists Nick Utrup and Jeff Finley participated as presenters and boat captains at the Booneville-Rocheport Missouri River Relief event. Local schools brought nearly 500 middle school children to hear various presentations from river professionals. Utrup showed the station's trawl boat *Phoenix* and Finley discussed the unique attributes of live shovelnose sturgeon and blue suckers, a state-listed species. Volunteers converged at the Franklin Island Conservation Area for the river clean-up phase of the event the following day. An estimated 300 volunteers cleaned 17 river miles, removing 10.5 tons of trash and debris. Eleven boats transported volunteers, including three from Columbia FRO

Staff also supported Missouri River Relief at Kaw Point Park, at the confluence of the Kansas and Missouri rivers. They provided a live river fish display and trawling demonstrations to more than 1,000 seventh and eighth graders, catching and later releasing several species of chubs, juvenile catfish, blue suckers, river carpsuckers, carp, gar, shovelnose sturgeon, and one hefty sized flathead. Missouri Department of Conservation (DOC) biologist Jake Allman was co-located with Columbia FRO with an electrofishing display and fish. Working in cooperation with the Missouri DOC allows for a clear distinction between our two agencies and the different gear types used in fish management.
Jeff Finley, Columbia FRO

-photo by Dory Colbert, Living Lands and Waters

Nick Utrup (far right) from the Columbia Fishery Resources Office captains *the Jen-nay* as volunteers prepare to board as part of the Missoui River Relief cleanup near Booneville, Missouri.

Biologists Participate in Missouri River Natural Resources Conference

Project Leader Tracy Hill, biologist Wyatt Doyle, and Fishery Program Supervisor Mike Oetker attended the fall meeting of the Missouri River Natural Resources Committee in St. Charles, Missouri. Meeting participants heard reports from state and Federal agencies regarding their river activities during the previous field season, discussed monitoring protocols that would be necessary to evaluate a spring rise of the Missouri River below the Gavins Point Dam, and enjoyed a field trip and Missouri style BBQ at the Columbia Bottoms Conservation Area. Wayne Nelson-Stastny was introduced as the group's new coordinator.
Tracy Hill, Columbia FRO

Scouts Get Banded at Seney NWR

Fish and Wildlife Service personnel presented "Get Banded" to more than 100 Girl and Boy Scouts as part of Scout Activity Day 2005 at Seney National Wildlife Refuge (NWR), in Michigan's Upper Peninsula. During hands-on activities, scouts learned how the bird banding program provides important information about birds that is useful in both research and management projects. They also learned that bird identification makes possible studies of dispersal and migration, behavior and social structure, life-span and survival rate, reproductive success, and population growth.

To demonstrate some of the data collected during typical banding activities, scouts tossed small artificial birds into a mist net and removed them with great care. Measurements were taken of each scout's arm and leg length, height, head circumference, and weight. Finally, each scout was fitted with a plastic wrist band with their own unique band number.
John Weisser, Marquette Biological Station

-GLFC

Gregg Baldwin, Marquette Biological Station, participated in "Get Banded" to Girl Scouts as part of Scout Activity Day 2005 at Seney National Wildlife Refuge. Scouts learned first-hand how the bird banding program provides important information about our avian friends.

Aquatic Species Conservation and Management

Large Wild Pallid Sturgeon Captured in the Lower Missouri River

Biologists Cliff Wilson and Wyatt Doyle from the Columbia FRO caught one of the largest pallid sturgeon captured in recent years during a September survey. The sturgeon was captured above Hartsburg, Missouri, at River Mile 161.2. Its fork length measured 37.60 inches and it weighed 7.93 lbs.

Wilson and Doyle passed the pallid sturgeon to a U.S. Geological Survey (USGS) crew from the Columbia Environmental Research Center, which made a small incision in the sturgeon to determine its sex. They found large portions of fatty tissue, indicating the fish was in good condition; however, the pallid sturgeon's sex could not be determined. The USGS crew implanted an ultra-sonic telemetry tag into the sturgeon which allows them to track the fish's movement in the Missouri River. Biologists are hopeful that this sturgeon will help us to better understand the life history and habitat needs of this endangered species.
Cliff Wilson, Columbia FRO

-USFWS photo by Wyatt Doyle
Cliff Wilson proudly shows off a large, wild pallid caught captured near Hartsburg, Missouri, during a fisheries assessment.

Lake Sturgeon Stocking Successful in Missouri's Large Rivers

Project Leader Tracy Hill participated in a meeting with the Missouri DOC to evaluate the state's 20-year lake sturgeon stocking effort. The original purpose for stocking lake sturgeon in Missouri waters was to establish self-sustaining populations. Several Missouri DOC researchers, district fishery biologists, and Hill met to determine how to evaluate the success of the stocking events and develop mechanisms to move forward with achieving the stated goals. Hill provided lake sturgeon data collected by the Columbia FRO to the group and shared information about Great Lakes lake sturgeon populations. This meeting provided an excellent opportunity to interact with biologists from the Missouri DOC and to explain the Fish and Wildlife Service's mission and efforts to assist with management of fishery resources in Missouri.
Tracy Hill, Columbia FRO

-USFWS photo
Corey Lee (left) and Andy Starostka pose with four lake sturgeon collected on the Missouri River providing visual evidence that the Missouri Department of Conservation's stockings are successful.

The Islands are Calling These Trout

Approximately 71,000 coaster brook trout won an all expenses paid trip to Michigan's Isle Royale National Park in September. Their trip included a midnight loading into tanks on trucks, a four-hour drive to Houghton, Michigan, and a three-hour cruise on board a National Park Service boat before they were released into Siskiwit Bay the following day. Iron River NFH raised the brook trout from eggs collected from their captive brood stock, which are descendents of wild coaster brook trout on Isle Royale. An additional 735 coasters traveled from Genoa NFH to Iron River NFH to meet up with their traveling companions.

These fingerlings are part of an ongoing program to bring the coaster brook trout populations on Isle Royale back to their historically healthy numbers. Iron River NFH Assistant Manager Kurt Schilling, Nick Starzl from Genoa NFH, and Lee Newman from Ashland FRO participated in this fun and exciting stocking activity.
Angela Baran, Iron River NFH

Extra Lake Trout Bound for Lake Michigan

September fish inventories at Iron River NFH reflected a 140,000 fish over-commitment of Green Lake strain of lake trout. These fish, needed to be stocked this fall due to rearing space limitations at the hatchery. Iron River biologists consulted with the Green Bay FRO to establish the best use of the fish and on November 3, staff from Iron River and Pendills Creek NFH's hauled the lake trout, weighing 3,150 pounds, to Traverse City, Michigan. The

fish were shore stocked in Grand Traverse Bay at the Maritime Academy site with assistance provided by nearby Jordan River NFH. The extra fish support the *U.S. v. Michigan* 2000 *Consent Decree* and add to the Fish and Wildlife Service's rehabilitation efforts in Lake Michigan.
Kurt Schilling, Iron River NFH

Fin Clipping Gets a Jump Start

Each year, all of the lake trout produced at the Iron River NFH receive various fin clips prior to being distributed to the Great Lakes. The fin clips or "marks" vary by year and by lake, make hatchery fish easily identifiable if they are captured, and allow management biologists to determine stock and year class performance within a particular lake. This year, fin clipping at Iron River began in October to allow for marking a group of fall fingerlings that were sent to Lake Michigan in November. A crew of six employees marked fish for 25 days. All in all, more than 558,000 fish received fin clips. This equals nearly 20,000 fish per day and more than 3,500 fish per person per day. Additional clipping will occur in January and February, but because employees got an early start, nearly 40 percent of the work is complete.
Kurt Schilling , Iron River NFH

One Species Down, One to Go

Lake trout spawning at the Iron River NFH was completed in October, to be followed by brook trout spawning in November. This year, Iron River NFH spawned a total of 760 female lake trout and collected more than 4 million eggs. We would like to thank the following people who not only helped to keep our heads above water with spawning, but assisted us at times with other fish culture duties: Jenny Walker from Genoa NFH, Wayne Talo from Jordan River NFH, Jonathan Pyatskowit from Ashland FRO, and Rick Nelson from La Crosse Fish Health Center (FHC).

