

U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

Fish Lines

Sturgeon Return to Red Lake

Environmental Compliance
Audit Team Assists Hatcheries
in 2007

Flathead Futures Looking
Strong



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Fish Lines

Fisheries & Aquatic Resources Program - Midwest 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.

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.

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fish lines

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-USFWS
Fishing Derby at the Genoa
National Fish Hatchery

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Sturgeon Return to Red Lake

BY MICHAEL MEUERS OF THE RED LAKE NET NEWS

Ten thousand small, but potentially large primitive fish known as lake sturgeon, were reintroduced to Red Lake, Minnesota, on Monday October 1st. Employees of the Red Lake Department of Natural Resources (DNR) and Fish and Wildlife Service released the 7.5 inch lake sturgeon at a landing on the southeast shore near where the Blackduck River enters Lower Red Lake. Ceremonial tobacco was offered at the site by Spiritual Elder and Hereditary Chief Greeting Spears. At the landing, the Blackduck River welcomed the lake sturgeon, and they showed their happiness at finally being released from stainless steel tanks that must have been getting quite crowded with their 10,000 brothers and sisters. As one watched from the landing, one could see many of these small primitive fish gleefully jumping out of the water over and over on a warm, sunny October day. Free at last and happy to be in their new home.

According to Red Lake DNR Director Al Pemberton, the sturgeon eggs came from the Manitou Rapids First Nation in Canada. “The eggs were taken from the Rainy River and procured and raised by the U.S. Fish and Wildlife Genoa National Fish Hatchery in Wisconsin” said Pemberton. They were fed brine shrimp at first, then bloodworms, and finally krill to reach their release size. “Lake sturgeon was indigenous to Red Lake until the 1940’s when the U.S. Government, administered by the Army Corp of Engineers, placed a dam on the Red Lake River, preventing lake sturgeon from entering their traditional spawning area,” said Red Lake DNR Administrative Officer Dave Conner, “although other issues contributed as well.” It is hoped that by releasing the young lake sturgeon into the Blackduck River, they will return there to spawn. “But it won’t be for a long time”, said Conner, “as sturgeon females take up to 20 years to mature and reproduce, although they should grow fast doubling in size by next summer.” It is believed the fish will acclimate well to the Blackduck River where there is a considerable amount of suitable habitat. The last official sighting of lake sturgeon in Red Lake was by the Red Lake fisheries in 1943, but sightings were reported by fishermen into the early 1950’s. “Lake sturgeon were important culturally to our ancestors”, said Pemberton, “as they not only provided meat but lamp oil, and of course the large fish - not much more difficult to catch than a smaller fish - fed many more people”. “Lake sturgeons dry and smoke well and therefore are easy to store,” added Pemberton. According to Conner, funding for the reintroduction of the fish was provided by the Tribal Wildlife Grant Program, a program that the Red Lake DNR lobbied for and was instrumental in getting created. He said that money for the Tribal Wildlife funds comes from taxes on off-shore oil well drilling, a percentage of that tax going to the fund.



-Michael Barrett and Mike Meuers
A tribal member releases one of the first lake sturgeon into Lower Red Lake as part of a restoration plan.

In the last century, this large, bony-plated animal, browsing along the bottom, was often regarded as a nuisance because it became entangled in and ripped commercial fishing nets that targeted smaller fish species. Only later did the lake sturgeon become prized for its meat, eggs (caviar) and oil. A gelatin from the inner lining of its air bladder was used to make isinglass—a substance used as a clarifying agent in jellies, glues and in the isinglass windows of carriages and early cars. Unfortunately, the lake sturgeon was exceptionally vulnerable to over-fishing, largely because of its slow reproductive cycle. The female requires more than 20 years to mature, and then it spawns only every four to six years during its lifespan.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

Environmental Compliance Audit Team Assists Hatcheries in 2007

BY ROGER GORDON, JORDAN RIVER NFH

Central to the primary mission of the Midwest Region Fisheries Program is the production, distribution and assessment of aquatic species of concern for the American people. Secondly, but of no less importance, is the mandate to carry out these and other missions with the least amount of impact to the environment. Since early 2000, when Executive Order 13148, Greening the Government through Leadership in Management was signed, the Federal government has instituted an ambitious monitoring program to ensure compliance with all applicable environmental laws and regulations. This program, which is carried out at Fish and Wildlife Service facilities, examines a wide range of operational and administrative practices to ensure that all Federal and state regulations are being properly implemented. In addition to regulatory findings, audit teams evaluate practices to ensure that procedures and record-keeping practices are within “policy” guidelines set by other guidance such as executive orders, Departmental or Fish and Wildlife Service policies, or best management practices.

