



U.S. Fish & Wildlife Service

# *Fish Lines*



Fiscal Year 2006  
Vol. 4 No. 10

## Region 3 - Great Lakes/Big Rivers

*Leadership in Conserving, Enhancing, and Restoring Aquatic Ecosystems*

### Director Dale Hall Joins Partners to Dedicate Fish Stocking and Evaluation Vessel

(See the “*Feature Story*” on Page 5)



-USFWS

The M/V *Spencer F. Baird*, a one-of-a-kind vessel that will stock millions of native lake trout in the Upper Great Lakes, was christened and commissioned September 7 during a ceremony at the Great Lakes Maritime Academy Pier in Traverse City, Michigan.

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



## Region 3 - Great Lakes/Big Rivers Region

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

### *Region 3 Focus Areas*

#### **1. Partnerships and Accountability**

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

#### **2. Aquatic Species Conservation and Management**

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

#### **3. Aquatic Invasive Species**

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

#### **4. Public Use**

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

#### **5. Cooperation with Native Americans**

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

#### **6. Leadership in Science and Technology**

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

#### **7. Aquatic Habitat Conservation and Management**

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

#### **8. Workforce Management**

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

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

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

# Inside this Issue

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



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

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



### Feature Story:

Director Dale Hall Joins Partners to Dedicate Fish Stocking and Evaluation Vessel

## Partnerships and Accountability (Page 9)



*M/V Spencer F. Baird*  
Delivered to Home Port

## Aquatic Species Conservation and Management (Page 13)



Endangered Winged Mapleleaf  
Collected on the St. Croix River

## Aquatic Invasive Species (Page 16)



Summer Sampling of Four  
Invasive Ruffe Populations  
Completed

## Public Use (Page 18)



Genoa NFH Helps Sportsman's  
Association "Make a Wish"

## Cooperation with Native Americans (Page 22)



Lake Whitefish Population  
Assessment Conducted

## Leadership in Science and Technology (Page 23)



Genoa NFH's Freshwater  
Mussel Program: It's Not Just  
for Restoration Anymore

## Aquatic Habitat Conservation and Management (Page 27)



Farcus Creek Project Completed

## Workforce Management (Page 29)



Youth Conservation Corps  
Program Lives on at Genoa  
NFH

*Click here to visit our Fisheries Web Site*



# Great Lakes - Big Rivers Region Fisheries Field Offices

## National Fish Hatcheries

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

## Sea Lamprey Control Stations

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

## Fishery Resources Offices

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

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

## Fish Health Center

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

Great Lakes - Big Rivers Region Fisheries Field Offices



## List of Acronyms

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

## Feature Story - Director Dale Hall Joins Partners to Dedicate Fish Stocking and Evaluation Vessel

The M/V *Spencer F. Baird*, a one-of-a-kind vessel that will stock millions of native lake trout in the Upper Great Lakes, was christened and commissioned September 7 during a ceremony at the Great Lakes Maritime Academy Pier in Traverse City, Michigan.

Operated by the U.S. Fish and Wildlife Service, the 95-foot *Spencer F. Baird* is a fish stocking and population assessment vessel that will annually stock nearly 4 million lake trout into lakes Huron and Michigan. These efforts will further four decades of work by the Fish and Wildlife Service and its partners to rehabilitate depleted lake trout populations in the Great Lakes and establish self-sustaining populations of this native fish, which was nearly wiped out in the late 1950s due to invasion of sea lampreys, overfishing, and pollution.

On a beautiful late summer morning on Grand Traverse Bay, some 200 invited guests and members of the public gathered for the christening and commissioning ceremony. After a brief speaking program, Assistant Director for Fisheries and Habitat Conservation Mamie Parker and Midwest Regional Director Robyn Thorson each broke a champagne bottle to officially christen the vessel. Director Dale Hall introduced the vessel and scientific crew, and read the official "Orders to Commission" the *Spencer F. Baird*.



-USFWS photo by Karla Bartelt

**Fish and Wildlife Service Director Dale Hall reads the official "Orders to Commission" the M/V *Spencer F. Baird*.**

The American flag was presented by Gerry Barnhart, Vice-chair of the Great Lakes Fishery Commission and Director of the Division of Wildlife and Marine Resources for the New York State Department of Environmental Conservation. The Canadian flag was presented by Bob Lambe, Regional Director General for the Central and Arctic Region of the Canadian Department of Fisheries and Oceans. A Native American blessing for the safety of the vessel and its crew was performed by Dwight "Bucko" Teeple of the Bay Mills Indian Community. Other noted speakers at the event included Frank Ettawageshik, Tribal Chairman of the Little River Band of Odawa Indians; Gary Whalen of the Michigan Department of Natural Resources; Harold Chase, spokesperson for Senator Carl Levin; Brandon Fewins, spokesperson for Senator Debbie Stabenow; Sharon Wise, spokesperson for Congressman Dave Camp; and Jason Walsh, spokesperson for Congressman Bart Stupak.

Also participating in the ceremony were Pastor Budd Wagner of Cheboygan, Michigan, and Tom Todd, a U.S. Geological Survey employee and bagpiper. A local musical group, the Northwind Brass Band, entertained the crowd with patriotic tunes.



-USFWS photo by Karla Bartelt

**Great Lakes Maritime Academy students raise the United States flag on the M/V *Spencer F. Baird* during the christening and commissioning ceremony.**



“This is a proud day for the Fish and Wildlife Service,” said Robyn Thorson, the Fish and Wildlife Service’s Midwest Regional Director. “The newly-dedicated, ultra-modern M/V *Spencer F. Baird* is a welcome addition to conservation efforts in the Great Lakes, and we are pleased to celebrate the ship’s dedication with our fisheries partners. With a fisheries-related economy of \$5 billion per year, we know that the Great Lakes are a resource that is vital not only to fisheries but to people, as well.”



-USFWS photo by Karla Bartelt

**Assistant Director for Fisheries and Habitat Conservation Mamie Parker (left) and Midwest Regional Director Robyn Thorson takes turns breaking a champagne bottle to officially christen the M/V *Spencer F. Baird*.**

Of 90 science vessels on the Great Lakes, the *Spencer F. Baird* is the only hatchery fish distribution vessel in operation, distributing fish reared at the Fish and Wildlife Service’s Iron River National Fish Hatchery in Wisconsin and Pendills Creek and Jordan River National Fish Hatcheries in Michigan.



-USFWS photo by Pat Myers

**Friends of the Jordan River National Fish Hatchery participate in the christening and commissioning of the M/V *Spencer F. Baird*.**

Other hatcheries that contribute to lake trout rehabilitation are the Allegheny National Fish Hatchery in Pennsylvania, Saratoga National Fish Hatchery in Wyoming, and White River National Fish Hatchery in Vermont.

In addition to its stocking duties, the vessel will evaluate the performance of stocked lake trout. It will also measure the abundance and distribution of other fish species, which will help meet the information and assessment needs of the Fish and Wildlife Service and its state, tribal, provincial, and Federal partners.

After decades of rehabilitation, self-sustaining populations of lake trout are established in Lake Superior, and Lake Huron is showing signs of rehabilitation. Research continues to identify major limiting factors affecting lake trout rehabilitation in these two lakes. Strong partnerships have been key to successful lake trout rehabilitation in Lake Superior and will be critical to continued rehabilitation efforts in lakes Huron and Michigan.

The *Spencer F. Baird* could not have been built without the support of our long-term partners in aquatic resources conservation: states, tribes, other Federal agencies, non-government organizations, and other Fish and Wildlife Service programs,” Regional Director Thorson said.



-USFWS photo by Karla Bartelt

**Dwight "Bucko" Teeple of the Bay Mills Indian Community conducts a Tribal blessing of the *M/V Spencer F. Baird*.**

The *M/V Spencer F. Baird* is named for a prominent zoologist associated with the Smithsonian Institution, appointed in 1871 by President Ulysses S. Grant as the first head of the U.S. Fish Commission, a forerunner agency to the U.S. Fish and Wildlife Service.

Spencer Baird is considered the father of Federal fisheries research and fish culture programs in the United States. It was his idea to create the commission to regulate and research America's fishing industry. Baird was also responsible for securing funding and building the world's first fishery research and assessment vessel, the *R/V Albatross*.



-NOAA

**Spencer F. Baird (1823-1887), a prominent systematic zoologist, was appointed the first Commissioner of the U.S. Commission of Fish and Fisheries on February 9, 1871. He is considered the father of Federal fisheries research and fish culture programs in the United States.**

The Fish and Wildlife Service produces nearly 4 million lake trout each year and transports 95 percent of these fish to key Great Lakes offshore sites for release. Offshore stocking results in better survival and increases the probability that lake trout will spawn at offshore habitats near stocking locations. The goal of the program is to re-establish self-sustaining populations of lake trout on their historic spawning reefs.

Support systems of the *Spencer F. Baird* ensure optimal water and oxygen conditions for lake trout during the ride from shore to stocking sites. Each year, the vessel will travel nearly 3,000 miles in lakes Huron and Michigan from April to July.



Once the annual trout stocking mission is complete, fish tanks will be removed from the *Spencer F. Baird*'s deck and replaced by fishing gear to carry out assessments to measure the performance success of stocked lake trout. The vessel will also monitor and assess other fish populations in lakes Michigan, Huron, and Superior. Using bottom trawls, mid-water trawls, and gill nets, the *Spencer F. Baird*'s crew will sample prey and predator fishes to gather important biological information on fish communities in the Great Lakes.



-USFWS

The ten (1,000 gallon) removable fish tanks can be seen on the deck of the *M/V Spencer F. Baird*. The combined hauling capacity of the tanks is approximately 190,000 six inch fish. Once the annual trout stocking mission is complete, the tanks will be removed from the deck and replaced by fishing gear to carry out assessments to measure the performance success of stocked lake trout.

The *Spencer F. Baird* also has a hydroacoustic system that will measure fish abundance using sound waves as the vessel moves through water. This data will be collected in annual surveys, often done cooperatively with Federal, state, tribal, and provincial partners.

The *Spencer F. Baird*'s lake trout rehabilitation activities in the Great Lakes are just one piece of the Fish and Wildlife Service's conservation mission in the Midwest. Restoring native lake sturgeon and freshwater mussels, improving native species habitat, and controlling invasive species are other aspects of the Fish and Wildlife Service's efforts.

Acting as an agent of the Great Lakes Fishery Commission, the Fish and Wildlife Service is also committed to controlling sea lamprey populations in the Great Lakes so that native species such as lake trout can continue to rebound.



-USFWS photos

Ship captain Mike Perry (left) and engineer Bob Bergstrom were each recognized by Director Dale Hall at an awards ceremony, for their efforts during the construction of the new vessel.

The *M/V Spencer F. Baird* replaces the *M/V Togue*, a much smaller vessel that has come to the end of its working life. Built in 1975, the *Togue* was a shrimp trawler before the U.S. Customs Service confiscated it for carrying contraband cargo. The Fish and Wildlife Service retrofitted the *Togue*, and in 1989 it began its Great Lakes work.

During its lifetime as a stocking vessel, the *Togue* placed tens of millions of lake trout in the Great Lakes, making it a critical component to the success of the Fish and Wildlife Service's lake trout rehabilitation program.