This year's lake trout season was considerably easier and faster with the elimination of the Green Lake strain as a viable strain for the lake trout rehabilitation program. The Green Lake strain tends to spawn late and usually overlapped with brook trout spawning efforts. Eliminating this strain helped the hatchery save time—since they did not have to spawn these fish and keep unneeded eggs—and opened valuable raceway space in the brood building for other high priority strains of lake trout and brook trout.
Angela Baran, Iron River NFH

Hatchery Cry for Help Answered

The annual spawning of lake trout brood stock at the Sullivan Creek NFH has come to an end and as with every year, the staff received a few helping hands along the way. Rob Grant, Chief of Diversity and Civil Rights in the Regional Office, seized the opportunity to get out of the office and spent three slime-filled days helping. As always, staff from the Jordan River NFH near Elmira, Michigan, was also ready and willing to lend a hand with John Johnston, Paul Haver, Denise Johnston, and Tim Smigielski each spending a week. Tim Moore, from Mancelona, Michigan, who volunteered last year, came up for another week this year. Student Career Experience Program employee Jenny Walker from Genoa NFH spent a few days helping out during the last week of spawning.

The "spawning crew" from the Pendills Creek/Sullivan Creek NFH Complex includes assistant manager Crystal LeGault-Anderson, maintenance worker John Shuman, and biologists James Anderson and Tracy Roessner. The staff is always appreciative of the help that comes from across the region.
Tracy Roessner, Pendills Creek NFH

-USFWS
Robert Grant, Chief of Civil Rights and Diversity, helps sort through lake trout brood stock at the Sullivan Creek NFH. His smile seems to indicate that he enjoys his outing.

Fish Species Inventoried on International Wildlife Refuge

As part of the Fish and Wildlife Service's Challenge Cost Share program, biologists from Alpena FRO and Michigan DNR Lake Erie Management Unit teamed up to conduct the first fishery survey within the recently established Detroit River International Wildlife Refuge (IWR). The refuge boundary includes Michigan waters of the Lower Detroit River and Lake Erie. The last time a fishery survey was conducted in that area of the Great Lakes was back in the early 1980's. Many changes have taken place since that time including the spread of invasive species that have likely displaced or reduced the numbers and diversity of native species.

This survey represented a critical first step in identifying the status of fish species within the newly created Detroit River IWR and will aid the refuge in developing its comprehensive conservation plan.

The goal of this pilot project was to provide baseline information about species—both native and non-native—found within the refuge, which provides some of the last remaining natural wetland areas in the Detroit River and Western Lake Erie. Those nursery areas are critical to the early life stages of many species of sport fish as well as some state listed species. Past surveys identified more than 30 species of fish using those wetland habitats for either spawning or nursery areas.

During the early planning stages, biologists Gary Towns, Joe Robison, and Jim Francis of the Michigan DNR, Detroit River IWR Manager John Hartig, and Alpena FRO biologist Jim Boase identified eight areas along the western shoreline of Lake Erie that still had relatively large expanses of intact soft shorelines and were considered important for fish and wildlife. Unfortunately, crews sampled only five areas in 2005, but they plan to finish the remaining three areas in Lake Erie and add additional locations in the Detroit River for 2006.

During the week of September 12, crews collected a total of 46 different fish species in the nearshore habitats of Lake Erie, as well as young-of-the-year age groups of the major sport fish species such as walleye, largemouth bass, smallmouth bass, northern pike, and other sunfishes. One state listed species, the silver chub, was collected as well.
James Boase, Alpena FRO

-Photo by Dennis Tar

Bob Kavetsky (East Lansing Field Office), and Todd Somers and Jim Francis (Michigan Department of Natural Resources) pull a seine at the recently established Detroit River International Wildlife Refuge to provide baseline information about species, both native and non-native, found at the refuge.

Alpena FRO Completes 2005 Mid-lake Trout Survey

Staff from the Alpena FRO completed a mid-lake lake trout spawning survey on Yankee Reef in Lake Huron in October, but called off the spawning survey at Six Fathom Bank because of persistent bad weather. The goal of this survey is to collect abundance and biological data from spawning lake trout at index stations located on two mid-lake reef complexes. The Alpena FRO has conducted the annual mid-lake lake trout spawning surveys on these reefs since 1993. In addition, the Fish and Wildlife Service has stocked hundreds of thousands of lake trout yearlings on these two off-shore reefs in recent years.

Catch rates declined to an all time low at Yankee Reef this year. Total catch rates were down 67 percent, and catch rates at the north and south Yankee Reef sites were down 85 percent and 54 percent respectively, compared to 2004 data.

Crews set two 400-foot long, large-mesh gill nets on Yankee Reef for one night. They measured all lake trout collected, weighed them, checked for invasive sea lamprey wounds, sexed them, assessed them for maturity and visceral fat content, and sampled for ageing structures. Non-target fish species were worked up in a similar manner.

This year, the crew did not capture any unclipped, presumably wild adult lake trout at Yankee Reef, a departure from 2004 when unclipped fish were sampled at each of the five mid-lake sites and 13 percent of Yankee Reef fish sampled were unclipped. Low 2005 catch rates at Yankee Reef may indicate decreases in spawner abundance on this important off shore complex; however, low 2005 catch rates may also be a result of warmer than normal air and water temperatures that delayed arrival of spawning fish. Also, because of poor weather, the 2005 Yankee Reef survey was done 17 days earlier than in 2004. This difference in timing may account for some of the difference between 2004 and 2005.

Monitoring the abundance, stability, and quality of spawning lake trout populations on Six Fathom Bank and Yankee Reef is an important index of lake trout rehabilitation in Lake Huron. Six Fathom Bank and Yankee Reef were historically important lake trout spawning sites.
Aaron Woldt, Alpena FRO

Walleye Harvest at Rydell NWR Provides Bountiful Return

Fisheries crews from Genoa NFH and La Crosse FRO, with much appreciated assistance from Rydell NWR staff, completed fall walleye collection activities at the refuge during October. Crews harvested more than 34,500 six-inch fish for management projects for two Northern Minnesota tribes, Desoto NWR in Western Iowa, and state partners. These fish are used to enhance Federal, tribal, and state recreational fisheries projects, and are an important component in maintaining strong, viable fishing opportunities in areas where they are stocked. This program is supported directly by the Minnesota DNR, which supplies the newly hatched walleye fry to Genoa NFH for stocking into Clifford Lake on Rydell NWR.

Clifford Lake is unique in that it represents the only natural water body on a Region 3 refuge that is used extensively for fish production. This small lake is perfect for annual walleye production because of its shallow depth, which results in an annual winter kill that is necessary to eliminate all potential fish predators of newly stocked walleye fry. This annual winter "cleaning out" of older walleyes or other fish that may compete with the newly introduced fry optimizes production for this valuable sport and food fish. After spring stocking, the fish grow on natural food items within the 40-acre lake until fall's first frost signals fisheries crews that it is time to begin harvest operations.

Fish are removed from the rearing lake with several dozen hoop nets set by fishery and refuge crews, and transported daily to receiving waters across Minnesota and Iowa. These fish potentially represent thousands of recreational fishing hours in tribal, Federal, and selected state waters and are an important part of our fisheries cooperative management program in Region 3.

Roger Gordon, Genoa NFH
Dave Wedan, La Crosse FRO

-USFWS photo

Genoa National Fish Hatchery and Rydell National Wildlife Refuge staff lift hoop nets on Rydell's Clifford Lake to collect fingerling walleye for distribution to high priority Federal and tribal waters within Region 3.

Genoa NFH Enjoys a Successful Pan Fish Harvest

Cool temperatures and turning leaves signal the end of the 2005 production year for pan fish at Genoa NFH. Crews harvested ponds for yellow perch, black crappie, and bluegill to meet production requests made by state, tribal, and Federal agencies for assistance in meeting fish population objectives. Management objectives vary for each stocking site and species, and fisheries management plans are carefully constructed by Fishery Resources Offices for fish and egg requests, to ensure healthy fish communities and provide recreational fishing opportunities for the public.