The Midwest Region Fisheries Program, in cooperation with the Division of Safety, carries out scheduled inspections of all National Fish Hatcheries under a proactive approach to ensure adherence to environmental laws and guidelines. In August, a regional team of safety and environmental experts visited the Jordan River National Fish Hatchery (NFH) in Elmira, Michigan, for a scheduled Environmental Compliance inspection of the facilities. Working with station staff, they completed the inspection over several days. The audit considered eleven major environmental categories, including Federal, state, and local regulations, required practices, and management practices.

The inspection team noted a handful of minor findings, which will be addressed at the facility and regional levels over the next several months to ensure the hatchery meets all required standards. The staff of Jordan River NFH especially appreciates the assistance that the regional inspection team of Patrick McDermott, John Hoffman and Craig Nibbe offered in the form of suggested solutions and best management practice changes.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Flathead Futures Looking Strong

BY JEFF FINLEY, COLUMBIA NFWCO

From their potential to reach leviathan lengths to their laid-back attitude, the flathead catfish has long been one of my favorite fish species. An aggressive piscivore (fish eater), these predators are king of the watery jungle we call the Big Muddy. I've worked and fished on the Missouri River for over a decade. I say with confidence the future of flathead catfish populations is looking strong because we are addressing management alternatives and restoring key habitats.

Following the closing of commercial cat-fishing on the Missouri River in 1992, flathead catfish populations have grown in number and size. According to several popular fishing organizations, the Big Muddy is now one of the nation's premier cat-fisheries. As a biologist, I wonder, given how good it is now, what the Missouri River was like before the severe habitat losses of the past 50 years. More importantly, I wonder, "How much better can it get?" Historic accounts of flathead catfish exceeding 200 pounds were common in early writings about the Missouri and Mississippi rivers. With few scientifically defensible records, we can only speculate about the past.

The Missouri Department of Conservation (MDC) is preparing to implement special flathead catfish regulations on a designated reach of the Missouri River. Angler data collected by MDC shows most flathead catfish are harvested before they reach 20 inches and 5 pounds, leaving few fish to grow to trophy sizes of 55 to 70 pounds. MDC feels that limiting take of catfish over 30 inches will improve the population. While this proposed regulation change would undoubtedly bolster populations, it only addresses the current population, not the management of its environment. We should look not only at the product of the river but also at its processes.

Providing a better natural environment in terms of flow, habitat and food is another part of managing riverine fish populations. The majority of the Lower Missouri River is a swift and deep navigation channel designed to self-scour between the confines of rock armored banks. This is not the favored habitat for flathead catfish. They prefer moderate to minimum flow with lots of structure. If river flows are favorable for spawning in the spring and early summer, the resulting young flathead catfish thrive. They feed on insects occupying rocky bank lines and rip-rap structures; however, in two to three years their diet shifts from invertebrates to small fish. They need to find areas where they can avoid expending energy fighting strong water currents and feed

on abundant small fish. In the same way we deposit Christmas trees in old reservoirs to restore lost habitat, we must also restore habitat in this altered river.

This is exactly what the U.S. Army Corps of Engineers Missouri River Mitigation Project addresses: habitat loss along the lower 735 miles of the Missouri River. The project is designed to restore historic river features and compensate for aquatic habitat losses resulting from past channelization efforts. A primary aspect of the project is creating and reopening side channels, or "chutes."

Additional habitat improvement projects include altering navigation structures to diversify habitats along the banks and create "off channel" aquatic habitats similar to the historic braided river. These areas have slower water velocities, more resting habitats and aggregations of small fishes. Flathead catfish occupy deep pools during the day and move



-USFWS/Cliff Wilson

This single hoop net captured an estimated 300 pounds of flathead catfish in the Upper Lisbon chute of the Missouri River.

into these shallow water and off-channel habitats at night to feed. Recent MDC studies demonstrate that most flathead catfish (80 percent) travel less than 5 km; therefore, they need diverse habitats in close proximity to each other. This complexity is the primary goal of the creation of side channels and in-stream structure modifications.