Rachel F. Levin, *External Affairs*



-USFWS

The *M/V Togue* served since 1989 as a lake trout stocking vessel on the Upper Great Lakes, placing millions of lake trout on historical offshore spawning reefs as designated in fishery management plans.

For additional information, please visit the *M/V Spencer F. Baird* website at:  
<http://www.fws.gov/midwest/Fisheries/Baird/>.



## Partnerships and Accountability

### *M/V Spencer F. Baird* Delivered to Home Port

The pride of the Fish and Wildlife Service's Great Lakes Lake Trout Rehabilitation Program, the *M/V Spencer F. Baird* arrived at the U.S. Geological Survey dock in Cheboygan, Michigan, on July 20. This new vessel was built in Morgan City, Louisiana, by Conrad Industries over the course of 19 months at a cost approaching \$7.5 million. Funding such an expensive project wasn't easy and wasn't taken lightly. Money came from the Fish and Wildlife Service base budget, so offices from across the country had a hand in making this happen.

This boat will replace the aging *M/V Togue*, the condition of which has been in steady decline for quite some time, despite significant investments in maintenance and repairs. Safety is of the utmost importance, and the *M/V Togue* just wasn't as safe as it needed to be. Due to its poor condition, Captain Mike Perry had to be very conservative in determining whether to make offshore stocking runs, if even moderately inclement weather was forecast.

The *M/V Spencer F. Baird* was constructed according to U.S. Coast Guard safety specifications, so it will be able to safely handle higher seas than the *M/V Togue* could. The new vessel is slightly larger and will haul roughly 25 percent more fish. It will also be used extensively by fishery resources offices in Green Bay, Wisconsin, and Alpena, Michigan, for offshore fisheries assessment work involving the deployment and retrieval of large gill nets, trawl nets, and trap nets.

One may assume that a vessel constructed in Louisiana could be

delivered to Michigan via the Mississippi River, but because some of the *M/V Spencer F. Baird's* radar and radio equipment is too tall to pass under some bridges spanning the Mississippi River, it had to be delivered via the Atlantic Ocean, traveling 4,200 miles over 20 days with stops in Florida, Massachusetts, Nova Scotia, and Quebec. The *M/V Spencer F. Baird* was officially dedicated on September 7 in Traverse City, Michigan. *Wayne Talo, Jordan River NFH*



-USFWS photo by Aaron Wolcott

The new lake trout stocking and product evaluation vessel arrives in its home port in Cheboygan, Michigan, on July 20, 2006.

### Bald Eagle Monitoring and Banding

For two days in June, personnel from the Ashland Fishery Resources Office (FRO) used the station's vessel, *R/V Chub*, to assist the National Park Service Great Lakes Monitoring Network with bald eagle monitoring and banding in trees within the Apostle Islands National Lakeshore on Lake Superior. Bill Route, project leader from the Great Lakes Monitoring Network, is leading the project, which is monitoring bald eagles at multiple parks in the Upper Midwest. Glenn Miller and Ted Koehler assisted from the Ashland FRO.

Active bald eagle nests previously had been located during aerial surveys performed by the Wisconsin Department of Natural

Resources (DNR). Once the nest trees were pinpointed on the ground, the ascent into the towering white pines began and the eaglets secured. They were then lowered to the biologists below, who collected an assortment of data and drew blood to monitor contaminant levels in young birds.

Eagles are considered bio-sentinels at the top of the food chain. The chicks primarily eat fish caught by their parents from the Lake Superior waters surrounding the islands. Monitoring contaminant levels in the young eagles indicates the overall levels of contaminants such as mercury and pesticides in the fishery and ecosystem.

After the biologists banded the chicks, they hoisted the young birds back into the nest. None worse for the wear and sporting new jewelry, the young eagles settled back into their nests overlooking the magnificent Apostle Islands.

*Ted Koehler, Ashland FRO*



-USFWS

Ted Koehler of the Ashland Fishery Resources Office poses behind a young bald eagle that has just been banded.

## Aquatic Plant Survey on the Mississippi River

Genoa National Fish Hatchery (NFH) moved past the fish hatchery boundary and assisted the U.S. Geological Survey (USGS) Upper Midwest Environmental Science Center in sampling portions of Pool 9 of the Upper Mississippi River to monitor trends in aquatic plant coverage for the center's Long term Natural Resource Monitoring studies. The hatchery supplied a boat and three crew for the annual day-long sampling event. The station's two Student Temporary Employment Program students Ashley Umberger and Brandon Keesler gained valuable experience in the monitoring program's background and plant sampling methodologies, while Maintenance Mechanic Dan Kumlin supplied the boat operating expertise.

A total of 16 boat crews representing agencies that included the Upper Mississippi River National Wildlife and Fish Refuge (NW&FR), the Iowa and Minnesota departments of natural resources, and local county land management districts all participated in this effort that included more than 200 sampling locations. Through this cooperative effort, partners gathered valuable information to assess trends in the Upper Mississippi River system, at the same time providing natural resource education and valuable expertise to student employees.  
*Doug Aloisi, Genoa NFH*



-USFWS

Vista view of Pool 9 of the Upper Mississippi River

## Fish and Wildlife Service Consulted and Protocol Implemented to Minimize the Effects of Granular Bayluscide Assessments on Rare Species

Sea lamprey management program staff consulted with personnel of the Ecological Services Field Offices in the Twin Cities, Green Bay, East Lansing, Reynoldsburg, and Cortland to complete Section 7 reviews on proposed granular Bayluscide assessments to comply with the Endangered Species Act of 1973, as amended. Concurrence was achieved to assess populations of larval sea lampreys with conservation measures to protect and avoid disturbance to six Federal and state-listed endangered, threatened, candidate, and special concern species in Minnesota, Wisconsin, Michigan, Ohio, and New York during 2006. The Federal and state-listed species include bald eagle, dwarf lake iris, eastern massasauga rattlesnake, Houghton's goldenrod, Michigan monkey-flower, and Pitcher's thistle.

Nine additional state-listed endangered, threatened, and special concern species were described during the granular Bayluscide assessment state-permitting processes and included the Blanding's turtle, channel darter, common loon, lake stur-

geon, osprey, pugnose shiner, red-shouldered hawk, sauger, and wood turtle.

Based on the Federal reviews and state permits received, a "Protocol to Protect and Avoid Disturbance to Federal and/or State-listed Endangered, Threatened, Candidate, or Special Concern Species and Critical or Proposed Critical Habitats in or near Great Lakes Streams Scheduled for Granular Bayluscide Assessments in the United States during 2006" was implemented to minimize the effects of the assessments on 15 rare organisms in 26 of 57 streams scheduled for assessments. The protocol included a list of stream treatments, known locations, maps, procedures to protect and avoid disturbance, and fact sheets for each rare species with an image, description, and preferred habitat.

The sea lamprey program continues to work closely with partners to control populations of sea lampreys in tributaries of the Great Lakes to protect the fishery and related economic activities in the basin, an estimated benefit of \$4 billion to \$6 billion per year to the region. The Fish and Wildlife Service delivers a program of integrated sea lamprey control in the United States waters of the Great Lakes as a contracted agent of the Great Lakes Fishery Commission.

*John Weisser, Marquette Biological Station*



## Fish and Wildlife Service Hosts Chinese Scientist

Region 3 Fisheries and Ecological Service programs, the Region 4 Lower Mississippi River Fisheries Coordination Office, and the Division of International Conservation in Washington hosted Dr. Yamin Wang as he visited the Lower Missouri River and the Mississippi River from the Twin Cities to New Orleans and beyond, as well as attend the International Large Rivers and Civilization Conference in La Crosse, Wisconsin. Dr. Wang is a Senior Advisor in the Office of Aquatic Flora and Fauna for the People's Republic of China Ministry of Agriculture in Beijing. His background and interest includes endangered species, large river restoration, dams, and biodiversity. Dr. Wang is one of two scientists who represent China at the Convention on International Trade in Endangered Species and International Whaling Commission meetings.

En route to the United States, Dr. Wang attended the International Whaling Commission meeting in St. Kitts. After arriving in the Twin Cities, he made a presentation in the Regional Office on fish and wildlife conservation issues facing Chinese managers and researchers and how they approach these challenges. He then traveled along the Mississippi River to La Crosse, Wisconsin, to participate in the International Large Rivers Conference, attended by scientists from dozens of nations. While in La Crosse, Dr. Wang had a field tour of Pool 8 of the Mississippi River with other Chinese scientists.

After the conference, he toured Genoa NFH and saw the hatchery's lake sturgeon and endangered mussel work. Travel-

ing south, Dr. Wang got "hands-on" experience trawling for sturgeon on the Lower Missouri River and learned about wing dike habitats, courtesy of the Columbia FRO. The Carterville FRO provided netting opportunities for sturgeon and Dr. Wang had the chance to see jumping invasive Asian carp in an open reach of the Upper Mississippi River. Along with Pam Thiel (La Crosse FRO), Carterville's Rob Simmonds and Colby Wrasse gave the scientists a look at the fish, habitat, and uses of the Middle Mississippi River. This section of the Mississippi River is highly altered, with much of the floodplain in agricultural lands behind levees. Barge traffic is also heavy and many river structures help direct flow to the navigation channel to maintain the nine foot depth needed for shipping. But what were important during the scientists' tour were not these conditions, but how the Fish and Wildlife Service works with these conditions and how the fish respond.

The scientists and their guides took a close look at several new and creative solutions that have been used to meet navigation needs and improve habitat for fish, visiting notched dikes and closing structures, chevron dikes, and other structures. These approaches provide greater diversity and quality of habitat as compared to traditional approaches. The Chinese guests were excited to hear about such approaches and have been discussing some of the very same problems on large rivers in their homeland. We were also visited by a couple invasive silver carp that jumped aboard the boat to greet us. It made for an interesting discussion for them to see their native fish in our waters. It was equally as interesting to catch one of our native channel

catfish which are a major invasive species in China.

After passing through Cape Girardeau, Missouri, where the Ohio River joins the Mississippi, Dr. Wang continued his journey with Ron Nassar, from the Lower Mississippi River Fisheries Coordination Office, traveling downstream through the alluvial floodplain to the Gulf of Mexico. The last day was highlighted with a flight over the Gulf of Mexico.

Dr. Wang is taking ideas back to China that he can incorporate into watershed restoration plans. Around the globe, we have universal problems, concerns, and possible solutions; and this visit demonstrates how we can work together to build a better world!

*Pam Thiel, La Crosse FRO*

*Rob Simmonds, Carterville FRO*



-USFWS

Chinese scientist Dr. Yamin Wang (upper right) gets a taste of netting on the Upper Mississippi River during a tour of Mississippi River drainage.