In addition to recreational fishing, pan fish species have been used for research, tribal trust programs, and recently, for biological control of invasive common carp populations at Horicon NWR in East-central Wisconsin. This year, Genoa produced 163,660 bluegill, 58,498 yellow perch, and 39,100 black crappie. These fingerlings were spawned from captive brood stock in Genoa's nursery ponds in the spring. The fry grow all summer on zooplankton and other natural food produced in the pond.

Brood pan fish such as adult crappie are held in culture ponds year-round. After the fish naturally spawn and as the young fry grow, the natural pond food is supplemented with minnows produced in other hatchery ponds. At the end of the season, the ponds are harvested, and parents are separated from fingerlings. The young fish are then inventoried and shipped in distribution trucks to their new homes throughout the Midwest.

Jenny Walker, Genoa NFH

-USFWS

A net full of crappies are being removed from a culture pond at the Genoa National Fish Hatchery. The fish are used to meet management plan objectives.

Aquatic Invasive Species

Sea Lamprey Control Program Destroys Lampreys to Save Lake Trout

The Fish and Wildlife Service's Sea Lamprey Control Program continues to ensure sport fish rehabilitation in the Great Lakes and protects a fishery valued at more than $4 billion. During the 2005 field season, the Sea Lamprey Control program treated 38 Great Lakes streams (13 in Lake Superior, 13 in Lake Huron, 10 in Lake Michigan, and 2 in Lake Erie) with lampricide to eliminate larval sea lamprey populations. These treatments destroyed an estimated 15,284,000 sea lampreys including about 233,300 that would have metamorphosed to the parasitic phase in 2005 and entered the Great Lakes. There, each parasitic phase sea lamprey would have been capable of killing upwards of 40 pounds of lake trout during its year long life in the lakes. The Sea Lamprey Control program is conducted under contract with the Great Lakes Fishery Commission.
Dennis Lavis, Ludington Biological Station

-GLFC
A Fish and Wildlife Service technician applies lampricide to a Great Lakes tributary that is infested with invasive sea lamprey larvae.

Lake Huron Netting Turns Up No Ruffe

An annual fall netting survey targeting Eurasian ruffe at the only site where they were previously detected in Lake Huron, the Thunder Bay River, has found none for the third year in a row. An invasive fish species that was first found in the Great Lakes in Lake Superior in the 1980s, Eurasian ruffe are believed to have been accidentally transported to the Great Lakes in the ballast water of an ocean-going ship. Biologists discovered ruffe in Lake Huron in the Thunder Bay River in 1995 and in Lake Michigan in 2002.

The abundance of ruffe in the Thunder Bay River slowly increased, reaching an all time high in 1999, when they were the most abundant bottom dwelling fish captured during fall trawling surveys. In 2002, the Alpena FRO initiated a spring netting survey to remove adult spawning ruffe from the river before they could spawn. Ruffe were captured in the spring and fall of 2002 and spring of 2003 but have not been captured since. It is believed that Eurasian ruffe may no longer be present in the Thunder Bay area and Lake Huron based on survey findings since 2003. The possible removal of ruffe is a remarkable outcome considering the fact that established invasive species usually become a permanent fixture in the fish community.
Anjanette Bowen, Alpena FRO

Ruffe Range Remains Unchanged in Lake Superior

A fall aquatic invasive species survey detected no major range expansion of Eurasian ruffe or other invasives along the south shore of Lake Superior from Superior, Wisconsin, east to Paradise, Michigan, near Whitefish Bay. In addition, no new ruffe discoveries have been reported along the north shore by the Minnesota DNR or the Ontario Ministry of Natural Resources.

The Michigan DNR did capture an adult ruffe from Torch Lake, confirming minor ruffe expansion within the Keweenaw Waterway on the periphery of the ruffe range. Also within the waterway, the Michigan DNR reported unconfirmed angler captures of ruffe from the mouth of the Pilgrim River, and the Ashland FRO continued to catch ruffe from established transects in Pike Bay. Although ruffe continue to spread in the Keweenaw Waterway, individual trawl catches of ruffe remain comparable to previous year's catches. The only other aquatic invasive species captured in the fall survey included seven white perch from the Iron and Flag rivers, Wisconsin. Like most invasive fish, white perch and ruffe compete with native species.
Gary Czypinski, Ashland FRO

Great Lakes Indian Fish and Wildlife Commission Convenes Conference on Aquatic Invasive Species

Mark Dryer and Gary Czypinski of the Ashland FRO participated in a conference to encourage regional collaboration in controlling aquatic invasive species in the Upper Great Lakes. The two-day conference was hosted by the Great Lakes Indian Fish and Wildlife Commission to brainstorm new approaches to improve cooperation and collaboration among organizations actively engaged in managing invasives in the Upper Great Lakes Basin. Federal, state, tribal, and local organizations provided a summary of their control efforts and conference participants divided into several small breakout groups to discuss improvements in regard to coordination/communication, research, monitoring, and education. Streamlining information and communication was the main focus of attention; what, where, how, and by whom is invasives monitoring being conducted in the Upper Great Lakes Basin; comprehensive contact lists for Wisconsin, Minnesota, and Michigan were provided to all participants. The commission will also summarize the strategies discussed in each breakout group, and provide these to all participants. It is hoped that funding can be secured to implement the major strategies of common interest.
Gary Czypinski, Ashland FRO

Columbia FRO Partners with Big Muddy Refuge

Biologist Jennifer Johnson assisted technicians Adam Jones and Kyle Singer from the Big Muddy National Fish and Wildlife Refuge (NF&WR) in August by spraying herbicides on purple loosestrife, an invasive plant that can spread rapidly once established, crowding out native plants and destroying valuable wildlife habitat. During the growing season, a single plant may produce more than 100,000 seeds. The best time to control purple loosestrife is during mid-summer when the plant is easily recognizable and has just begun flowering.

The crew targeted the Jameson Island and Lisbon Bottoms units of the refuge, searching along the Missouri River banks, recording loosestrife locations, and spraying with herbicide. The Jameson Island unit consists of 1,871 acres of bottom land containing floodplain species such as cottonwood, willow, and box elder; across the river, the Lisbon unit consists of 2,013 acres of primarily young forests of cottonwood and willow. Combined, the two units provide 4,000 acres of public land for hunting, fishing, and exploring. Columbia FRO will continue to work with the Big Muddy NF&WR to improve the quality of riparian habitats.
Jennifer Johnson, Columbia FRO

-USFWS photo by Jennifer Johnson
Adam Jones and Kyle Singer from the Big Muddy National Fish and Wildlife Refuge spot treat newly established invasive purple loosestrife plants on the refuge. Columbia Fishery Resources Office biologist Jennifer Johnson (not pictured) assisted with the project.

Alcona County Grade Schoolers Learn About Aquatic Invasive Species

Biologist Susan Wells of the Alpena FRO presented information on aquatic invasive species to 40 fourth grade students in Michigan's Alcona County School District. The presentation included a preserved specimen of an adult sea lamprey, and plastimounts of round goby, Eurasian ruffe, and zebra mussels. Touching these props allowed the students to become more involved with the presentation and increased their awareness of how these invasive species came to the Great Lakes and how they can harm the Great Lakes ecosystem. The students learned about how to prevent the spread of aquatic invasive species and ways they can help educate others about the potential effects and the need to prevent their spread in the Great Lakes. The presentation was part of a larger program that included speakers from the U.S. Forest Service and U.S. Department of Agriculture, educating the students about our natural resources.
Susan Wells, Alpena FRO

-Les Thomas (MSU Extension)
Susan Wells shows students a preserved invasive sea lamprey during a school presentation.

Public Use

M/V Togue Returns to Alpena Lighthouse Festival

After a year's hiatus, the lake trout stocking vessel M/V Togue and her crew returned to the Alpena Lighthouse Festival in October. Over three days, Marine Engineer Bob Bergstrom and Ship Captain Mike Perry gave tours of the vessel. Staff from the Jordan River NFH began each tour with an overview of the lake trout rehabilitation program and a pictorial "tour" of the lake trout life cycle.