Now the question is, “Are flatheads using the newly created habitats?” The Fish and Wildlife Service’s observations began in 2005 while monitoring fish populations in four side channels created and maintained under the Mitigation Program. We selected four chutes: a historic chute, a naturally created chute and two engineered chutes (one fewer than five years old and one more) for a three year study. We are observing an increasing trend in young flathead catfish. A strong year-class of fish is evident in our samples demonstrating a successful spawn in 2001. During that year, flows were from 100,000 to 155,000 cubic feet per second in May and June, inundating more areas of floodplain and shoreline habitat for spawning.

In 2005, the majority of flathead catfish collected were around 10 inches, a typical length for flatheads in their third to fourth year. In 2005, 94 percent of our flathead catfish catch in the side channels between April and October was from this year class. In 2006, it was 93 percent. With two more months of sampling still to come, 85 percent of the fish collected this year were from the 2001 year class. Retaining this proportion of the population in these side channels says something about what they provide.

In addition to being favorable habitat for sub-adult flathead catfish, chutes are also favored by adults. In May of this year, our crews collected more than 300 pounds of flathead catfish in a single four-foot hoop net, including one fish weighing 79 pounds. We have seen trophy-sized flathead catfish catch rates increase as well, with more fish measuring up to 40 inches and weighing over 40 pounds being collected every year. This increase is likely attributable to the diverse habitat in the mature chutes and permanent woody debris that adult fish use for ambushing prey and spawning.



-USFWS

Jeff Finley displays some of the young flathead catfish captured at a Missouri River sampling site which indicates strong 2001 and 2005 year-classes of fish.

I see a bright future for flathead catfish fishing on the Lower Missouri River. If the U.S. Army Corps of Engineers continues to create habitat and can provide the right conditions for spawning, the fishing will only get better. I am anxious to see the analysis from our three-year data set on these four chutes for all riverine fish. I’m also eager for the 2001 year class to reach that memorable size of 30 inches - in a few more years.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

The Meramec River Basin Summit

BY JOANNE GRADY, COLUMBIA NFWCO

The Meramec Tributary Alliance hosted the Meramec River Basin Summit in September to celebrate past successes and collaboratively create a vision for the future of the Meramec River and its tributaries. The summit brought together people and organizations who contribute to the water quality protection, restoration, conservation, and outdoor recreation benefits found throughout the watershed in Eastern Missouri. Session topics included: History, Threats, and Opportunities in the Meramec River; Conservation and Water Quality; Parks, Greenways and Outdoor Recreation; the Impact of Economic Development and the Growth of Tourism on the River; and Upper Meramec River Best Land & Water Management Practices.

The keynote speaker was Andrew Fahlund, vice president of American Rivers, who discussed “American Rivers in Renaissance.” Missouri Department of Conservation Fisheries Administrator Steve Eder discussed the aquatic species of the Meramec River. His analogy comparing stream structures such as boulders and gravel to personality types showed how people from different organizations and viewpoints can still work together toward a common goal.

Columbia NFWCO Branch Chief for Fish Conservation Joanne Grady worked with Steve Nagle, community planner for the East-West Gateway Council of Governments, to present the Meramec Initiatives framework and encourage participants to submit their ideas for the future of the river. It is hoped that the ongoing collaborative communication growing out of the summit will further inspire the public to embrace the Meramec River and appreciate its many cultural and natural benefits.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

La Crosse NFWCO Assists with a Water Quality Assessment Program

BY HEIDI KEULER AND SCOTT YESS,
LA CROSSE NFWCO

Louise Mauldin and Heidi Keuler from the La Crosse NFWCO assisted the Iowa City Office of the U.S. Geological Survey with the National Water Quality Assessment (NAWQA) Program. This program was implemented in 1991 to support informational needs and decisions related to water quality management and policy. It is designed to answer questions concerning our nation’s water resources using information on water chemistry, physical characteristics, stream habitat and aquatic life. This allows resource managers to make science-based decisions on water quality issues.

La Crosse NFWCO has been called on to provide expertise on the fishery aspects of this project. During August and September, crews electrofished four sites along the Iowa River and its tributaries to determine the fish community structure. All fish were identified, weighed and measured. Fishery information will be analyzed in combination with the other aspects of the study which will allow water resource managers to make informed decisions. The NAWQA Program has been active for over ten years and 42 of the original 51 study units will be reassessed for an additional ten years.

For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>

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.



-USFWS

Louise Mauldin and Heidi Keuler from the La Crosse National Fish and Wildlife Conservation Office assisted the Iowa City Office of the U.S. Geological Survey with the National Water Quality Assessment Program. This program was implemented in 1991 to support informational needs and decisions related to water quality management and policy.