## Friends of the Jordan River NFH Hold First Friends Group Meetings

June 28 was a wonderful evening filled with anticipation and excitement. The Friends of Jordan River NFH executive board met to discuss old and new business, hammer out a few more details about its by-laws, and then it was "off to the races." About 15 prospective members joined the board for an open membership meeting. President Bob MacCord delivered



a motivating speech outlining the potential of the group and what the future holds. Other speakers included hatchery Project Leader Rick Westerhof and biologist Tim Smigielski. The attendees represented a good cross section of those who have been involved with the hatchery in some way. Treasurer Peg Myers has been instrumental in preparing meeting notes, announcements, and materials for posting on the Friends group website at: <http://www.fws.gov/midwest/JordanRiver/friends.htm>.  
*Tim Smigielski, Jordan River NFH*

### **Middle Mississippi River Partnership Holds Summit**

Project Leader Rob Simmonds of the Carterville FRO attended the first summit for the Middle Mississippi River Partnership (MMRP), which drew more than 150 people from a variety of groups, agencies, and the public. The MMRP is a collaboration of Federal and state agencies and non-profit organizations working to restore and enhance the natural resources of the corridor through public and private resource management, compatible economic development, private lands conservation, and education and outreach to the citizens of the region. The purpose of the summit was to focus on opportunities to address needs for conservation, recreation, education, agriculture, transportation, and economic development. There was certainly a buzz in the room and some great information exchange and discussion.

The annual meeting of the MMRP followed the summit. Partners discussed business items and made progress on continuing to move the partnership forward. A major topic of discussion was the receipt of a large grant from the

U.S. Army Corps of Engineers to complete collaborative resource planning for the area. A number of planning efforts are already underway and these funds will help to pull them together as well as potentially do a number of other very creative things to help focus restoration efforts into areas where they are most likely to succeed (e.g., detailed GIS mapping of the area - surface and subsurface - that would identify historic river conditions so that future restoration efforts are in harmony with what the floodplain has to offer). This was Carterville FRO's first involvement with the MMRP, but certainly not the last.  
*Rob Simmonds, Carterville FRO*

### **Alpena FRO Staff Participate in Great Lakes Viral Hemorrhagic Septicemia Discussion**

Alpena FRO staff participated in a June 29 conference call discussing status and concerns related to recent epizootics associated with Viral Hemorrhagic Septicemia (VHS) in the Great Lakes. Participants in this large conference call included representatives from each of the Great Lakes states, Federal and provincial representatives from Canada, the U.S. Department of Agriculture - Animal and Plant Health Inspection Service, the National Oceanic and Atmospheric Administration, several university researchers, and Fish and Wildlife Service representatives from Regions 3, 5, and 9.

Several fish kills in lakes Ontario, Erie, St. Clair, and Huron have been confirmed to be associated with VHS, and others are suspected. The fish kills involve a broad array of species and raise several management concerns around the Great Lakes. Alpena FRO participation in the call was

extremely important, particularly as it relates to the field work being conducted in the Huron-Erie corridor (HEC), an area particularly hard hit by these fish kills. Information on virulence and modes of transmission will likely change station protocols for sharing gear and working in the HEC, to prevent inadvertent spread of the virus. Participants on the call were added to a list of contacts who will receive routine updates as new information becomes available.

*Jerry McClain, Alpena FRO*

### **Woodcock Singing Ground Survey Conducted**

As part of the North American Woodcock Singing Ground Survey, Ted Koehler and Gary Czypinski from the Ashland FRO surveyed Wisconsin Routes 001 in Northern Bayfield County and Route #005 near the Bad River. This annual survey provides an index to the relative size of the woodcock breeding population and is the most important source of data used to guide the United States and Canadian woodcock programs. Male woodcock give vocal calls described as "peents" and perform aerial displays called "flight songs" shortly after sunset as part of their courtship behavior. The number of peenting males was recorded and the results entered into the national database.

*Ted Koehler, Ashland FRO*

# Aquatic Species Conservation and Management

## Endangered Winged Mapleleaf Collected on the St. Croix River

Divers from the Fish and Wildlife Service and National Park Service searched the St. Croix River for two days in an effort to locate winged mapleleaf mussels, an endangered species considered to be one of the rarest mussels in North America. The goal of this effort was to increase the number of winged mapleleaf mussels in the aggregation which will be used for future propagation. Seven new mussels were collected and added to the aggregation site. The mussels are being stock-piled in the summer and will be gravid, or have eggs, during the early fall.

In the fall, divers will return to the aggregation sites to collect the egg-bearing (gravid) winged mapleleaf mussels and take them to Genoa NFH where the larva (glochidia) will be extracted from the mussel and added to water containing several host fish. Channel catfish have been used successfully as the host and are readily available and native to the St. Croix River. The glochidia attach to the gills of the fish.

After the fish are inoculated with the glochidia they are placed in protected cages which are placed in the St. Croix River. The cage also protects the young winged mapleleaf mussels after they drop off the gills of the fish and live on their own. This method of mussel propagation has been extremely successful with the endangered Higgins' eye pearl mussel and is starting to show promising results for winged mapleleaf mussels as well.  
*Scott Yess, La Crosse FRO*



-USFWS

**A diver prepares to search for Federally endangered winged mapleleaf mussels in the St. Croix River.**

## La Crosse FRO Assists Region 5 with American Eel Status Review

The Fish and Wildlife Service, in coordination with the National Marine Fisheries Service, completed an evaluation of a petition to list the American eel under the Endangered Species Act. Since enough data existed to warrant further research, an American Eel Status Review Committee was formed. La Crosse FRO employee Heidi Keuler assisted Region 5 with the status review from June 2005 through May 2006. Heidi worked with nine status review steering committee members from Regions 2, 3, 4, 5, and 6 along with coordinator Heather Bell (Region 5), Kim Damon-Randall (National Oceanic and Atmospheric Administration), Marie Maltese (Fish and Wildlife Service International Representative), D.J. Monette (Tribal Liaison from Region 5), and Eric Holmes (Region 5 Law En-

forcement). Heidi represented the Mississippi River Watershed and Gulf States, and Mike Twohey of the Marquette Biological Station represented the Great Lakes.

Data was first gathered from biologists across the country; then some of the committee members summarized what was found or where more material could be referenced if needed. Heidi wrote sections including the *Mississippi River Watershed, Wisconsin commercial harvest*, and the *Upper Mississippi River Conservation Committee*. After the status review was completed, Heidi helped with editing and comments. The committee's decision whether to propose the listing of the American eel is scheduled to be posted near the end of August 2006.

The American eel begins its life in the Sargasso Sea located in the Atlantic Ocean. Eels migrate to freshwater rivers or coastal waters and live for 7 to 30 years. The eel transforms from a glass eel, to elvers, to yellow, and finally silver eels. When eels reach maturity, they return to the Sargasso Sea to spawn and die. This species lives its life in both salt and freshwater; and for this reason, the National Marine Fisheries Service and the Fish and Wildlife Service worked together on reviewing the petition and data collection.

*Heidi Keuler, La Crosse FRO*



-USFWS art by Duane Raver

**American Eel**

## Fish and Wildlife Service completes Annual Surveys of Native Large Predators in Lake Michigan

Green Bay FRO completed the annual native predator surveys in Lake Michigan. The surveys are part of the Lakewide Assessment Plan (LWAP) to monitor lake trout and burbot within the Northern and Midlake refuges and at nine port locations around the lake. Green Bay FRO completed the Sheboygan, Wisconsin, survey site and assisted the U.S. Geological Survey - Great Lakes Science Center with surveys at Washington Island, Manistique, and the Northern Refuge sites. Additional sites are surveyed by the departments of natural resources of Wisconsin, Michigan, Illinois, and Indiana.

The LWAP surveys were established in 1998 to determine the overall health of the native predator populations so that fish managers are forewarned of potential problems within the fish community. Graded mesh gill-nets are used to obtain catch-per-effort information to monitor general trends in abundance and look for unclipped, presumably wild lake trout. Also, biological data collected from the catch determines the predators' length and age compositions, sex ratios, reproductive potential, and sea lamprey marking rates. Additional collections of lake trout and alewives were provided to the USGS thiaminase monitoring project this year, and additional data were collected as part of a research project to assess lake trout aging methods. Complete results from the LWAP surveys will be consolidated this winter and analyzed by the Lake Michigan Lake Trout Task Group; however, a preliminary observation from the survey near

Sheboygan shows no signs of natural reproduction at this site; however, there is some optimism because sea lamprey marking rates appear to be lower than last year. Lower lamprey marking rates result in less lamprey-induced mortality and may lead to higher densities of lake trout spawners on the near-shore reefs in the vicinity of Sheboygan, Wisconsin. This is critical because a lack of egg deposition is one of the primary reasons that lake trout are not successfully reproducing in this area of the lake.

*Dale Hanson, Green Bay FRO*

## Fingerling Lake Trout Transferred to Pendills Creek NFH

From May through June, Jordan River NFH transferred approximately one million lake trout at an average length of 2.5 inches to the Pendills Creek NFH. These fish will be raised there over the course of the next ten months and released next spring into the Great Lakes. Pendills Creek NFH does not have the capacity to produce adequate numbers of early life stage fish.

*Wayne Talo, Jordan River NFH*

## Lake Trout Distribution Completed at Jordan River NFH

On June 23, Jordan River NFH released the last group of yearling lake trout into Lake Huron, completing the 2006 lake trout distribution season. This hatchery released nearly two million lake trout averaging 6.7 inches in length. More than half (57 percent) were released into Lake Huron, and the remaining 43 percent were released into Lake Michigan. Overall, 90 percent of the fish were released offshore from the *M/V Togue*. This is the last year of service for the *M/V*

*Togue*, as its replacement, the *M/V Spencer F. Baird*, has arrived in the Great Lakes. We'd like to thank all those that assisted with our fish distribution this year: Angie Baran, Steve Redman, and Kurt Schilling from the Iron River NFH; James Anderson and John Shuman from the Pendills Creek/Sullivan Creek NFH Complex; and Captain Mike Perry, Engineer Bob Bergstrom, and emergency hire Amos Perry of the *M/V Togue*.  
*Wayne Talo, Jordan River NFH*



*-USFWS photo by Rick Westerhof*  
**The offshore lake trout stocking vessel *M/V Togue* completes its tour of duty in 2006 and heads into retirement.**

## Fish Health Inspections Conducted at Pendills and Sullivan Creek NFH Complex

Staff from the La Crosse Fish Health Center (FHC) conducted fish health inspections at Pendills Creek and Sullivan Creek NFH's, both located near Brimley, Michigan, on August 1. During the inspections, FHC staff observed the facilities and conditions at each hatchery and collected tissue samples to screen for pathogens. Tissue samples were collected from three production lots of lake trout at Pendills Creek NFH and nine brood stock lots at Sullivan Creek NFH. The tissue samples will be screened for bacterial, viral, and parasitic pathogens at the La Crosse FHC's laboratory facilities in Onalaska, Wisconsin. Lake trout reared at Pendills Creek NFH are stocked into lakes Huron and Michigan as part of the



Fish and Wildlife Service's rehabilitation efforts on the Upper Great Lakes. Strictly a brood stock facility, Sullivan Creek NFH is one of two Federal hatcheries with brood stock in Region 3.