Unfortunately, the M/V Togue was not able to be at last year's festival because of scheduled dry dock repairs in Escanaba, Michigan. This was the sixth time the vessel was available for tours, and it was the only Great Lakes vessel at the festival.

Denise Johnston & Mike Perry, Jordan River NFH

-USFWS photo by Rick Westerhof

Festival attendees pose for a picture during their tour of the M/V Togue at the annual Alpena Lighthouse Festival.

Jordan River NFH Hosts Adventure Rage Race

From September 24 to 26, 28 teams participated in the 2005 Salomon/Moosejaw Adventure Rage at the Boyne Mountain Resort in Northern Michigan. The race is a 30 hour supported race that begins in Ellsworth and ends at Boyne Mountain, covering seven legs: 1) 22-mile canoe down the Chain of Lakes; 2) 35-mile bike from Bellaire to Kalkaska; 3) 16 - to18-mile orienteering course to find 13 points in the woods; 4) 13-mile bike from Kalkaska to the Jordan River NFH; 5) six-mile trek (walk or run) from the hatchery to Graves Crossing; 6) six-mile pack rafting down the Jordan River to Webster's Bridge; and 7) 12-mile bike from East Jordan to Boyne Mountain. Jordan River NFH served as a transition site and staging area for the teams. Hatchery manager Rick Westerhof gave tours, answered questions, and ensured the restrooms, water, and picnic tables were available. Many of the racers were extremely grateful for a "clean, normal restroom," water, and place to relax before the next stage of the race, as the racers were already in their 17th to 22nd hour of the race by the time they reached the hatchery.

The support teams also enjoyed the hatchery accommodations, especially compared to the last transition area, in the deep dark woods. The support teams took up most of the parking lot with chairs, tables, food, and gear for the racers. One support team even served a meal cooked over a propane stove. The entire group was so quiet, not even one permanent employee living on station knew they were there from 9:30 p.m. to 6 a.m. The first team finished in 25:37, almost two hours before the second place team. The last team finished in 29:53, just barely before time expired. Overall, the race was quite a success and the hatchery was glad to be part of it. We look forward to similar events in the future and hope the hatchery can be the "RAGE" of the area.

Rick Westerhof, Jordan River NFH

-Infiterra sports LLC

These two individuals participated in the 2005 Adventure Rage Race. The Jordan River National Fish Hatchery served as a transition site for racers.

Jordan River NFH Staff "Too Busy" at Hunting and Fishing Expo

John Johnston and Wayne Talo staffed a Fish and Wildlife Service display at the Northland Sportsman's Club Family Hunting and Fishing Expo, attended by about 1,500 visitors. Organizers hope to recruit the next generation of anglers and hunters through the Expo, so many booths and activities are geared to interest children. Jordan River's booth was no exception, offering fish tattoos and "hands on" displays of fish food and aquatic invasive species.

"It was so busy that we were unable to step away from the booth during the whole four hours," Johnston said. Sportsman's Club staff made sure the guys did not wither away though, rescuing John

and Wayne with hotdogs and drinks (Wayne loves hotdogs!). The trout tattoos and our replica of a lake trout with an attached invasive sea lamprey are always big draws. Jordan's display provides materials and insight on the Great Lakes lake trout rehabilitation program and hatchery operations.
Tim Smigielski, Jordan River NFH

-USFWS photo by Tim Smigielski
Wayne Talo staffs the Fish and Wildlife Service booth at the Northland Sportsman's Club Family Hunting and Fishing Expo.

Sullivan Creek Lake Trout Retire to Western Upper Peninsula Lakes

During two November afternoons, 424 lake trout brood stock were released into Golden Lake, managed by the U.S. Forest Service, and Long Lake, managed by the Michigan DNR. Both of these lakes are located near Crystal Falls and Iron River, in the Western Upper Peninsula of Michigan. The lucky lake trout, hand picked by staff for the occasion, were of the Traverse Island Wild strain of Lake Superior lake trout. The fish were seven-year-olds averaging nine pounds and 26 inches in length.

The Fish and Wildlife Service no longer needs the eggs of the Traverse Island Wild strain of lake trout for the Great Lakes Lake Trout Rehabilitation Program. Other strains of lake trout have been identified as a higher priority for limited rearing space.

Located in the Hiawatha National Forest, Golden Lake comprises 285 acres of water up to 100 feet deep. Long Lake is in a state forest area and contains 60 acres of water up to 105 feet deep. Both have had historical lake trout populations and will provide excellent habitat for the retired Sullivan Creek NFH brood stock.

The hauling and stocking of brood fish from Sullivan Creek NFH involves long days and lots of work. Assistant Project Leader Crystal LeGault-Anderson began work at 4 a.m. to get the two small fish trucks ready to load. At 5 a.m., biologists Tracy Roessner and James Anderson, along with maintenance worker Johnny Shuman arrived to help load the fish and then drive them to the lakes. Since the fish are too big to go out the tank gates, each individual fish was netted out of the trucks and released. All of the work is definitely worth it when you can see the lake trout swim away from the truck and into their new homes – a real lake!
Crystal LeGault-Anderson, Pendills Creek NFH

Columbia FRO Presents Fish Sampling Results to Fort Leavenworth

Columbia FRO staff presented preliminary results from spring and summer sampling to Fort Leavenworth resource management officials. FRO staff conducted surveys to determine the presence or absence of endangered pallid sturgeon in the section of the Missouri River that borders Fort Leavenworth.

Catches consisted primarily of shovelnose sturgeon, smallmouth buffalo, shortnose gar, silver chubs, and young-of-the-year channel catfish, blue catfish, river carpsuckers, and freshwater drum. Sampling the waters associated with Fort Leavenworth has given the Columbia FRO the opportunity to work with the Department of Defense in an attempt to improve the health of the fort's aquatic resources, which provide quality fishing for the families living there. Crews also sampled two of the fort's small impoundments to help improve recreational fishing opportunities.

Department of Defense Environmental Division employees attending the presentation included Environmental Protection Specialist Judy Wimberg and Natural Resources Specialist Matt Nowak. The group discussed future cooperative projects between the Fish and Wildlife Service and the DOD, including outreach and aquatic educational programs, a key component of the DOD environmental program. Fort Leavenworth staff and families benefit from the presence and expertise of the Fish and Wildlife Service at these events. Columbia FRO is currently finalizing a report summarizing sampling data from 2005, and is also providing project proposals for 2006.
Geno Adams, Columbia FRO

End of Fair Season Means Good Food, Great Outreach

For the fourth consecutive season, Genoa NFH took part in the last county fair of the season in Wisconsin, staffing an outreach booth and aquarium display at the Vernon County Fair. Members of the Friends group participated to recruit new members and increase their visibility among the community.

Over 19,000 people attended the Vernon County fair this year, and many stopped to see the miniature aquatic community in the hatchery aquarium. Both live mussels and fish were displayed, and the biggest hits were the lake sturgeon, or "dinosaur fish" as fairgoers often called them. Sunglasses, coloring books, and fish tattoos were also in high demand with the kids, and many educators requested a copy of the Sport Fish Identification poster. Of course, to take in the ambience of the fair, staff all had to sample some of the finest culinary arts this side of Madison, Wisconsin. According to popular opinion, the gyros and funnel cakes were exceptionally good this year!

Doug Aloisi, Genoa NFH

-USFWS

Jenny Walker talks with visitors about the fish raised at the Genoa National Fish Hatchery during the local county fair.

Neosho NFH Staff Give Interviews

Neosho NFH manager Dave Hendrix and assistant manager Rod May set up a booth at Wildcat Park in Joplin, Missouri, on October 1. The Outdoor Channel was there doing interviews for the "Host your own fishing show contest." Several hundred people came by to see the display and ask questions about the Neosho NFH.

Roderick May, Neosho NFH

-USFWS

David Hendrix (left) and Roderick May staff a booth at Wildcat Park in Joplin, Missouri, as part of a local outdoor channel event.

Neosho NFH Picnics with Friends

The annual Neosho National Fish Hatchery/Friends of the Neosho National Fish Hatchery picnic was held during a sunny Sunday in October on the hatchery grounds. Because there was a chill in the air, everyone met at the shop. Each member brought one hot dish and a dessert. The event was a big success, and a local reporter for the Neosho News even attended and wrote an article about the event and the hatchery.