Pallid Sturgeon Recovery Team Update

BY WYATT DOYLE, COLUMBIA NFWCO

The 2007 Pallid Recovery Team met in Mississippi to discuss revisions to the Pallid Sturgeon Recovery Plan. The recovery team comprises biologists and researchers from universities, U.S. Army Corps of Engineers, and states (Missouri, Montana, Louisiana and Nebraska), as well as six representatives from the Fish and Wildlife Service. Columbia NFWCO continues to be part of this team, represented this year by Wyatt Doyle. The team discussed new information about stocking, genetics and research, and made recommendations to assist agencies in their continued efforts toward pallid sturgeon recovery.

The newest genetic information suggests distinct population units occur throughout the sturgeon's range. Changes to the recovery plan regarding stocking recommendations and collection locations of brood stock will protect the genetic integrity of those units. Recommendations were also made to increase emphasis on discontinuing commercial harvest of shovelnose sturgeon, which has been documented as contributing to the decline of pallid sturgeons in the Mississippi River basin.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Upper Mississippi River Conservation Committee

BY SCOTT YESS, LA CROSSE NFWCO

The Fish, Wildlife, and Recreation Tech Sections of the Upper Mississippi River Conservation Committee (UMRCC) held a joint meeting at the Kibbe Research Station near Hamilton, Illinois. The meetings were well attended.

Highlights of the meeting were a presentation by Ken Lubinski (U.S. Geological Survey) on the Fishers and Farmers Fish Habitat Initiative, Jeff Janvrin's (Wisconsin DNR) presentation on island habitat, and Tim Schlagenhaft's (Minnesota DNR) presentation on climate change. There were two excellent field trips. The Wildlife Section went to Lock and Dam 19 for a tour. The second tour group was treated to a river boating experience on the high-tech research vessel used by Southern Illinois University to conduct fish sampling. They also checked out the VR2 fish tracking receivers used to monitor sturgeon and paddlefish movements.

Scot Johnson (Minnesota DNR) has been instrumental in reviving the Recreation Tech Section. At the fall meeting, this group addressed several key issues concerning recreation on the Upper Mississippi River. Agenda items discussed were boating impacts, cooperative conservation plan activities, cultural resources, beach planning, invasive Asian carp and geocaching. The group also had great ideas for the new Web site that will be updated this winter. Cindy Samples volunteered to do the Web site updates for the Recreation Section.

The Fish Section will be updating its Fishery Management Plan. The Wildlife Section will work in conjunction with the Fishery group to finalize the resolution concerning connectivity. A future activity for the UMRCC is to designate the Upper Mississippi River Wildlife and Fish Refuge and adjacent state lands as a Wetland of International Significance.



For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>

You can go home again: Thousands of Endangered Higgins' Eye Pearlymussels Return to Historic Range

BY DOUG ALOISI, GENOA NFH

Thousands of endangered Higgins' eye pearlymussels were recently returned to the Mississippi River basin in what was perhaps the largest reintroduction of an endangered species since the inception of the Endangered Species Act. More than 8,600 two- and three-year old mussels were placed in the Rock River and Pool 16 of the Upper Mississippi River after being raised in cages in Pool 4 of the Upper Mississippi River.

The mussels will be sleeping in a new bed, so to speak, and biologists hope they acclimate to their new surroundings and begin producing young on their own in the next one to three years. These locations were selected as release sites after careful examination to ensure that invasive zebra



-Tatsuaki Nakato

Illinois Department of Natural Resources biologists Rich Lewis (left) and Bob Schanzie release sub-adult Higgins' eye pearlymussels into the Mississippi River near Fairport, Iowa.

muskel colonizations at release sites were low enough to avoid complications with recovery efforts. The Higgins' eye pearlymussel was one of the first species protected by the Endangered Species Act and was listed as endangered in 1976. With the invasion of zebra mussels, its survival is even more precarious, as the colonization of zebra mussels on native mussel beds interferes with normal feeding, respiration and reproduction.

begun in 1999, this multi-agency propagation effort has produced more than 30,000 Higgins' eye pearlymussels to ensure the species survival. Biologists hope to produce five naturally reproducing populations made of multiple year-classes. Although still in the early stages of success, the latest stockings indicate that recovery efforts for this species have past the tipping point and are now heading in a positive direction. Native mussels are an important part of the ecosystem, supplying food, bottom stabilization and even water purification by filtering water through their respiration and feeding processes. The Upper Mississippi River basin still holds one of the most diverse mussel populations in the world, though over 50 percent of the populations have experienced declines range-wide or are listed as imperiled by Federal and state agencies and concerned conservation groups.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