In addition, on August 2 a fish health survey was conducted on fish collected from Videan's Creek, the water supply for Pendills Creek NFH. The survey was conducted to ensure that fish present in the stream do not carry pathogens that could potentially threaten fish at the hatchery. Sampling yielded 10 brook trout and 22 sculpins for pathogen screening. Tissue samples collected from the fish will be screened the same as for the facility inspection. Results of the fish health survey will help ensure that fish present in the Pendills Creek NFH water supply are not carrying pathogens which may threaten the fish being reared at the hatchery.

*Rick Nelson, La Crosse FHC*



-USFWS  
**Biologist Ken Phillips of the La Crosse Fish Health Center conducts a routine fish health inspection on fingerling lake trout at the Pendills Creek National Fish Hatchery.**

### **Fish Health Inspection Conducted at Iron River NFH**

**R**yan Katona and Corey Puzach completed Iron River NFH's semi-annual fish health inspection from July 31 through August 1. The survey was completed on 16 groups of fish, more commonly referred to as lots. These lots have a comparative sample taken so all of the species and strains of fish can be screened. On the second day of the inspection, 30 brook trout and 30 sculpin were also tested from the water supply. These fish are tested to be certain there are no harmful pathogens entering the hatchery through the water supply.

A kidney swab was taken to screen for the bacterial pathogens. A second kidney sample was taken to be later screened for *Renibacterium salmoninarum*, a causative agent of bacterial kidney disease. Next, kidney and spleen samples were collected and screened for viruses. The last sample was heads from the younger lake trout. These heads will be taken and cooked, crushed, digested, and screened for *Myxobolus cerebralis*, more commonly known as whirling disease.  
*Rick Nelson, La Crosse FHC*

### **Alpena FRO collects Smallmouth Bass in Thunder Bay**

**B**iologists Adam Kowalski, Anjanette Bowen, and Jerry McClain of the Alpena FRO participated in a project with Michigan DNR to collect data on smallmouth bass in Thunder Bay, near Alpena. The survey provides baseline information on Thunder Bay smallmouth bass for use in evaluating cormorant control efforts being conducted by the U.S. Department of Agriculture - Animal and Plant Health Inspection Service. This information was also needed as

part of a larger program to better understand the status of smallmouth bass stocks in Lake Huron, a need identified by the Lake Huron Technical Committee.

Evening electrofishing was used to collect fish on June 13 and 14. This effort coincided with Michigan DNR near shore small-mesh gillnetting that has been used for several years to monitor predator-prey dynamics in Thunder Bay. In total, 33 smallmouth bass were collected in 7 hours of electrofishing. Two areas of the bay where smallmouth bass habitat was considered ideal were sampled. The shoal areas on the south side of the bay around Partridge Point and Sulphur Island were sampled the first night and produced 25 smallmouth. The rocky shoreline and near shore reefs on the north side of the bay were sampled the second night and produced the additional 8 fish.

In addition to general biological data, tissue samples were also taken from these fish and provided to the La Crosse FHC to conduct bacterial and viral screening. The primary focus was to screen for *Viral Hemorrhagic Septicemia* in Lake Huron. Fin tissue was also taken from the bass by Cal Borden, a graduate student from Ohio, who is compiling genetic information on Great Lakes smallmouth bass stocks. Carp were also collected during the second night of sampling at the request of the Michigan DNR for annual contaminant monitoring conducted by Michigan Department of Environmental Quality.

*Adam Kowalski, Alpena FRO*

## Aquatic Invasive Species

### Summer Sampling of Four Invasive Ruffe Populations Completed

The Ashland FRO completed summer sampling of the invasive Eurasian ruffe in three Wisconsin tributaries and one Michigan tributary to Lake Superior. Sampling is also conducted during spring and fall, and the results are averaged to account for seasonal variation. This ongoing investigation was initiated in 1995 to compare trends in abundance of ruffe and native fish populations, one of eight elements in the Eurasian Ruffe Control Program.

A total of 3,123 fish representing 25 species were captured in bottom trawls including two invasive species, Eurasian ruffe and threespine stickleback. All fish were released except the invasive species. The total catch comprised of three percent ruffe and less than one percent threespine stickleback, which is not unusual for summer sampling. Ruffe young-of-the-year was only strong in the Flag River, Wisconsin, which contains the most nursery habitat of the four tributaries. Experimental research, and this long term investigation, has shown that ruffe may have an impact on yellow perch growth and abundance. Yellow perch comprised just over one percent of the total catch in this sample.

*Gary Czypinski, Ashland FRO*



### Sea Lamprey Control Staff Hosts Journalists

On July 23 and 24, sea lamprey control staff from the Marquette Biological Station conducted outreach that will significantly raise media and public awareness of sea lamprey control activities in the Great Lakes. Biologist Michael Siefkes and biological science aid Bruce Eldridge hosted Peter Annin, an associate director of the Institutes for Journalism and Natural Resources (IJNR), and a group of 13 journalists from across the region. Based in Madison, Wisconsin, the IJNR is a nonprofit educational foundation and an independent public charity that pursues higher standards of news coverage of natural resources and the environment through expedition-style programs of professional development. The July IJNR program targeted mid-career journalists and focused on issues affecting the Lake Michigan and Lake Huron watersheds. Roger Bergstedt, station supervisor of the U.S. Geological Survey Hammond Bay Biological Station also hosted the IJNR group.

The group visited the Sea Lamprey Sterilization Facility

located at Hammond Bay Biological Station, and learned about the invasive sea lamprey and the importance of sea lamprey control on fish community ecology in the Great Lakes. The group also learned about current control methods and research into emerging alternative control strategies. Siefkes and Eldridge led a tour of facilities used to sterilize male sea lampreys and demonstrated operation of key sterilization equipment. Siefkes also gave a presentation covering sterilization operations and sea lamprey control efforts in the St. Marys River. In addition, Bergstedt led a tour of Hammond Bay Biological Station and gave a presentation covering the history of the sea lamprey invasion and control program, and an overview of current research and emerging control techniques. This outreach will result in increased media interest in the sea lamprey control and research programs.

*Michael Siefkes, Marquette Biological Station*

### Alpena Lifelong Learners Learn About Asian Carp

On June 8, Alpena FRO biologist Anjanette Bowen presented information on Asian carp as part of the Alpena Lifelong Learners 2006 Seminar Series. Asian carp refer to four species of invasive carp (bighead, silver, black, and grass carp) that have become established and are spreading within the Mississippi River and its tributaries. Within the Mississippi River they have become very abundant, reducing the diversity of native species and posing a hazard to water users. They are currently poised to enter the Great Lakes basin.

Bowen showed a presentation that covered Asian carp characteristics, identification, current distribution, concerns, and the effort to slow their spread into the Great Lakes via the Chicago barrier project. Bowen discussed what the public can do to prevent the spread of Asian carp and other invasive species and showed a video recorded by the Illinois Natural History Survey depicting the jumping behavior of silver carp. There were a number of questions from those attending. Education about the problems invasive species cause and about what the public can do to combat invasive species is key to preventing their spread to new areas.

*Anjanette Bowen, Alpena FRO*

### Fish and Wildlife Service Participates in Invasive Species Field Course

On June 20, Barry Matthews (Ludington Biological Station) and Anjanette Bowen (Alpena FRO) participated in an Invasive Species Field Course hosted by Inland Seas Education Association (ISEA) at the Great Lakes Campus of Northwestern Michigan College in Traverse City, Michigan. The course educates teachers from across the Great Lakes region about invasive species issues and allows them the ability to directly interact with invasive species researchers from a number of management agencies.

Matthews showed a video about sea lamprey in the Great Lakes and Bowen provided a presentation on problems associated with Eurasian ruffe and round goby, identifying characteristics and their current distribution. Preserved specimens, similar looking native species, and identification cards were provided to aid

in proper identification. More than 30 teachers attended the course.

ISEA is a non-profit organization whose mission is to provide a floating classroom where people of all ages can gain first-hand training and experience in the Great Lakes ecosystem.

*Anjanette Bowen, Alpena FRO*



*-USFWS*

The invasive Eurasian ruffe was one of the many species discussed during an invasive species field course hosted by Inland Seas Education Association.

### Biologist Presents at Aquatic Invasive Species Early Detection Workshop

Alpena FRO biologist Anjanette Bowen provided information on the invasive round goby for two workshops hosted by the Tip of the Mitt Watershed Council on aquatic invasive species early detection. The workshops were held on June 21 in Petoskey, Michigan, and June 22 in Central Lake, Michigan, and provided information to concerned lake citizens willing to train others about a number of aquatic invasive species including purple loosestrife, Eurasian watermilfoil, round goby, and others. Participants learned how invasive species harm the aquatic environment, how to distinguish invasives from native species, and how best to combat, control, or take action against their populations.

The Tip of the Mitt Watershed Council is a non-profit organization dedicated to the protection of northern Michigan lakes, streams, wetlands, and ground water through advocacy, education, water quality monitoring, and research.

*Anjanette Bowen, Alpena FRO*



## Public Use

### Genoa NFH Helps Sportsman's Association "Make a Wish"

Genoa NFH helped United Special Sportsman Association (USSA) "Make a Wish" by assisting in their kids' outdoor event in rural Black River Falls, Wisconsin, providing an aquarium with fish and an outreach display with two minute presentations. The USSA provides unique outdoor opportunities to children diagnosed with cancer, Down's syndrome, terminal illnesses, and other challenges.

The Black River site was an outstanding location for the fishing event because of the many lakes and ponds used to fill and drain cranberry bogs that are prevalent in the area. An early July morning thunderstorm moved through, but didn't dampen the children's enthusiasm for learning more about resource conservation, and enjoying a new fishing opportunity.

More than 120 kids and their parents attended the event at the home of Brigid O'Donoghue, the founder of USSA. As the kids spent the day learning about fish and mussels, fishing, shooting bows and rifles, riding horses, and swimming, it was easy to see that they valued this chance to enjoy the many outdoor opportunities available. It was a pleasure and honor to be invited to be able to share in their joy, and participate in this noteworthy event.

*Tony Brady, Genoa NFH*



-USFWS  
Genoa National Fish Hatchery provided an aquarium display and assistance at a United Special Sportsman Association childrens fishing event.

### Conservation Campers Learn About Fishery Management

Green Bay FRO staff recently assisted with the 2006 Sand Lake Conservation Camp in North-eastern Wisconsin. More than 30 kids and adults participated in the week-long event. Campers enjoyed various sessions including wildlife management, orienteering, forestry, canoeing, aquatic insect studies, invasive species, fisheries management, and bird habitat biology. Professionals in each discipline were invited to share personal experiences in their field of expertise. Green Bay FRO led the fish session which included a brief overview of basic fish biology, displays of gear used for assessments, a short discussion on typical biologist duties, and closing the week with an electroshocking and fyke netting demonstration. A highlight from the session was allowing the top camper to 'fly' the Remote Operated Vehicle out to the fyke net pot and inspect the catch.

*Stewart Cogswell, Green Bay FRO*



-USFWS photo by DeAnna Cogswell  
Steward Cogswell demonstrates fish sampling methods to a group of campers at the 2006 Sand Lake Conservation Camp.

### Fish Distribution Unit Gets a Facelift

One of the most important pieces of equipment at the Iron River NFH is the 3,000-gallon fish distribution tanker. It is used to haul millions of lake trout yearlings to numerous destinations in the Upper Great Lakes, traveling thousands of miles each spring. The truck is visible to the public during those trips and it is important that it displays a positive image of the NFH and of the Fish and Wildlife Service.