Roderick May, Neosho NFH

Fish and Wildlife Service Biologist Addresses Rotary Club

Biologist Aaron Woldt of the Alpena FRO was invited to speak at the October 11 meeting of the Rotary International Club of Alpena. Rotary International is an organization of business and professional leaders that provides humanitarian service, encourages high ethical standards, and helps build goodwill worldwide. Woldt gave a presentation describing the Fish and Wildlife Service's mission, commitments, roles in Great Lakes resource protection, and current Alpena FRO projects including: 1) the annual fishery independent lake whitefish survey in 1836 Treaty waters; 2) the basin-wide Lake Huron lake whitefish tagging study; 3) the mid-lake lake trout assessments at Six Fathom Bank and Yankee Reef; 4) lake sturgeon tagging and tracking studies in Lake Huron and the Lake St. Clair corridor; 5) aquatic invasive species monitoring and control efforts in Lake Huron; and 6) current Private Lands and Fish Passage work.

Approximately 60 to 70 local community members and businessmen and women attended the meeting. Woldt fielded questions regarding Alpena FRO operations and responsibilities, local fishing opportunities, and double-crested cormorants. Woldt's presentation was well received, and many Rotary members expressed thanks for the high quality of information provided regarding local natural resources.

Aaron Woldt, Alpena FRO

Cooperation with Native Americans

Sturgeon Restoration Successful at White Earth Reservation

The lake sturgeon restoration effort at the White Earth Reservation continues to show increased numbers and growth. Biologists collected 15 lake sturgeon from White Earth Lake in 2005, a significant increase from 2003 when they collected only two lake sturgeon. A majority of the fish were similar in size ranging from 12 inches to 15 inches. One large fish, measuring 27 inches, was also collected. White Earth DNR had three other reports of juvenile lake sturgeon being caught on hook and line. These are all signs of great success for lake sturgeon restoration on White Earth Lake and in the Red River watershed.

On a related effort, the Minnesota DNR netted 19 (8-24 inch) lake sturgeon on Round Lake this summer. Round Lake is currently the only other lake on the White Earth Reservation being stocked with lake sturgeon. During the 2003 netting survey, White Earth DNR and La Crosse FRO collected only four lake sturgeon on Round Lake. The 2005 data will be the basis for a fishery status report that will be prepared this winter. The report will update recommendations addressing lake sturgeon restoration on the White Earth Reservation.

Scott Yess, La Crosse FRO

-USFWS

Biologists from the White Earth Department of Natural Resources and La Crosse Fishery Resources Office carefully remove a young lake sturgeon from a net , evidence of a successfull stocking project on White Earth Lake.

Biologists Begin Annual Sturgeon Survey on the Menominee Reservation

The La Crosse FRO began the annual lake sturgeon survey on Legend Lake of the Menominee Indian Reservation on October 5. Gill nets were set overnight for two nights in the first of three weeks of sampling scheduled for this fall. Crews sampled 77 lake sturgeon up to 53 inches and 31 pounds in size. Captured lake sturgeon were tagged with passive integrated transponders (PIT). These tags allow biologists to track individual fish. Nearly half the fish captured were tagged in previous years of sampling. Additional sampling this fall will allow biologists to conduct a population estimate and set a harvest quota for the 2006 sturgeon season.

Lake sturgeon management on the reservation follows a plan produced by a multi-agency committee formed in 1992 to enhance Menominee Reservation lake sturgeon populations. The first annual population survey was conducted on Legend Lake in the fall of 1996, when only one lake sturgeon was collected after a full week of netting and electrofishing. The lake sturgeon population has grown to an adequate size to support a limited fishery.

Ann Runstrom, La Crosse FRO

-USFWS

La Crosse Fishery Resources Office biologists collect information on the lake sturgeon population in Legend Lake to assist the tribe to set safe harvest quotas.

Coded-wire Tags Extracted from Lake Trout

During October, biologist Adam Kowalski extracted and read coded-wire tags, which are microscopic metal tags placed in the snouts of juvenile lake trout. The lake trout were collected during the spring fishery independent lake whitefish survey conducted by the Alpena FRO. Kowalski also extracted and read tags from lake trout sampled by the Chippewa Ottawa Resource Authority. Coded wire tags are extracted by cutting lake trout snouts into smaller and smaller pieces until the tag can be seen and removed. They are read under a microscope, and each tag's unique number is recorded. The tag number, when compared to stocking records, yields information such as stocking location, stocking date, fish age, fish strain, and hatchery of origin.

Kowalski removed and read more than 100 tags from approximately 125 heads. Not all adipose clipped lake trout contain coded wire tags, because some lake trout

shed their tag. Additional lake trout heads from the Bay Mills Indian Community, Michigan DNR creel program, and the Alpena FRO fall surveys will be studied. Data collected from lake trout tags are used to determine harvest limits, stocking locations, movement patterns, and post stocking survival rates of various hatchery practices.
Adam Kowalski, Alpena FRO

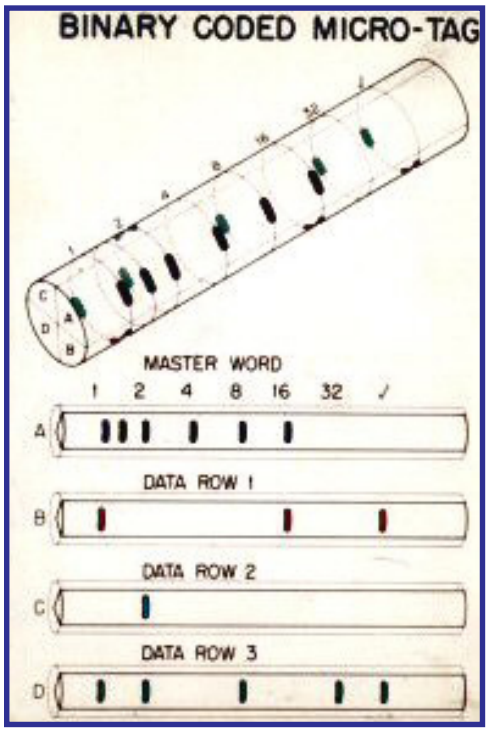


Diagram of a coded-wire tag showing the bionary coding inscribed on tags.

Surveying Walleye with Great Lakes Indian Fish and Wildlife Commission

Frank Stone recently finished an eight-week project assisting the Great Lakes Indian Fish and Wildlife Commission in determining recruitment levels of juvenile walleye. The objectives of these surveys were to estimate relative abundance of young-of-the-year walleye in several lakes of northern Wisconsin and Michigan. The data from these surveys will be used in conjunction with spring population estimates to set safe walleye harvest levels for the 2006 spearing season. During this period, Stone conducted fishery surveys on 30 lakes.

These sampling efforts take place at night, when walleye activity is the highest and catch efficiency is maximized. Using a boat electrofishing system, fish collection is relatively fast and efficient. Both length data and scale samples are collected. These data reflect the lake's recruitment values and are combined with the spring population surveys to yield the information needed to help determine the number of adult walleye that can be safely harvested.
Frank Stone, Ashland FRO

Tribal Officer Tours Jordan River NFH

Wayne Talo provided a facilities tour of the Jordan River NFH to Officer Jim Petoskey of the Grand Traverse Band of Ottawa and Chippewa Indians. In addition to a tour of the culture facilities, Petoskey saw the hatchery website and a video slide show detailing hatchery operations and the construction of the M/V *Spencer F. Baird*, which is to replace the M/V Togue as the offshore fish distribution vessel in the summer of 2006. The Jordan River NFH is always interested in establishing new contacts and strengthening old ones within the resource conservation community.
Wayne Talo, Jordan River NFH

-USFWS
Wayne Talo (right) provided Officer Jim Petoskey from the Grand Traverse Band of Ottawa and Chippewa Indians with a tour of the Jordan River National Fish Hatchery.