2007 Mitigation Season Comes to a Close

BY JOSEPH MULLEN AND JEFF FINLEY, COLUMBIA NFWCO

The 2007 Mitigation Program field season has ended on the Lower Missouri River. The mitigation crew logged 2,320 field hours over the 180 field day period to conduct 980 sampling events. This completed the second formal season of collecting biological data on the fish communities from four selected side channels (chutes) in Missouri. Lisbon chute, near Glasgow, was naturally created during the floods of 1993 and 1995. Overton and Tadpole chutes, near Rocheport, were engineered chutes constructed

by the U.S. Army Corps of Engineers (Corps) in 2001 and 2006 respectively. Tate Island chute, near Portland, is an older natural chute and one of the few that were never closed off.

Our fish sampling season took place from April through the beginning of October for several reasons. First, when the Corps closes off navigation flows from upstream dams it makes access to the areas impossible. Second, spawning of adult fishes has ceased by this time. Finally, juvenile fishes that feed

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.

in these areas have now sought over-wintering habitats and the security of deeper water.

New this season was the addition of a push trawl as a standard sampling gear. This technique completes a full complement of methods to sample the wide range of fish found in these chutes. The push trawl is designed to capture small-bodied fish in shallow water, making this method of sampling particularly important in the chutes. Several species of concern were sampled this year, including the state endangered lake sturgeon, and the blue sucker and sauger. No pallid sturgeon were captured in 2007, however several hybrid sturgeon (shovel-nose x pallid sturgeon) were captured.

In the future, Jameson chute, just downstream from Lisbon and Baltimore Bend chute near Waverly are among those likely to be opened to add to the diverse habitats on the Missouri River, and hopefully aid in the successful recovery of threatened and endangered species. Information gathered from this three-year mitigation chute study will provide baseline information for rapid assessment and a biological scoring of future chutes.



-USFWS/Joe McMullen

Technician Zac Beussink works to free a blue catfish captured while drifting a trammel net at Overton chute on the Lower Missouri River.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Divers Map the Mississippi River in the Twin Cities

BY TONY BRADY, GENOA NFH

SCUBA divers from three Fish and Wildlife Service Offices came together in September to assist the Mussel Coordination Team in mapping the Mississippi River between the Ford Dam and the mouth of the Minnesota River in the Twin Cities.

The aim of the multi-agency Mussel Coordination Team is to protect and reestablish populations of the endangered Higgins' eye pearl mussel in the Upper Midwest. Divers from Genoa NFH, Twin Cities Field Office and La Crosse NFWCO spent eight days on the bottom of the Mississippi River digging quadrants to locate areas with the highest densities of native mussels. The U.S. Army Corps of Engineers and Minnesota DNR provided topside support for the divers.

Divers collected more than 240 quadrants that each produced fewer than five invasive zebra mussels. Zebra mussels have wreaked havoc on native mussel beds in the lower reaches of the Mississippi River, and their extremely low numbers makes this stretch of the river ideal as a relocation area for some 5,000 three-year old native mussels scheduled to be released later in September.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>



-USFWS

A Fish and Wildlife Service diver collects mussel samples in some shallow water habitat on the Upper Mississippi River.

Alternative Sea Lamprey Controls Reduce Reproduction in the St. Marys River

BY MICHAEL TWOHEY, MARQUETTE BIOLOGICAL STATION

Trapping and releasing sterilized male sea lampreys continued in the St. Marys River during 2007 as an integral part of the invasive sea lamprey control strategy. Traps operated by the Fish and Wildlife Service and its partner, the Department of Fisheries and Oceans, Canada, removed more than 5,600 sea lampreys (25 percent of the estimated spawning population) from the river, which borders the United States and Canada. In addition to removing the reproductive potential of females, traps also removed males, reducing competition for sterile males seeking mates in the river. About 33,000 male sea lampreys captured in 20 Great Lakes tributaries in the United States and Canada were sterilized and released into the St. Marys River. The sterile-male release technique reduces reproduction by causing females to waste their eggs in matings that will fail. The combination of trapping and sterile-male release reduced reproduction by about 81 percent during 2007, and an average of 86 percent since 1997. The Fish and Wildlife Service delivers an integrated program of sea lamprey management in United States waters of the Great Lakes as a contracted agent of the Great Lakes Fishery Commission.