Clark Bartelt, facilities manager, removed and replaced the lettering and stickers on the sides of the tank and doors. The lettering had been on the truck for nearly ten years. The cost to have this done at a commercial sign shop was estimated at more than \$1,000. Clark was able to obtain the lettering from the regional Fish and Wildlife Service sign shop for just \$50 dollars. Because of Clark's hard work, the truck will look respectable as it travels throughout the region hauling lake trout for many years to come.

*Kurt Schilling, Iron River NFH*

## And They're Off!

Staff from the Iron River NFH was running in all directions at the hatchery open house on Saturday, August 5, giving guided tours to the visiting public. The event was attended by approximately 500 people who were able to ask questions of the hatchery staff as well as people from Whittlesey Creek NWR, Ashland FRO, Trout Unlimited, and the Friends of the Iron River National Fish Hatchery. The day included coloring for kids, fly-tying demonstrations from Dick Berge of Trout Unlimited, guided tours to groups of 15-25 people, and the all important cookies and lemonade. The staff at Iron River NFH would like to thank Dick Berge of Trout Unlimited, Mary Lee Bast of the Friends of the Iron River NFH, Jonathan Pyatskowitz of the Ashland FRO, Liisa Niva of Whittlesey Creek National Wildlife Refuge (NWR) and the Wal-mart stores of Ashland and Superior for their donations of cookies and lemonade.

*Angela Baran, Iron River NFH*



-USFWS  
Visitors enjoy the exhibits at the Iron River National Fish Hatchery open house.

## "Paws, Claws, Scales, and Tails" Summer Reading Program

Biologist Tim Smigielski presented "What About Lake Trout?" on July 11 at the Otsego County Library in Northern Michigan. More than 100 children and parents were in attendance during the summer reading program called "Something Fishy." Kathy Johnson, the education coordinator at the library, learned of Tim's "Fish Are Fun" presentations at the hatchery and asked for one at the library. Attendees then inquired about hatchery tours. Certainly we'll be seeing some of these folks again at the hatchery. Again on July 12, Tim presented "Exotic Invaders" and displayed many specimens of aquatic invasive species that plague the Great Lakes. This time he was at the Mancelona Public Library, in Mancelona, Michigan. Tim did one show for about 30 summer readers and adults.

*Tim Smigielski, Jordan River NFH*

## Jordan River NFH Parades down Main Street

Jordan River NFH staff participated in the annual Mancelona Bass Festival Parade on June 3. Project Leader Rick Westerhof, biologist Tim Smigielski, and volunteer Ray Puroll represented the hatchery in the parade. Ray's daughter Megan and son Dylan, along with Tim's kids Luke and Jill did a great job keeping up with the hatchery truck while giving out candy to the hundreds of onlookers. The parade ended at Palmer Park where hatchery staff set up a table offering fish tattoos and more candy to the visitors. It was a beautiful day for the Fish and Wildlife Service and our partners.

*Tim Smigielski, Jordan River NFH*

## 11th Annual Water Watch Student Congress Held

The 11th Annual Water Watch Student Congress was held in Traverse City, Michigan, on May 19. The workshop focuses on water uses and issues across the Great Lakes. Approximately 20 other agencies and organizations joined the Jordan River NFH at the event. The students came from nine schools in the Traverse Bay Area Intermediate School District. Students from grades 6 through 12 chose the class they wanted to attend. Each class runs for one hour and twenty minutes and is presented in the morning and afternoon. This year, Rick Westerhof and Paul Haver teamed up to provide a brief overview of the hatchery program and guided the students through a fish dissection. Rick covered the hatchery information and Paul covered the fish dissection.

*Tim Smigielski, Jordan River NFH*

## Jordan River NFH Assists with Kid's Fishing Clinic

The Michigan DNR and the Miller Van-Winkle Chapter of Trout Unlimited held their first Kid's Fishing Clinic at Oden State Fish Hatchery in Oden, Michigan, on May 6. Hatchery manager Rick Westerhof and Student Temporary Experience Program (STEP) student Chris Olds assisted at one of the eight stations set up for the kids. The event was free of charge and was limited to the first 100 kids between the ages of 9 and 14. The eight learning stations covered topics such as fishing laws and ethics, fishing techniques, fly-tying, Great Lakes fishing, live bait demos, and fishing. Rick and Chris worked the fishing pond where the hatchery keeps 80 to 100 of their



excess brood stock brown trout and rainbow trout for the kids to catch and release. The fish ranged in size from 20 to 30 inches and weighed three to 10 lbs. Rick claims that his fishing expertise resulted in more kids catching fish than Chris' students, but Chris disagrees. Most of the kids at the fishing clinic had never seen a fish as large as the brood stock they were catching. One young girl who caught the largest fish in her life at the clinic actually came back with tears in her eyes wanting a hug from Chris, who would not let her give up her pursuit of a big brown trout after many failed attempts to land one.

Rick and Chris made some great contacts with Trout Unlimited and invited them to participate in the Jordan River NFH Hatchery Fest in 2006. All the kids that participated enjoyed the wonderful day and had a great time learning more about fishing. The two hatcheries have been working together for the past two years assisting with each others public outreach events. Last year Oden State Fish Hatchery came to Hatchery Fest 2005 and set up a booth.

*Chris Olds, Jordan River NFH*

### Kindergarten Field Trip to Jordan River

On May 24, 125 kindergarten students (plus chaperones) from the South Maple Elementary School toured Jordan River NFH. Each group of 25 learned about a different station for twenty minutes before moving on to the next station. In the visitor center, they learned about sea lampreys and other invasive species, our brood stations, and our offshore stocking vessel. In the tank room they viewed the youngest fish on station, saw what we feed them, and

learned about the daily work involved with raising them. At the Six-Tile water supply, they saw where our water, and our black fly population comes from, and they learned about our seasonal water temperature variability and its effect on fish growth. At the outside raceways, they saw fish at release size (six to seven inches total length), learned about our feed truck, raceway cleaning practices, and how we use our fish pump to load fish distribution trucks. Lastly, they got a chance to have a snack of goldfish crackers, pretzels, and orange Hi-C (courtesy of the Mancelona McDonald's restaurant) while they colored pictures of lake trout. This is the second year that the kindergarten teachers have chosen the Jordan River NFH for their final spring field trip. They plan on a third annual trip in 2007.

*Wayne Talo, Jordan River NFH*



*-USFWS photo by Andy Pavelek*

**Tim Smigielski explains about raising young lake trout to kindergarten students from Gaylord, Michigan.**

### Fourth Graders Learn about Fish Health

Fourth grader Canon O'Heron-LaBeff from the Bangor Elementary School visited the La Crosse FHC to complete a job shadow assignment for a class project. Employees Eric Leis and Ryan Katona explained to Canon why diagnostic/inspection work is done, selected procedures to determine cause of problems, and answered all his many questions.

The smell of fish was stronger than Canon was aware of, especially when fish were cut open and the body fluids were exposed. He was very interested in the procedures, the complexity of the sampling protocols, and specialized education and training required for the position. He is the nephew of Nancy Christopherson, administrative technician for the La Crosse FRO.

*Rick Nelson, La Crosse FHC*



*-USFWS*

**A future fish health biologist carefully conducts his task during a job shadow assignment at the La Crosse Fish Health Center.**

### Mitigation Fisheries

Neosho NFH stocked 14,194 rainbow trout (4,784 pounds) into Lake Taneycomo during the month of July. There were no stockings into Hickory Creek and Capps Creek since these two areas are not stocked during the hot summer months because of high water temperatures. Stocking of these two local areas will begin again in the fall.

Neosho NFH gave Chesapeake State Fish Hatchery, Missouri, 5,800 (4.2 inch) surplus rainbow trout. Another 19,516 5.2 inch rainbow trout were given to Spring River SFH in Arkansas.

*Roderick May, Neosho NFH*



## Bible School Students Connect with River Ecosystem

Vacation Bible School students from First Congregational Church in Winona, Minnesota, took part in outdoor activities on June 12 and 13 to improve their awareness of the abundant natural wonders in their backyard. Fish and Wildlife Service staff had been contacted by the church requesting assistance with teaching the students “stewardship” of the river ecosystem and the fish and wildlife that call it home. Ann Runstrom from the La Crosse FRO and Cindy Samples and Brian Pember of the Upper Mississippi River NW&FR-Winona District worked together and taught the kids about local plants (including “hands-on” experience with poison ivy), invertebrates, fish, and wildlife and their role in the ecosystem. On the evening of June 12, kids were able to “touch and feel” lake sturgeon and learn about their behavior and adaptations to live in the river. The following day, kids went out to the Upper Mississippi River NW&FR and helped collect, examine, and identify invertebrates and fish.

*Ann Runstrom, La Crosse FRO*



-USFWS

**Bible school students connect with river ecology, complements of Fish and Wildlife Service offices in the La Crosse, Wisconsin, area.**

## Fish and Wildlife Service spends Friday Nights Downtown

Alpena FRO biologists Anjanette Bowen and Heather Rawlings organized a Fish and Wildlife Service booth on June 30, the first night of Alpena’s “Friday Nights Downtown.” Held every Friday night in July, the event focuses on fun for the family, and all downtown businesses stay open. The booth contained an aquatic invasive species display, pamphlets and informational brochures, coloring books, and several games for children including a fish puzzle and fish family game. Several hundred people visited the booth. A local band, vendors, and an emphasis on children’s activities such as face painting and balloon tying contributed to the relaxed atmosphere. The Alpena FRO will participate in the final “Friday Nights Downtown,” on July 21. Approximately 400 people attended the first “Friday Nights Downtown” of the season.

*Heather Rawlings, Alpena FRO*

## Lake Sturgeon Recovery Efforts Highlighted in Media

It has been four years since researchers from Michigan Sea Grant, U.S. Geological Survey (USGS), Michigan DNR, and the Fish and Wildlife Service first sat down to brainstorm on the idea of constructing an artificial lake sturgeon spawning reef in the Detroit River. Those early planning meetings, the research that followed, construction of the reefs, and the history of lake sturgeon were highlighted in a documentary titled *Giants in the River* which aired on Detroit Public Television on April 30. Researchers and partners from Michigan Sea Grant, USGS, Michigan DNR, DTE

Energy, JJR Consulting, and the Fish and Wildlife Service were interviewed in the documentary.

A special screening of the documentary along with a special lake sturgeon exhibit was held at the Detroit Science Center the week prior to the airing. Patricia Chargot covered the story for the Detroit Free Press. Director of the project Jennifer Read (Michigan Sea Grant) hosted the event. Sea Grant developed the exhibit as well as a Web site

([www.miseagrant.umich.edu/sturgeon/sturgeon\\_exhibit.html](http://www.miseagrant.umich.edu/sturgeon/sturgeon_exhibit.html)) that includes information about the exhibit, the history of lake sturgeon, and a sturgeon quiz. All of the partners involved in the project attended the screening, including John Hartig, manager of the Detroit River International Wildlife Refuge, and James Boase, Alpena FRO biologist. From February to August, teachers, students, and fishing enthusiasts can view a life-sized lake sturgeon model and pick up a DVD copy of the documentary at the center.