Leadership in Science and Technology

Success! First Endangered Winged Mapleleaf Mussels Cultured

For the first time, Federally endangered winged mapleleaf mussels have been artificially propagated and recovered from culture cages. A process that has taken over a year to accomplish. In September 2004, SCUBA divers and snorklers from the Minnesota DNR, Macalester College, National Park Service, and the Twin Cities Field Office searched the St. Croix River, the last known location of the reproducing winged mapleleaf mussels. On this sunny fall day, divers found two female mussels carrying larvae (gravid). The females were taken to Macalester College in St. Paul, Minnesota, where they released their larvae (glochidia). These glochidia were then rushed to Genoa NFH where the staff was waiting with anticipation to introduce the glochidia to 100 eight-inch channel catfish being cultured just for this purpose. For the winged mapleleaf mussel to complete its life cycle, the glochidia must attach to the gills of channel catfish, where they undergo a metamorphosis to become juvenile mussels. The small mussels break free from the fish's gills and settle to the river bottom to begin life on their own.

You may ask what makes the winged mapleleaf mussel different from other mussel species that the Mussel Coordination Team have cultured in cages in recent years. The answer is that winged mapleleaf glochidia attach to the gills of the channel catfish in the fall and remain attached all winter before dropping off the fish in the late spring. Glochidia from other propagated mussel species attach during the spring and drop off in early summer. To mimic the natural cycle of the winged mapleleaf mussel, infested channel catfish were held at Genoa NFH in a recirculation tank with a chiller unit to duplicate water temperatures recorded from the St. Croix River.

In May 2005, as the waters of the St. Croix warmed up, crews acclimated the channel catfish to the warming waters and then placed them in cages on the bottom of the river. Divers removed the channel catfish in late June, leaving the juvenile winged mapleleaf mussels in the river to continue growing in the cages. In Early October, these cages were checked and the results were rewarding. Divers recovered 11 juvenile mussels from one of the culture cages. The juveniles were small, measuring between 0.1 and 0.2 inches.

Building on this success, crews collected three new gravid winged mapleleaf mussels in September 2005 and infested 300 eight-inch channel catfish with their glochidia in efforts to produce and harvest even more juveniles next year.
Tony Brady, Genoa NFH

-USFWS
These juvenile winged mapleleaf mussels were cultured in cages that were placed in the St. Croix River. The tip of a car key indicates the size of the juveniles.

Bergthold Presents Catfish Poster at Fisheries and Wildlife Meeting

In October, Columbia FRO technician Casey Bergthold attended the 59th annual conference of the Southeastern Association of Fisheries and Wildlife Agencies, an organization composed of 16 state fish and wildlife agencies from the Southeastern United States, Puerto Rico, and the U.S. Virgin Islands, in St. Louis. Bergthold presented his poster "*Evaluation of Potential Environmental Factors Influencing Blue Catfish and Channel Catfish Abundance and Growth at Early Life History*," co-authored by FRO staff Wyatt Doyle, Nick Utrup, and Tracy Hill using data collected from the Missouri River under the Pallid Sturgeon Recovery program. Extrapolated juvenile catfish data helped evaluate blue and channel catfish growth and abundance as a function of water temperature and flow rate. Thus far, the data suggest a positive correlation between spawning success of channel catfish and a spring rise. This information will serve as a baseline to be combined with impending data and analyzed to make more conclusive judgments in the future.
Casey Bergthold, Columbia FRO

I Do My Electrofishing at Night

Night-time electrofishing is known to produce greater numbers and different species of fish that congregate in near-shore habitats at night and are nocturnally active. Until this season, Columbia FRO has never sampled the Lower Missouri River using night-time electrofishing. In June, our electrofishing boat was outfitted with lights and the crew began using this technique to analyze fish populations in side chutes and the adjacent main river channel. Since then, weekly sampling trips to one of three sites used both day and night electrofishing techniques. We hope this information will help us determine if underrepresented species were found more frequently at night. The data is currently being analyzed to see if there is a significant difference. General observation of the data suggests blue sucker, sauger, and big mouth buffalo were more common in nighttime samples than in daytime samples; however, fewer gar, gizzard shad, river carpsucker, and other fish that typically dominate daytime samples were observed.

Jeff Finley, Columbia FRO

-USFWS

Columbia Fishery Resources Office's crew set up their electrofishing boat for night work on the Missouri River.

Lake Trout Brood Stock Play Tag

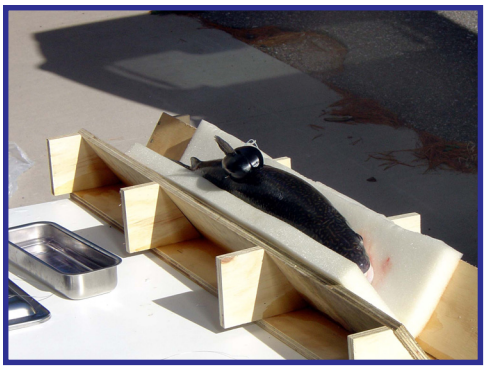
A select few brood stock lake trout from Sullivan Creek NFH were recently chosen to test out a new type of tag for a U.S. Geological Survey (USGS) study. Roger Bergestedt, a USGS biologist from the Hammond Bay Biological Station in Millersburg, Michigan, and Charles Krueger, the Science Director from the Great Lakes Fishery Commission in Ann Arbor, Michigan, placed their prototype tags on six captive Seneca Lake strain lake trout.

What makes these tags so special? After a determined amount of time, they will pop off of the fish, float to the water surface and give off a radio signal so that they may be retrieved. If the tags work, they will be put onto different strains of wild lake trout in the Great Lakes. The tags will measure depth and water temperature, allowing biologists to see any major differences in habitat use between strains.

The six brood stock selected for this test were all about 3 ½ pounds, which is the target size of the wild fish to be tagged. Each tag was set to "pop off" at a different time interval—the first after one day, the second after four weeks, the third after eight weeks, the fourth after 16 weeks, the fifth after 32 weeks, and the sixth should pop off after one year. The brood stock will also be monitored to ensure that the tags do not cause a disruption in their normal behavior.

If the tags work and the study proceeds, within the next few years the technical committees from each lake will have better information to base decisions, such as which strains to stock in the different areas of each lake.

Tracy Roessner, Pendills Creek NFH



-USFWS

This lake trout has just been fitted with a new type of dorsal fin tag. This tag will release from the fish and float to the surface for recovery after a designated time period .

Water Quality a Concern for Ozark Cavefish

The state of Missouri routinely downloads information from its water sampler in the Harrell Spring spring-box, an important source of culture water for the Neosho NFH. The machine takes samples and analyzes them on a continual basis throughout the month and stores the information until downloaded into a laptop computer. The Federally threatened and state endangered Ozark cavefish is found at this location and information collected will help determine what parameters this species needs.

Roderick May, Neosho NFH

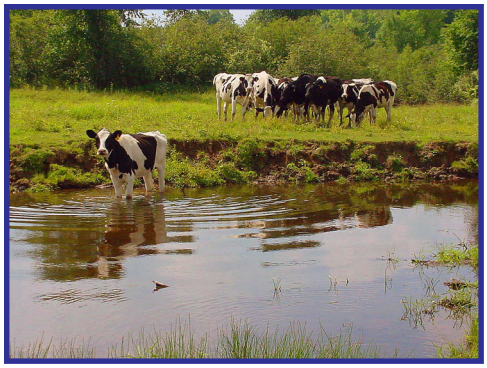
Aquatic Habitat Conservation and Management

Foytik Stream Restoration Project Completed

The Partners for Fish and Wildlife program provided funding to restore 1,500 feet of stream for native brook trout on the Foytik tributary of the Little Elk River. Located in Price County, Wisconsin, the Little Elk River is a cold water trout stream that had been degraded by years of cattle access. During the initial survey of the project, biologists found just a few brook trout. Now, with the stream improvements, it is expected that brook trout populations will flourish in this reach of the river.