For further info about the Marquette Biological Station: <http://www.fws.gov/midwest/marquette/>

Jordan River NFH Welcomes Ludington Staff During Sea Lamprey Treatment

BY TIM SMIGIELSKI, JORDAN RIVER NFH

In September, Jordan River NFH staff, including volunteer Hannah Edwards, gained some valuable experience assisting the Sea Lamprey Control survey crew as they determined larval sea lamprey densities and locations in the Jordan River. Ludington Biological Station staff performed a chemical treatment of the Jordan River during the week of September 10. Hatchery staff cooperated with lamprey control staff, providing access to our discharge manhole (a chemical introduction point) and supplying a vacant residence that was used for lab analysis. We understand that the treatment went well. Treating this watershed is a major undertaking, and the lake trout rehabilitation program appreciates the effort.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

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.



-USFWS/Tim Smigielski

Technician Katrin Glascock of the Ludington Biological Station monitors this site where lampricide is added to the water effluent at the Jordan River National Fish Hatchery during a sea lamprey treatment of the adjacent Jordan River.

Invasive Ruffe Decline in Four Lake Superior Tributaries; Zebra Mussel Range Expands

BY GARY CZYPINSKI, ASHLAND NFWCO

The Ashland NFWCO completed a fall investigation of invasive ruffe and other aquatic invasive species in four Southwestern Lake Superior tributaries. Bottom trawl sampling verified declines in all ruffe populations and detected the presence of invasive zebra mussels in one of the tributary estuaries. These ongoing investigations were initiated in 1995 to compare trends in relative abundance of ruffe and native fish populations, one of eight elements in the Ruffe Control Plan. Monitoring is also conducted during spring and summer, and the abundance results are averaged to account for seasonal variation.

A total of 379 fish representing 18 species—including invasive ruffe—as well as 16 crayfish, were captured from all four tributaries. This compares to a total catch of 6,571 fish representing 21 species during this cycle in 2006. The significant decline —94 percent — in the total fish catch was likely due in part to low water levels in all tributaries and high turbidity in one tributary. The total catch this year included seven ruffe and 11 yellow perch. This compares to total catches of 49 ruffe and 42 yellow perch captured in the Fall of 2006. Experimental research shows that yellow perch is affected by ruffe. Two zebra mussels were captured from one tributary - the Amnicon River estuary in Wisconsin, a new location for this invasive species. The Amnicon River estuary is located eight miles east of the Duluth/Superior Harbor (Minnesota/Wisconsin), and is the only location in Lake Superior known to have a reproducing population of zebra mussels. No other aquatic invasive species were captured.

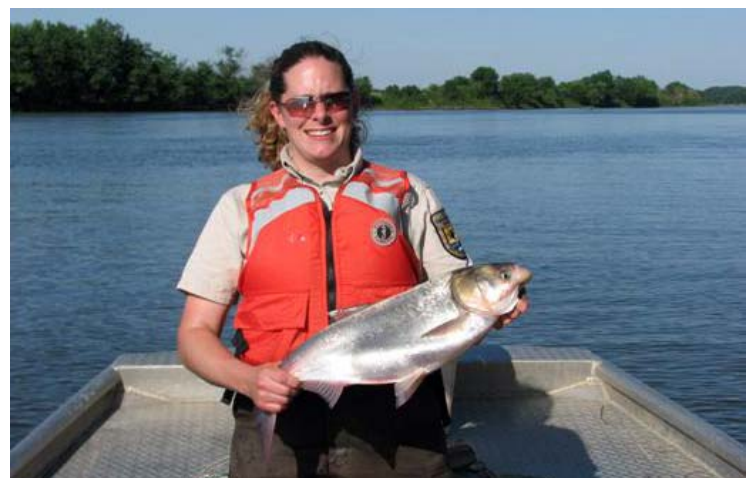
Volunteer assistants included Don Livingston (Red Cliff Tribal Fisheries) on the Iron and Flag rivers in Wisconsin; Bob Price (independent auto body specialist) on the Amnicon River in Wisconsin; and Jenna Scheub National Park Service) on the Ontonagon River in Michigan.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

La Crosse NFWCO Demonstrates to 7th Graders How They Can Prevent Invasive Species

BY HEIDI KEULER, LA CROSSE NFWCO

The University of Wisconsin Extension at the Trempealeau County Government Center hosted the 7th Grade Environmental Sciences Day on September 21 at the Trempealeau County Fairgrounds in Galesville, Wisconsin. Just over 300 students came from Whitehall, Galesville –Ettrick –Trempealeau, Arcadia, Independence, and Osseo school districts. Organizations presenting included the National Eagle Center, Trempealeau County UW Extension, U.S. Geological Survey, Riverland Energy, Fish and Wildlife Service, and Honda Motorwerks. Heidi Keuler from La Crosse NFWCO presented “Fishing for Energy” and spoke to seventh graders about the cost of invasive species to the environment and how students could help save energy and the environment by not dumping bait buckets after fishing, not releasing pet fish or aquatic plants, and not transporting fish, water, or aquatic plants from one water body to the next. Keuler concluded with a video of leaping silver carp.