*James Boase, Alpena FRO*



-Michigan Sea Grant

**This model of lake sturgeon anatomy is on display at the Detroit Science Center.**

# Cooperation with Native Americans

## Lake Whitefish Population Assessment Conducted

Ashland FRO conducted lake whitefish assessments out of Grand Marais, Michigan, in July. These gill net surveys were coordinated by the Technical Fisheries Committee of the 2000 Consent Decree for 1836 Treaty waters of Lake Superior. Cooperators on this effort include the Fish and Wildlife Service, Bay Mills Indian Community, Chippewa-Ottawa Resource Authority, Michigan DNR, Pictured Rocks National Lakeshore, and Grand Marais Coast Guard Auxiliary. The areas surveyed include Grand Marais, Blind Sucker Creek, and Deer Park. The information obtained is used by agencies to manage the commercial and recreational harvest of lake whitefish, evaluate abundance and fish health, and to gain a broader understanding of the ecological role of lake whitefish in Lake Superior. Biological data collected by species caught included length, weight, sex, sea lamprey marks, ageing material, and stomach (diet) samples.

*Glenn Miller, Ashland FRO*



-USFWS

**Ashland Fishery Resources Office staff work up fish samples collected during a lake whitefish population assessment conducted near Grand Marais, Michigan.**

## Fish and Wildlife Service Completes Whitefish Surveys in 1836 Treaty Waters

In June 2006, biologists from the Green Bay FRO, with assistance from biologists of the Ludington Biological Station, completed lake whitefish surveys in the 1836 Treaty Waters of Lake Michigan, surveying two whitefish management units near Elk Rapids and Frankfort, Michigan. Nearly 15,000 feet of graded mesh gill-net was set in each survey location. Catches from the survey provide an alternative set of data on lake whitefish abundance and health, and most importantly, this data source is independent of the commercial fishery. In the assessment surveys, four random transects are selected within 10 miles on either side of the port-town. A shallow and a deep gang of gill-net are set along each transect, producing catch per effort information to track the relative abundance of whitefish populations from year to year and across management units of the lake. Biological data are also collected from the lake whitefish and lake trout that are captured. Lengths, weights, sex, maturity and lamprey marks are recorded

on the catch and aging structures, including scales and otoliths, are extracted. These structures provide estimates of age based on the number of annuli that can be counted.

The Fish and Wildlife Service, State of Michigan, and the five tribes co-manage the fishery and each agency has responsibilities to conduct lake whitefish surveys. This survey information is then supplied to the Modeling Subcommittee, a multi-agency group of fishery analysts who are attempting to incorporate this time-series of survey data into the catch at age models used to forecast whitefish stock size, and ultimately, to establish recommended total allowable catches for each management unit. By combining an assessment survey data source in addition to the commercial fishery data, it is anticipated that the catch at age models will be able to make more accurate predictions of stock size and enhance the management capabilities in the 1836 Treaty Waters.

*Dale Hanson, Green Bay FRO*

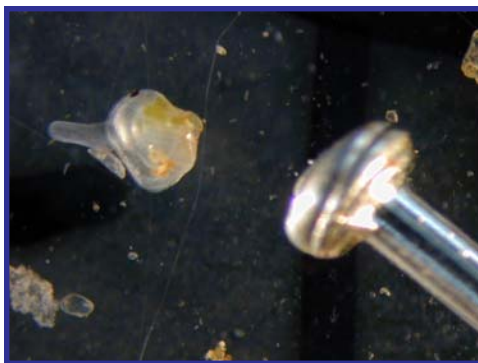
## Leadership in Science and Technology

### Genoa NFH's Freshwater Mussel Program: It's Not Just for Restoration Anymore

Genoa NFH's mussel program continues to expand its services by helping researchers at the University of Wisconsin-La Crosse better understand the parasitic life stage of these unique organisms. Freshwater mussels' parasitic larva called *glochidia*, must attach to the gills of fish so that they can undergo a metamorphosis required to become an independent living organism. UW-La Crosse Professor Scott Cooper is interested in the blood clotting properties of parasitic organisms.

Cooper's interest in the parasitic glochidia developed after he assisted Mark Steingraeber from the La Crosse FRO on a winged mapleleaf mussel study. In July, Genoa NFH supplied Cooper with 1,700 newly transformed plain pocketbook mussel juveniles. This makes the third research facility which Genoa NFH has provided mussels this year. Mussels from Genoa NFH have gone to the United States Geological Survey for diet studies, and others are currently being cultured for toxicity testing to be conducted at North Carolina State University. Because of their lack of mobility, mussels are a "captive audience" to any toxic chemical that comes downstream. Because of its ability to culture large numbers of freshwater mussels, Genoa NFH is on the forefront to provide test animals for future studies.

*Tony Brady, Genoa NFH*



-USFWS

This image displays the size of a juvenile freshwater mussel in comparison to the head of a pin.

### Lake Sturgeon Reef Project Presented

Biologist James Boase attended the 49th annual meeting for the International Association of Great Lakes Research on May 24 in Windsor, Ontario. Boase was an invited speaker at the Detroit River International Wildlife Refuge Symposium. He gave a presentation titled "Fish Response to Construction of an Artificial Lake Sturgeon Spawning Reef in the Detroit River" and was coauthor on four other talks given at the meeting. All talks focused on the recent research results by biologists from Alpena FRO and our partners with the USGS Great Lakes Science Center and Michigan DNR Lake Erie Management Unit. Three of the talks focused on success of the artificial lake sturgeon spawning reef located at Bell Isle in the Detroit River. The remaining two talks addressed the near-shore fish communities in Western Lake Erie and the first documented occurrence of whitefish spawning in the Detroit River in nearly 90 years. Talks and highlights of the meeting can be accessed at <http://www.iaglr.org>.

Approximately 100 researchers and policy makers from the United States and Canada attended the

symposium. The symposium provided an excellent opportunity to demonstrate how Alpena FRO is working with state and Federal biologists, recreational anglers, and commercial fishers from both Canada and the United States to better manage fisheries resources in the Huron Erie Corridor.

*James Boase, Alpena FRO*



-USFWS

Conventional equipment was used to construct an artificial lake sturgeon spawning reef in the Detroit River.

### R/V Chub Expands Capabilities

The highest priority project for Lake Superior fishery agencies is the development of a standardized hydroacoustic survey to estimate the abundance and biomass of pelagic prey fish in the lake. At the winter Lake Superior Technical Committee meeting, Ashland FRO offered to assist with this effort by deploying hydroacoustic gear from the Lake Superior vessel *R/V Chub*. In July, the *R/V Chub* was tested as a platform for conducting these hydroacoustics surveys in the nearshore waters. Working with USGS, Northland College, and the University of Minnesota-Duluth, Glenn Miller and Henry Quinlan simulated surveys by working at night and following transects with the "towfish" periodically deployed. The winch setup, deck and cabin space, and fish processing



table all proved to be well suited to support the high tech hydroacoustic equipment. With successful completion of the field trials, the *R/V Chub* will be used to conduct hydroacoustic surveys in early August in conjunction with the U.S. Geological Survey vessel *Kiyi* and University of Minnesota vessel *Blue Heron*.

The field trials proved to be doubly beneficial as graduate and undergraduate students from Michigan State University and Northland College were able to deploy nets to capture mysis, a small crustacean that serves as the forage base for planktivorous prey fish in Lake Superior. Mysis ascend in the water column at night to feed on plankton and zooplankton and are more easily captured at night. The students were conducting the sampling as part of a project to describe the energy transfer between trophic levels in Lake Superior and to develop a relationship between length and weight of the mysis that will allow researchers to estimate weight (biomass) based on the length of the mysis.

*Henry Quinlan, Ashland FRO*



-USFWS  
Ashland Fishery Resources Office's *R/V Chub* goes through field trials for suitability to conduct hydroacoustic surveys

### Biologist Presents Results of Yellow Perch Analysis

John Netto of the Green Bay FRO recently attended the Wisconsin DNR Lake Michigan Fisheries Team meeting, presenting preliminary results of his recent attempts to integrate the results of two research projects. Recently, the DNR and University of Wisconsin conducted a study to describe the diet composition and predatory demand of double crested cormorants in Green Bay. Data from this study indicate that the yellow perch eaten by cormorants were two years old or younger. The Green Bay FRO has been working with the DNR to develop a stock assessment model for the yellow perch population in Green Bay. The stock assessment model uses fishery and survey data to estimate a time series of adult yellow perch abundance.

Netto used the estimates from the model and age-0 yellow perch trawl catch numbers to estimate an absolute abundance of juvenile yellow perch during the period of the cormorant diet study. The estimates of yellow perch abundance and an evaluation of the uncertainty surrounding the estimates will help determine the significance of cormorant induced mortality on the Green Bay yellow perch fishery and population.

*John Netto, Green Bay FRO*

### Do Fish Lie About Their Age? Project Aims to Find Out

Catch at age models are used as management tools to set harvest quotas for lake trout and lake whitefish within the 1836 Treaty Waters of the Upper Great Lakes. It is no surprise that fish age is an important piece of information in "catch at age" models. Fish aging problems have resulted in inaccurate stock assessments, and severe fishery depletions from overharvest have occurred.

Obviously fish don't "lie" about their age; however, the calcified structures that are collected from fish for aging purposes may not always give an accurate picture. Calcified structures, including fish scales and ear bones (otoliths), are aged in the same manner that trees rings are counted to age trees. The difference is that annuli (annual rings) can be much more difficult to interpret. Otoliths are known to provide more reliable annuli counts. Even otoliths; however, are not the perfect aging solution.

Regardless of which calcified structure is used, the aging process is still considered to be as much of an art as a science. Interpretation of annuli in both scales and otoliths is not clear-cut and age readers can, and do, assign different ages.

Dale Hanson, a biologist with the Green Bay FRO, has initiated a project to determine the potential for lake trout aging problems in Lake Michigan and to explore new methods to derive age compositions from commercial catches. This is a cooperative project involving biologists from the Wisconsin and Illinois DNR's. To assess the potential for aging problems, the group is creating an "aging library" of known aged, coded wire tagged lake trout from

the 2006 spring and upcoming fall assessment surveys in and near the Midlake Refuge area of Lake Michigan. Pat McKee (Wisconsin DNR), and Steve Robillard and Dan Makauskas (Illinois DNR) coordinated data collections on their spring assessment surveys and provided Hanson with scales, otoliths, and the fish heads containing the coded-wire tags (CWT).

The spring sampling season was highly successful; based on the number of CWT recaptures in and near the Midlake Refuge it is anticipated that analyses on the aging library will be able to proceed after just one year of fish collections. Hanson and technician Ted Eggebraaten have been busy processing the CWT's and extracting otoliths from the spring caught fish. After a drying period, the otoliths will be weighed to the nearest thousandth of a gram and then prepared for aging using the grind and burn technique. Over the next several months, Hanson and Eggebraaten will be preparing otolith and scale preparations to distribute to interagency 'fish agers' around Lake Michigan to populate the aging library with age estimates.