The project entailed narrowing the river's course, strategically placing large boulders, and creating riffles, meanders, and pools. Lunker structures placed at strategic locations along the stream bank will provide overhead cover for brook trout and other fish species. The stream courses through a 40 acre section of pasture, so crews built a fenced cattle lane along the edge of the property to keep the cows out of the riparian area, but still allow access to pastures beyond the stream. To minimize erosion at the stream crossing point of the cattle lane and provide an area for the cows to drink, a rock crossing was installed. Biologists also stabilized and seeded areas disturbed by the construction. The landowner and many partners are extremely pleased with the new look of the stream and surrounding landscape. Partners on the project include the Price County Land Conservation Department, Wisconsin DNR, and Natural Resources Conservation Service.

Ted Koehler, Ashland FRO



The Foytik stream restoration project eliminated cattle access to 1,500 feet of the Little Elk River. The river was returned to a natural meander with cattle access restricted to a rock crossing point (below).

-USFWS photos

Ashland FRO Partners Program Details 2005 Accomplishments

Fiscal year 2005 was another successful one for the Ashland FRO's work with the Partners for Fish and Wildlife program. Biologists completed four instream fish habitat restoration projects, replaced three culverts that inhibited fish movement, and completed 17 wetland restoration projects in the eight-county region of the Ashland FRO. Upland restoration, which will benefit migratory birds, also took place on 13 of the wetland restoration projects. This year the number of wetland restoration projects increased and the office more than doubled the number of fishery related projects.

Fish and wildlife were the biggest winners, with 239 acres of wetland habitat, 156 upland acres, and 13.5 miles of stream restored or enhanced. Twenty-three miles of stream reopened to fish passage. This year's restorations and habitat protection not only benefit migratory waterfowl such as wood ducks, and fish such as brook trout, but also scores of other species from aquatic insects to grey wolves. Stream miles and wetland acres restored far exceed last year's totals, a result of hard work by numerous agency partners and Fish and Wildlife Service staff, but most of all, because of the generosity of many landowners and their commitment to fish and wildlife. To complete the habitat work, partners matched $45,000 from the Partners for Fish and Wildlife program with $433,560. Partners included individual landowners, county land conservation departments, the Natural Resources Conservation Service, tribes, and the Wisconsin DNR.

Wetland projects ranged from one acre to 115 acres. Two of the wetland projects were completed in partnership with tribes, one with the Lac Courte Oreilles Band of Lake Superior Chippewa and the other with the Forest County Potawatomi Community. Working with Galligan Farms and Trout Unlimited, Ashland FRO personnel improved brook trout habitat on Whittlesey Creek by installing engineered log jams. Many of the wetland projects included acres of enhanced uplands for waterfowl nesting cover. This year's projects all contribute positively to fish and wildlife resources and will provide habitat for many different species for years to come.

Ted Koehler, Ashland FRO

Fish Passage Improved on Little Ocqueoc River

On October 24, the Presque Isle County Road Commission completed a culvert replacement at the Silver Creek road crossing on the Little Ocqueoc River in Northern Michigan. Alpena FRO biologist Susan Wells and Kris Bruestle from Huron Pines Resource Conservation & Development (RC&D) oversaw the project, and funding was provided by the Region 3 Fish Passage program, Presque Isle County Road Commission, and Huron Pines RC&D.

The project identified two undersized and perched culverts that hindered native brook trout passage in the Ocqueoc River watershed. In addition to impeding fish movement, the aging and undersized culverts allowed large amounts of sediment to enter the system during high water events when the water is backed up by the small culverts and floods the gravel roads. Partners replaced the failing culverts with a bottomless culvert constructed from a railroad tanker car, reducing cost, providing durability, minimizing erosion, and allowing for unimpeded fish access to upstream habitat.

Susan Wells, Alpena FRO

-USFWS photo by Susan Wells

This bottomless culvert replaced two undersized, perched culverts on the Little Ocqueoc River.

Exploring Southwest Iowa's Erosion Control Structures

Biologist Nick Frohnauer toured several stream grade control structures (GCS) in Southwest Iowa in connection with Columbia FRO's Fish Passage program. He learned about the history, ecology, and current happenings on Southwest Iowa streams; saw a variety of grade control structures; visited past projects that the Fish and Wildlife Service has helped fund; strengthened current relations and developed new partnerships; and sought out potential future projects.

Chris Larson, the Iowa DNR regional biologist, took Frohnauer on a tour of various GCS's on several southwest Iowa streams. This area of Iowa is unique in that it is made up of loess soils, which can be highly productive, but are very susceptible to erosion. Many of the streams in this region are experiencing erosion problems, not only causing problems for landowners, but also has put approximately 800 bridge crossings at risk for structural damage. This became readily apparent after flooding events in the early 1990s. As a result, the region built GCSs to protect these crossings. Unfortunately, these steep, 4:1 slope structures, more than 400 of which have been built since the 1990s, caused population declines in numerous fish species. Over the past several years, the Iowa DNR has worked with a local non-profit organization, Hungry Canyons Alliance (HCA) which oversees construction of GCS, to develop a protocol for structures to allow fish migration. These new structures, called weirs, are built with a gentler 20:1 slope that allows for fish passage beyond the structure.

Larson also showcased alternatives to these weirs that are very similar to the fish ladders seen on large dams out west but on a much smaller scale. It was agreed that the current 20:1 structures are a better option as they allow fish to pass more easily, were less expensive to build and more aesthetically pleasing, and provided a better hydrologic fit for the area.

The visit included some project sites the Fish and Wildlife Service helped fund. Several of these are on Turkey Creek in Cass County, Iowa, where Iowa State University graduate student Mary Litvan is doing monitoring and assessment.

Larson and HCA recently prioritized GCS for funding in the next few fiscal years. Larson explained the ranking system and other factors used in prioritizing the structures. Potential future projects that qualify for Fish and Wildlife Service funding are currently being sought. One project is the Natural Gas Pipeline Company of America's pipeline across Seven Mile Creek in Montgomery County, Iowa, that is at risk of damage from streambed erosion. The company is teaming up with HCA to build a new weir to protect the pipeline and replace a nearby 4:1 sloped structure.

Nicholas Frohnauer, Columbia FRO

-USFWS photos

The slope at this site on Turkey Creek was modified from a 4:1 slpe (left) to a 15:1 slope (right). A study is underway to compare fish passage between 15:1 and 20:1 slopes.

Field Work Completed for Missouri River Habitat Assessment

Columbia FRO completed its 2005 field work for the Habitat Assessment and Monitoring Program in early October. The program is intended to monitor man-made aquatic habitat improvement sites on the channelized portion of the Missouri River. These sites are constructed by the Army Corps of Engineers to increase the diversity of aquatic habitats found in the Missouri River. The river lacks specific habitats critical to the Federally endangered pallid sturgeon.

Sampling comprised of two major components, biological and physical. The FRO conducted the biological site sampling, primarily targeting fish, along with other state and Federal agencies while USGS and Corps crews conducted physical mapping. Columbia FRO's field work for 2005 consisted of 500 "sets" or gear deployments of eight different gear types on six selected bends. The different gear types sampled multiple habitats at a constructed site.

Testing new gears and deployment techniques will continue during the 2006 field season where sampling will be substantially more robust for both sampling gears and quantity of habitats sampled. Monitoring will also provide the Corps construction engineers with feedback on how fish are responding to these constructed sites and how to get the best biological response from each location.

These results of the assessment project will help to recover an endangered species, protect sensitive communities by creating critical lost habitats of the Missouri River, and determine best management practices for sustaining fish populations into the future.
Andrew Starostka, Columbia FRO

Columbia FRO Biologists Serve on Regional Watershed Committee

In the spring of 2005, Region 3 assembled a committee of regional office and field Fisheries staff to address issues relating to the implementation of a more watershed-based approach to some activities in the Fisheries program. Nick Frohnauer and Joanne Grady represent the Columbia FRO on the committee, which broke its task into three charges. The first charge was finding current or potential projects with a watershed/geographical approach for potential funding on the national level, and helping guide our development of a protocol for watershed plans. The second charge was developing a protocol for developing watershed plans. The last charge was revising the current Fish Passage funding process. Grady and Frohnauer are addressing charges 2 and 3. Currently, charge two has a draft on preparing watershed/joint venture plans and is working on ranking criteria, gathering information, prioritizing watersheds, and approaching potential partners. Charge 3 has a process developed for 2006 funding that will be adjusted to better fit a watershed plan.
Nicholas Frohnauer, Columbia FRO

Ashland FRO Participates in Culvert Workshop

Ashland FRO staff participated in a culvert workshop sponsored by the Bad River Watershed Association, a group formed in 2002 to promote citizen stewardship of the watershed and to assist local, state, Federal, and tribal governments in effectively managing the system. One of the projects the association is undertaking is assessing some 1,100 culverts in the 700,000 acre Bad River watershed in northern Wisconsin. Within this watershed are 1,345 miles of perennial streams and another 835 miles of intermittent waters. Association members have surveyed approximately half the culverts.