-USFWS

Heidi Keuler demonstrated to 7th grade students the impacts that invasive species have on the environment. She did not have a live silver carp as shown in this photo; however, she showed a video of jumping silver carp.

For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>

Columbia NFWCO Goes to Market

BY PATTY HERMAN AND COLBY WRASSE, COLUMBIA NFWCO

Overcast skies and a light drizzle did not dampen the enthusiasm of the patrons of The Land of Goshen Community Market in Edwardsville, Illinois, as several hundred people came out to buy locally grown produce and got an opportunity to see sturgeon and a Fish and Wildlife Service trawl boat. Colby Wrasse, Emily Kunz and Patty Herman represented Columbia NFWCO at the farmer's market located just a few miles from the confluence of the Missouri and Mississippi rivers.

This was a unique opportunity to educate the community about the plight of pallid sturgeon and other issues surrounding their big rivers. We talked with patrons about current activities such as the Pallid Sturgeon Recovery Project, Habitat Assessment Project and mitigation efforts along the river. Many people were unaware that sturgeon live in the Missouri and Mississippi rivers – most had never seen one. The “squishy”



-USFWS/Patty Herman

Patty Herman looks on as young visitors try their hands at the magnetic fish puzzle. Columbia National Fish and Wildlife Conservation Office set up a booth at The Land of Goshen Community Market.

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.

sturgeon and magnetic fish identification poster were favorites of the younger patrons. This was also a great opportunity to address many of the questions local residents had about the rivers and their fisheries. We fielded many questions and disseminated information on invasive Asian carps and what is being done to control their numbers. Most were impressed by the custom-made Clark trawl boat with its large inboard jet motor and net hanging from the back.

The Land of Goshen Community Market is an organization founded to enhance the quality of life in the Edwardsville area. It provides a community activity which fosters social gathering and interaction. For 11 seasons, Goshen Market has been a place for local growers/producers of agricultural commodities to promote the sale of those products. An important goal for the market has been to provide an educational forum for consumers to learn about the history, sustainability and conservation of the area. Given these goals, providing market patrons an opportunity to learn about conservation and restoration efforts in the Missouri River just seemed natural.

On a return visit to the market a couple of weeks later, many vendors and patrons walked up to me to ask when we would be coming back. Several teachers also asked if we could provide presentations to their classes and schools. The enthusiasm for fisheries and conservation generated from this one event has been overwhelmingly positive and lasting.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Hunting and Fishing Expo - A Busy Day for Biologists

BY TIM SMIGIELSKI, JORDAN RIVER NFH

Once again the Northland Sportsmen's Club Family Hunting and Fishing Expo was well attended. Held at the sportsman's club on Sept. 9, the Expo drew more than 800 children and an estimated 400 adults who enjoyed the beautiful day and the well-organized event. The day featured the ever-popular trout fishing pond, BB gun range, wild game snacks and of course the Jordan River NFH display. John Johnston and Tim Smigielski could not compete with the cotton candy vendor but their display came in a close second. John explained everything from aquatic invasive species to "What do you feed the fish?" Tim frantically replaced depleted literature and applied trout tattoos onto the arms, hands and faces of the excited kids. This is the fourth year in a row that Jordan River NFH has been asked to attend the Expo. This event is an ideal environment to tell our story and educate folks about Fish and Wildlife Service programs.