Progress on the modeling component of the aging library analysis is also underway. Hanson, fresh from a week of AD Model Builder training at Michigan State University in June, has begun writing the program to perform the modeling simulation component of this study. It is anticipated that Hanson in conjunction with resident fisheries modeler John Netto will have the simulation programming complete by the fall so that after the fall spawning survey collections are processed and the library is updated, the group can 'hit the ground running' with a number of analyses that will assess

current and potentially new aging methods for lake trout.

The primary objectives of the analyses are to compare current and new methods incorporating otolith weight to derive age composition data and identify the best method that is most accurate and cost effective. There are several parts to the analyses. First, the group of biologists will determine age specific error rates associated with each calcified structure by comparing reader ages to the known ages. Additional work will explore the usefulness of otolith measurements for age prediction.

This is an area of ongoing research that is based on the otolith's continued growth over the entire life of the fish. For many species otolith size and weight are highly correlated with fish age and this method may prove valuable in Lake Michigan. The biggest advantages to using ages inferred from otolith weight relationships are the removal of the "artistic interpretation" biases, also known as age error. Also, the method is cost effective in that weight data are less time consuming to obtain than annuli counts, so it may be possible to increase the sample size of fish ages for a given cost.

In addition to developing predictive equations for fish age from otolith weight and length, the group will pursue an extensive modeling simulation exercise to compare the accuracy of age composition data determined from scales, otolith counts, otolith weights, and combinations of these data sources. Each of these analyses have important implications that will be brought to the Modeling Sub Committee (a group of fishery analysts responsible for implementing catch at age models in the 1836 Treaty waters).

*Dale Hanson, Green Bay FRO*

## Final Stages of Construction and Tests before Delivery of the *M/V Spencer F. Baird*

In May, Conrad Shipyard was in the last stages of construction and testing on the *M/V Spencer F. Baird*. Paul Haver from the Jordan River NFH and the vessel engineer were present during the dock trials, which included operating all the equipment aboard the vessel.

With the fish tanks placed onboard and the support systems operating, Paul pointed out a few minor corrections that had to be done to make the fish tanks operate correctly and be more fish-friendly. The support systems, which include the chillers, oxygen concentrators, and pumps, all worked correctly.

All the assessment equipment was also placed onboard which included trawl winches and net reels. These systems also operated without major changes.

During sea trials, all electronic navigation equipment worked as required. Problems with the propulsion system and anchoring needed to be corrected.

*Bob Bergstrom, Jordan River NFH*



*-USFWS photo by Bob Bergstrom*

**One of the most important tests for the new *M/V Spencer F. Baird* was to install and check the fish tanks on the new vessel.**

## Viral Hemorrhagic Septicemia Symposium Held

A symposium in Minneapolis brought together 40 fish health, research, university, and hatchery experts to discuss current information and provide recommendations on how to resolve issues with *viral hemorrhagic septicemia*, a viral fish disease that has caused large scale mortalities in rainbow trout and turbot aquaculture operations in Europe and in Pacific herring and pilchard populations along the Pacific Coast of North America. The disease is caused by a rhabdovirus, *Viral Hemorrhagic Septicemia Virus* (VHSv). This virus has a number identified isolates grouped in four types; three from Europe and one from North America. Each appears to have unique effects with specific pathogenicity on certain species of fish. The isolate found in the Great Lakes basin is most similar to the VHS strain previously isolated from the Atlantic Coast in Eastern North America.

VHS is a reportable disease that requires notification of the Department of Agriculture-Animal and Plant Health Inspection Service (USDA-APHIS), Canadian agencies, and the International Organization for Animal Health. It is also listed as an emergency disease by the Great Lakes Fishery Commission-Great Lakes Model Program.

Mortalities have occurred in the following Great Lakes species: freshwater drum (lakes Ontario and Erie), muskellunge (Lake St. Clair), round goby (Lake Ontario), gizzard shad (Lake St. Clair) and yellow perch (Lake Erie and Lake St. Clair). Species confirmed as carrier fish that did not show signs of disease: smallmouth bass, rock bass, silver redhorse, bluegill,

northern pike, walleye, white bass, and short-head redhorse.

To date, VHSv has been confirmed from the St. Clair River, Lake St. Clair, Lake Erie (west-central basins), Lake Ontario (Bay of Quinte, Ontario, and Rochester, New York, area) and the St. Lawrence River.

*Rick Nelson, La Crosse FHC*

## Whitefish Research in the Huron Erie Corridor Highlighted in the Toledo Blade

Biologists from Alpena FRO and the U.S. Geological Survey Great Lakes Science Center discovered the presence of spawning whitefish in the Detroit River last winter for the first time since 1916. News of the discovery was first announced in the Toledo Blade on May 23. The work conducted last fall was part of the preliminary research for a larger study that is scheduled to begin in the fall of 2006 and continue until the spring of 2008. Funding for the research is provided, in part, by the Fish and Wildlife Service's Science Support Program. The goal of the project is to identify fish use of recently created and historical spawning habitats in the Detroit River. During the spring, species specifically targeted will include lake sturgeon and walleye, while whitefish will be the species of interest in the fall and winter.

Whitefish are currently the most sought-after commercial species in the Great Lakes and at one time they were harvested in huge numbers in Lake Erie. The fishery collapsed for a number of reasons but spawning habitat loss and pollution were identified as primary reasons for the decline. At the turn of the century, the Detroit River supported huge numbers of spawning whitefish, because at that time the river was composed

of many braided, shallow channels. Those historical channels were composed primarily of limestone bedrock, rock, and gravel, habitats that are needed for successful spawning by not only whitefish but also many other species of native fish such as lake sturgeon and walleye. In 1972 the U.S. Clean Water Act and the U.S.- Canada Great Lakes Water Quality Agreement in 1972 were signed and since then the Detroit River has seen a steady decline in pollution related problems. The goal is to clean up the river and provide adequate habitat that will eventually lead to the re-establishment of species like whitefish and lake sturgeon.

*James Boase, Alpena FRO*



*-USFWS photo by James Boase*

**Ed Roseman and Bruce Manny (U.S. Geological Survey) collected whitefish eggs from the Detroit River last fall. This collaboration with the Alpena FRO was highlighted in an article by the Toledo Blade.**



# Aquatic Habitat Conservation and Management

## Farcus Creek Project Completed

Work is complete on the Farcus Creek Fish Habitat Restoration Project on a historic brook trout stream in Wisconsin. Two thousand feet of instream habitat were restored, and the improvements will provide additional habitat for brook trout as well as other fish and wildlife. The project is located on the Tom Fratt Farm and consisted of removal of a failed concrete dam, bank stabilization, instream habitat improvement, and riparian restoration.

Large wood and boulders were used to stabilize the banks at the obstruction removal site, and at key locations along the degraded reach of stream. Engineered large wood structures were also placed in the stream to provide improved fish habitat. While the target species of the stream restoration is brook trout, migratory birds and small mammals will also benefit from the large wood. Songbirds such as yellow warblers will have an improved riparian and stream bank understory where they can forage for insects and small mammals such as the northern water shrew, will forage and burrow within the large woody debris placed on and near the stream banks.

Partners in the restoration project include the Fratt Family, Natural Resources Conservation Service, ABDI – Land Conservation Department, Ashland FRO's Partners for Fish and Wildlife Program, and Whittlesey Creek NWR's Youth Conservation Corps. The hard work of the YCC crew was essential to the success of the project. The hard working young people from the Ashland area put in three days of hard labor pounding stakes, shoveling gravel, and moving rocks and logs.

Prior to the on-the-ground restoration, a crew from Wisconsin DNR conducted an aquatic habitat and fish population inventory on the stream. Electrofishing, habitat cross sections, and other data were collected for an Index of Biological Integrity. The effort provided important pre-project baseline data that will be used to measure the success of the restoration efforts, and may eventually become a long term research and monitoring site.

*Ted Koehler, Ashland FRO*



-USFWS  
Partners involved with the Farcus Creek project, which restored 2,000 feet of instream habitat, include the Fratt family, Natural Resources Conservation Service, ABDI - Land Conservation Service, Ashland Fishery Resources Office, and the Youth Conservation Corps.

## Green Bay FRO Assists Private Landowner with Habitat Restoration

The Green Bay FRO partnered with the Marinette County Land and Water Division and a private landowner to stabilize an eroding bank along the Menominee River, in Marinette County, Wisconsin. More than 130 feet of shoreline and bank were stabilized to prevent several tons of sand and sediment from entering the river.

Rock was assembled on the top of the bank and then pushed down a metal shoot with a skidster. A

special excavator was used to place the rock along the shore. After the rock was in place, top soil was placed and seeded with native species. Additionally, erosion control fabric was used at the bank-rock interface to jump start plant growth and protect the site.  
*Stewart Cogswell, Green Bay FRO*



-USFWS  
An excavator stabilizes the bank along the Menominee River in Marinette County, Michigan.

## Woody Debris Added to Trout Creek

The Green Bay FRO worked with the Oneida Tribe of Indians of Wisconsin and two private landowners to complete a restoration project on Trout Creek, in Northeastern Wisconsin. Trout Creek has been a focus area for the Tribe over the past several years. The project continued that focus by adding woody structures to over 300 miles of stream. The Oneida Conservation Corps supported the project by supplying logs and assisting with log placement and other logistics.

Numerous other restoration projects have improved the available habitat in the watershed. Projects included riparian zone enhancement, woody debris additions, and restoring channelized sections of the stream. Land acquisitions by the Tribe have also aided with protection and enhance-

ment efforts throughout the Trout Creek watershed.

Native brook trout were historically present in Trout Creek, but have not been sampled for several decades. When all major disturbances have been addressed, the Tribe is interested in working on restoration of brook trout to Trout Creek.

*Stewart Cogswell, Green Bay FRO*

### Detroit River Refuge holds Elizabeth Park Meeting

Alpena FRO biologist Susan Wells met with staff from the Detroit River International Wildlife Refuge (IWR), Wayne County Parks Department, Detroit River Alliance, and Nativescape to discuss a restoration project involving a grant obtained through the Fish and Wildlife Service's Coastal program to stabilize 300 feet of riverine buffer strips along the Detroit River on Elizabeth Park, the oldest county park in Michigan.

This project will use innovative partnerships to conduct a habitat restoration project. The project, coordinated by the Alpena FRO and the Detroit River IWR, will reduce sediments directly entering the Detroit River system by restoring natural vegetation and creating buffer zones along the river. Reducing the sedimentation into the river will restore fish spawning and rearing habitats, and it will demonstrate techniques for restoring coastal habitat and teach these techniques to other conservation partners in a hands-on volunteer workshop. Soft engineering techniques that will be used to stabilize shorelines and enhance habitat along the Detroit River, will also improve the aesthetics and fishing opportunities.

*Susan Wells, Alpena FRO*



Partners met to discuss a project to stabilize 300 feet of riverine buffer strips (identified in the image as Project sites) along the Detroit River.

### June Meeting with Otsego Road Commission

On June 15, Alpena FRO biologists Susan Wells and Heather Enterline met with representatives from Huron Pines Resource Conservation & Development (RC&D) and the Otsego County Road Commission to discuss two pending road crossing projects, on Crapo Creek and Gillis Creek.