The purpose of the workshop was to inform town boards and road crews within the watershed about the culvert assessments and how they can participate in the work. They were also told about potential funding sources for replacing culverts that need work, especially culverts that hinder fish passage. Attendees identified several culverts as problems. Along with Ashland FRO, representatives from the Wisconsin DNR, Wisconsin Department of Transportation, and Wild Rivers Chapter of Trout Unlimited attended.
Glenn Miller, Ashland FRO

Workforce Management

Teens Look into the Deep Searching for a Career

GENOA, Wis. — "Look at that big one!" yelled Shawn Schaitel, 16, pointing at a large-mouth bass about the size of his arm. It lurked just beneath the surface of an algae-filled, green-tinted pond at Genoa National Fish Hatchery. Schaitel, a junior at Melrose-Mindoro High School, spent the morning at the hatchery along with Bailley Anderson, 16, of Arcadia, Wis., and Phillip Cathey, 15, of Independence, Wis. The three avid anglers got a tour of the hatchery from Nick Starzl, a U.S. Fish and Wildlife Service fisheries biologist. But they also got the hands-on-fish experience of a day in Starzl's work life. They were there as part of the Disability Mentoring Day 2005, "a national effort to promote the employment of persons with disabilities." Schaitel loves fish so much he's doing an independent learning project focused on aquaculture. Anderson's family has three ponds on its property stocked with many pan fish and walleye, which have found themselves at the end of her line. Cathey snagged a 24-pound striped bass last summer in a river near his grandparents' house in Georgia.

Consensus: A bad day at the hatchery beats the best day at school. Except it was a perfect day at the hatchery, with clear skies and plenty of sun. Even better, its harvest season — the tens of thousands of eggs that arrived in February have grown into adolescent fish, swimming furiously around the dozens of enormous tubs at the complex, waiting to be shipped away to life on the outside. The rainbow trout are going to Fort McCoy, to be stocked in ponds for people to catch. Coaster brook trout will be sent, among other places, to the Great Lakes to live in the deep. "See this," Starzl said, holding a toothpick-sized perch minnow, "This is the baby. Now, let's meet Mom and Dad." He reached into a black plastic bucket and pulled out an adult perch, the same black vertical stripes and yellow tint as the minnow, except ten times larger. Anderson said she most enjoyed "all the different kinds of fish I'd never seen," including lake sturgeon, channel catfish and many varieties of endangered mussels. Cathey said, "It's pretty cool to see how they raise the fish." Schaitel said the trip makes him want to be a fisheries biologist, mainly because of the hatchery's mission to grow endangered fish species. He's also considering a career in fish farming. "But I'm more interested in saving fish than raising them up to kill them," he said.

Dan Simmons, La Crosse Tribune - used with permission

-USFWS

Biologist Nick Starzl shows students the art of cleaning rainbow trout tanks as part of *Disability Mentoring Day*.

Jordan River NFH Staffs Non-Traditional Math/Science Career Expo

Rick Westerhof and Wayne Talo talked to approximately 100 eighth-grade boys from local schools about careers in Fisheries with the Fish and Wildlife Service at the Raven Hill Discovery Center in East Jordan, Michigan. The boys learned about the academic skills required for success in a hatchery setting (basic math and algebra, verbal and written communication skills, and some familiarity with office software) which are also applicable to many other careers. They also learned that a good work ethic, in addition to the ability to work well within a diverse workforce, is critical. Rick discussed job opportunities within the Fish and Wildlife Service, salaries, and how relocation is a fact of life for many career employees. Background was presented on the lake trout rehabilitation program and the invasive Sea Lamprey Control program, and lastly, they were guided through a basic aquaculture problem – doing a fish inventory.

Wayne Talo, Jordan River NFH

Columbia FRO Welcomes Volunteer Library Assistant

Columbia FRO welcomed volunteer library assistant Casey Schacher on September 22. Casey comes to Columbia from Chicago, Illinois, where she completed her undergraduate degree. She is currently pursing her Master's degree in Library Science at the University of Missouri-Columbia. Casey will update the station's online large river literature reference database and add recent publications necessary to work on the Missouri River. Casey has also expressed an interest in cataloguing the 30-year collection of Missouri and Mississippi river science and management documents.
Jennifer Johnson, Columbia FRO

University of Missouri Student Shadows Biologist

Joni Vanderflught, a student in the Techniques for Fisheries Management and Conservation class at the University of Missouri, spent a day shadowing Columbia FRO biologist Jennifer Johnson and technician Ryan Tilley. Joni assisted in seining for the Pallid Sturgeon Assessment program near Glasgow, Missouri, collecting habitat information, and identifying and measuring captured fish. By the end of the day, she could easily identify at least five of the common species captured that day. Joni also got a first hand glimpse of the "flying carp" she had heard about, when several of the invasive silver carp landed in the boat. As part of her assignment, Joni interviewed Johnson about a fishery biologist's education, experience, and job duties. Joni enjoyed her day on the river and expressed interest in volunteering with the Fish and Wildlife Service in the future. The Columbia FRO was happy to have Joni for the day and looks forward to future outings with students.
Jennifer Johnson, Columbia FRO

-USFWS photo by Jennifer Johnson

Joni Vanderflught measures fish collected in a net on the Missouri River during job shadowing at the Columbia Fishery Resources Office.

La Crosse FRO Biologist Demonstrates to Girl Scouts How Dreams Became Reality

Heidi Keuler from the La Crosse FRO discussed the career of a fishery biologist with approximately 30 Girl Scouts of the Riverland Council during the "From Dreams to Reality" program on October 8. This program provides Girl Scouts an opportunity to learn how working women have made their dreams a reality. Six women discussed their careers as a certified nutritional herbologist, conservation warden, non-profit executive, insurance agent, physical therapist, and vice president in advertising. Girl Scouts learned what type of education and training are needed for different careers as well as what it takes 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 new badges by applying what they learned to a project related to the fields of the local career women.
Heidi Keuler, La Crosse FRO

Students Learn About Careers at the La Crosse Center's Career Expo

Approximately 1,500 high school juniors from 22 school districts in the La Crosse, Wisconsin, area attended the La Crosse Center's Career Expo on September 29. The Career Expo is a joint effort of the Greater La Crosse Area Chamber of Commerce, Western Wisconsin Technical College, the Wisconsin Education Fair, and 22 area high schools. Fifty booths which focused on six career clusters: Agri-Business Science Technology & Natural Resources; Arts, Humanities & Communication; Business Management, Administration & Marketing; Health Care; Human Services & Education; and Industrial Science & Manufacturing Technologies. Heidi Keuler from the La Crosse FRO spoke to an ethnically diverse array of 100 students about the career of a fishery biologist. Students asked questions during an informal discussion and gained insight from photos taken of field operations. Many students were very interested in the student and volunteer programs offered by the Fish and Wildlife Service. La Crosse FRO's booth at the Career Expo was a great opportunity for the students to not only learn about fisheries careers in this organization but also how biologists help manage natural resources.
Heidi Keuler, La Crosse FRO

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-Jerry French Postcard Collection

Windows in time

A Glimpse into our Proud Past

The Baird Fish Hatchery was established in 1888. This hatchery was named after Spencer F. Baird, the first commissioner of the U.S. Fish Commission. The Baird Hatchery was located near the mouth of the McCloud River, a tributary of the Sacramento River. The Baird Fish Hatchery ceased operations in 1937 and was transferred to the Bureau of Reclamation. This site was later inundated as part of the Lake Shasta development.

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