The Gillis Creek project is funded with 2004 Fish Passage money and consists of an under-sized perched culvert that will be replaced this fall with a bottomless structure. Gillis Creek is a head-water tributary to the Black River, a state designated Blue Ribbon Trout Stream. Replacement of the current structure will restore two miles of brook trout passage to spawning and nursery areas.

The Crapo Creek project, funded with 2005 Fish Habitat Restoration money, is a bridge crossing on a tributary to the AuSable River, another state designated Blue Ribbon Trout Stream. The bridge is low and narrow and was installed years ago as a temporary crossing. Because the crossing was improperly designed, large amounts of sediment enter the stream at this

point and flow directly into the AuSable River. The gravel road washes out annually and many partners have identified it as a problem site. Project planning has begun for this site with expected completion in 2007.

*Susan Wells, Alpena FRO*



-USFWS

This undersized perched culvert will be replaced with a bottomless structure to allow uninhibited fish passage.



# Workforce Management

## Youth Conservation Corps Program Lives on at Genoa NFH

Douglas Elliott and Michael Pedretti of Genoa, Wisconsin, have joined the staff at the Genoa NFH through the Youth Conservation Corps (YCC) Program. Recruitment for the two summer positions began in April as staff at the Genoa NFH contacting numerous local schools. Nine applications were received for these two positions. Doug and Mike were chosen by a random drawing.

The YCC Program is a summer employment program for young men and women ages 15 to 18. The objectives of the program are for these enrollees to further the development and maintenance of the nation's natural resources by America's youth, to increase self-discipline, learn work ethics and how to relate to peers and supervisors.

Doug and Mike got a new pair of safety shoes, an orientation of the hatchery, and an overview of the program and work responsibilities. After completing the obligatory paperwork, Assistant Project Leader Roger Gordon explained that the following work projects were to be completed during their eight week employment: general building maintenance, hatchery facility and equipment maintenance, day to day fish culture activities, and cleaning. This valuable program has allowed the station to serve the community by providing jobs to local youth. It also has allowed the station to accomplish projects that may never have been completed without the temporary boost in the summer work force.

*Darla Wenger, Genoa NFH*



-USFWS

**Youth Conservation Corps enrollees Michael Pedretti (left) and Doug Elliott pose for a picture in front of the entrance sign at the Genoa National Fish Hatchery.**

## Green Bay FRO hosts Open-Water Boat Safety Course

Green Bay FRO coordinated Region 3's first stand-alone Open Water Module (OWM) motorboat course in Sturgeon Bay, Wisconsin, June 27-29. This course was attended by eight Fish and Wildlife Service employees, two Tribal law enforcement agents, and one U.S. Geological Survey employee. Instructors were drawn from around Region 3 including the Rock Island Ecological Services Field Office, Marquette Biological Station, Alpena FRO, and the Green Bay FRO. Previously, OWM was taught in conjunction with the basic Motorboat Operator Certification Course (MOCC). By offering the OWM as a stand-alone course, instructors are able to focus on open water situations and provide additional attention to those topics. A prerequisite for taking the OWM is to complete the basic MOCC, which is required for all Fish and Wildlife Service employees who operate motorboats.

The OWM covers many skills needed to operate safely in open water areas with a combination of lecture, open water and pool sessions, utilizing a hands-on

approach. This course expands on skills learned in the MOCC and includes additional information on topics such as sea anchors, drogues, radar reflectors, life rafts, operating in heavy seas, electronics, waves, tides, weather, survival suits, helicopter rescue, night operations, and emergency procedures.

Coastal navigation was a large component to the course and students learned how to determine location using various techniques including speed/time/distance, running fix, dead reckoning, and a three-point fix. Students were required to use these skills in a practical test which included electronic and non-electronic navigation.

Safety was another large a component to the OWM and emphasis was placed on "know before you go," assessing risk versus data collection and situational awareness. Students practiced survival procedures in a pool and were then required to use them in a real life scenario on Lake Michigan, which included a life raft deployment, safety formations, asset assessment, visual distress signals, rations, first aid, and psychological effects of survival.

The Open Water Module provides the necessary information and skills for Fish and Wildlife Service employees, with and without experience, to become safe and reliable motorboat operators and crew members. Some personnel may need additional time at their individual stations to practice skills learned and gain valuable experience operating motorboats in the field. For additional information, contact Stewart Cogswell of the Green Bay FRO at (920)866-1763.

*Stewart Cogswell, Green Bay FRO*



## Volunteer at Jordan River NFH going into Conservation Law Enforcement

A recent innovation to Jordan River NFH's volunteer program has been to provide diverse opportunities to students and volunteers interested in more than just fish culture. Travis Smith, a student enrolled at Cornerstone University in Grand Rapids, Michigan, assisted with fish culture duties and learned about hatchery operations while volunteering in May. While here, Project Leader Rick Westerhof scheduled Travis for a ride-along with Michigan DNR Conservation Officer (CO) for Antrim County Andrea Albert. Travis saw a day in the life of a Conservation Law Enforcement Officer. Andrea, a recent recruit herself, was able to give Travis some very useful information from her own experiences. Travis recently interviewed for the CO Academy and did very well. Certainly this fisheries experience will help him in his future career.

*Tim Smigielski, Jordan River NFH*



*-USFWS photo by Wayne Talo*

**Travis Smith's experiences while volunteering at the Jordan River National Fish Hatchery has led him to pursue a career in conservation law enforcement.**

## Lake Whitefish Survey Assistance Provided

Jordan River NFH volunteer Andy Pavelek spent the day assisting the Alpena FRO with its Lake Huron whitefish survey. Andy worked with Jerry McClain, Scott Koproski, and Adam Kowalski lifting and resetting gillnets near Rogers City, Michigan. This was Andy's first experience with fish sampling. To do it on the Great Lakes was "awesome," he said. Andy enjoyed the day and the word was he did well. Jordan River NFH student employee Chris Olds and biologist Wayne Talo also made brief trips to Alpena to assist with the whitefish survey during July. By providing this kind of assistance to our other offices, we benefit as much as they do. This work was very educational, and we will certainly draw upon this experience when talking about the overall lake trout rehabilitation program with hatchery visitors. The Jordan River staff looks forward to assisting Alpena FRO as much as possible in the future.

*Andy Pavelek and Wayne Talo, Jordan River NFH*

## Employees and volunteers assist with Lake Sturgeon Assessment Project on the St. Mary's River

In June, Student Temporary Experience Program (STEP) student Chris Olds and volunteer Andy Pavelek from the Jordan River NFH traveled to Sault Ste. Marie, Michigan, to help Alpena FRO biologist Scott Koproski and Alpena student employee Meghan Kline with their lake sturgeon assessment project in the St. Mary's River. Chris and Andy worked for two days setting and pulling set lines and collecting data. After all the lines were pulled and reset, they began tracking the previously caught lake sturgeon. Any sturgeon that was caught with a length over 50 inches received a tracking unit that was surgically implanted. This allows Meghan to track the daily movements of individual fish. Seven fish were captured in the two day time period. Two of the seven sturgeon met the fifty inch criteria, so tracking units were implanted. On the last day, Andy pulled up the first female sturgeon of the year. Ten lake sturgeon had been captured previously and all of those were males.

*Chris Olds and Tim Smigielski, Jordan River NFH*

# Great Lakes - Big Rivers Regional Fisheries Offices

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

Gerry Jackson ([gerry\\_jackson@fws.gov](mailto:gerry_jackson@fws.gov))

## Michigan

Alpena Fishery Resources Office  
Federal Building; 145 Water Street  
Alpena, MI 49707  
Jerry McClain ([jerry\\_mcclain@fws.gov](mailto:jerry_mcclain@fws.gov))  
989/356-3052

Jordan River National Fish Hatchery  
6623 Turner Road  
Elmira, MI 49730  
Rick Westerhof ([rick\\_westerhof@fws.gov](mailto:rick_westerhof@fws.gov))  
231/584-2461

Ludington Biological Station  
229 South Jebavy Drive  
Ludington, MI 49431  
Dennis Lavis ([dennis\\_lavis@fws.gov](mailto:dennis_lavis@fws.gov))  
231/845-6205

Marquette Biological Station  
1924 Industrial Parkway  
Marquette, MI 49855  
Katherine Mullet ([katherine\\_mullet@fws.gov](mailto:katherine_mullet@fws.gov))  
906/226-6571

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

## Missouri

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

Neosho National Fish Hatchery  
East Park Street  
Neosho, MO 64850  
David Hendrix ([david\\_hendrix@fws.gov](mailto:david_hendrix@fws.gov))  
417/451-0554

## Illinois

Carterville Fishery Resources Office  
9053 Route 148, Suite A  
Marion, Illinois 62959  
Rob Simmonds ([rob\\_simmonds@fws.gov](mailto:rob_simmonds@fws.gov))  
618/997-6869

## Wisconsin

Ashland Fishery Resources Office  
2800 Lake Shore Drive East  
Ashland, WI 54806  
Henry Quinlan ([henry\\_quinlan@fws.gov](mailto:henry_quinlan@fws.gov))  
715/682-6185

Genoa National Fish Hatchery  
S5689 State Road 35  
Genoa, WI 54632-8836  
Doug Aloisi ([doug\\_aloisi@fws.gov](mailto:doug_aloisi@fws.gov))  
608/689-2605

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

Iron River National Fish Hatchery  
10325 Fairview Road  
Iron River, WI 54847  
Dale Bast ([dale\\_bast@fws.gov](mailto:dale_bast@fws.gov))  
715/372-8510

LaCrosse Fish Health Center  
555 Lester Avenue  
Onalaska, WI 54650  
Richard Nelson ([rick\\_nelson@fws.gov](mailto:rick_nelson@fws.gov))  
608/783-8441

LaCrosse Fishery Resources Office  
555 Lester Avenue  
Onalaska, WI 54650  
Pamella Thiel ([pam\\_thiel@fws.gov](mailto:pam_thiel@fws.gov))  
608/783-8431



## Fish Lines

Region 3, Great Lakes/Big Rivers  
2006 Vol. 4 No. 10

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

Phone: 612/713-5111

Questions or comments concerning *Fish Lines* can be addressed to Dave Radloff, 612/713-5158 or email at [david\\_radloff@fws.gov](mailto:david_radloff@fws.gov)



Printed on 30% Recycled  
by Fiber Weight Paper



-Jerry French Postcard Collection; U.S. Fish Hatchery, Eagle Nest, New Mexico

## Windows in time

### *A Glimpse into our Proud Past:*

*The U.S. Fish Hatchery at Eagle Nest, New Mexico, was officially known as a sub-station since it was in operation only a few months each year. The function of the hatchery was to handle the large number of native trout eggs that were taken from nearby Eagle Nest Lake.*

*The hatchery was established in 1932 and remained in operation until 1959. The hatchery was transferred to the State of New Mexico in 1964.*

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

Questions or comments concerning *Fish Lines* should be addressed to Dave Radloff, 612/713-5158 or email at [david\\_radloff@fws.gov](mailto:david_radloff@fws.gov)

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