-USFWS/TimSmigielski

Biologist John Johnston educates the public about aquatic invasive species in the Great Lakes, at the Northland Sportsman's Club Expo.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Jordan River Hatchery Hosts "Michigan Autumn Series"

BY ROGER GORDON, JORDAN RIVER NFH

On Sept. 5, Jordan River NFH hosted its first of three informational seminars scheduled for Fall 2007. These programs, under the heading of "Michigan Autumn Series," highlight topics of interest related to the environment in the Great Lakes region. The series is hosted by the Friends of Jordan River National Fish Hatchery and is targeted to adults and children who are interested in the natural world of the Upper Great Lakes. The first installment of the series was titled "Geology of the Jordan River Valley" and was presented by Janet Smigielski, a geolo-

gist with the Michigan Geological Survey Division of the Michigan Department of Environmental Quality. Smigielski covered a wide range of geological topics relating to the formation of the Upper Great Lakes with special emphasis to the geomorphology of Michigan, and answered many questions. In addition to the presentation, there was an extensive display of eye-catching rock and mineral samples for the audience to handle. Given the reaction of the guests and the number of questions raised, this seminar will be repeated in the future.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Genoa Offers a "Helping Hand" at Norskedalen Nature and Heritage Center's Environmental Education Days

BY JENNY WALKER, GENOA NFH

On Sept. 27 and 28, Genoa NFH biologists Nick Starzl and Jenny Walker teamed up with Southwest Badger Resource Conservation & Development, the U.S. Army Corps of Engineers, U.S. Geological Survey, Wisconsin DNR, and other environmental

educators to participate in Norskedalen Nature and Heritage Center's Environmental Education Days.

Starzl and Walker presented information on North American freshwater mussels and the role Genoa NFH plays in helping to recover endangered and

threatened mussel populations. Freshwater mussels play a key role in river ecosystems by providing habitat for aquatic insects and algae. They are also an important food source for fish, birds and mammals. Mussels feed by filtering particles from the water column. By removing these particles and pollutants from the water, they serve as an important natural filter, improving water quality for the entire ecosystem. The build up of pollutants and other toxicants in mussels makes them important indicators of the health of ecosystems. By helping threatened and endangered mussel populations, Genoa NFH is helping the ecosystem.

Genoa's "Helping Hands for Freshwater Mussels" presentations tied in well with the theme for this year's event, "The Human Touch on Our Environment." By teaching the concept of good stewardship to young people, Genoa NFH is helping to ensure healthy resources for future generations. Environmental education events such as this provide the hatchery an opportunity to partner with other public and private agencies and reach large numbers of children in a fun way, combining recreation with education in a natural setting. Norskedalen's 400 acres of forest, wetlands, streams and hiking trails, created an exceptional outdoor classroom for the 488 middle school students and 61 adults who attended the event this year.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>



-C. Hall

Future environmentalists get in touch with mussel biology at the Norskedalen Nature and Heritage Center.

Columbia NFWCO Samples at Iowa Army Ammunition Plant

BY BRIAN ELKINTON, COLUMBIA NFWCO



-USFWS/BrianElkington

Zac Beussink and Joe McMullen hunt for darters during a sampling run at the Iowa Army Ammunition Plant. Fish community sampling is vital to make sound fishery management decisions.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

During the last week of September, Brian Elkington, Joe McMullen and Zac Beussink from the Columbia NFWCO teamed up with Iowa Army Ammunition Plant (IAAP) Natural Resources Manager Joe Haffner to survey IAAP aquatic ecosystems. Sample sites included two reservoirs, Mathes Lake and Stump Lake, as well as nine stream sites. The four-day sampling consisted of eight fyke net samples, day and night electrofishing, and backpack electrofishing. The fish species most abundantly sampled at reservoir sites were bluegill, largemouth bass and gizzard shad. Results indicate that for each hour of daytime electrofishing, crews caught more than 70 largemouth bass, all greater than 15 inches. Common species in the stream samples were creek chubs, central stonerollers and bluntnose minnows. The data collected will be analyzed and incorporated into a Fishery Management Plan and Stream Survey that will be used to make management decisions to maintain recreational fishing at onsite reservoirs and to exhibit the status of IAAP streams.

Prairie Island Indian Community Assists with Mussel Recovery

BY GENOA NFH STAFF, GENOA NFH

For the past seven years, a multi-agency group known as the Mussel Coordination Team has worked to recover and protect the endangered Higgins' eye pearl mussel in the Upper Midwest. The team members—including two Federal agencies, four state Departments of Natural Resources, and several academic institutions—have faced many ups and downs in their propagation efforts for the Higgins' eye pearl mussels. September marked both the highest and lowest points for the team. The high point came at the end of a three-season grow-out period of more than 20,000 Higgins' eye pearl mussels from a single year class. With such a large number of mussels to be prepared for release, the team put out a call for help, and the Prairie Island Indian Community responded by sending their staff biologist Kyle Herdina to lend a helping hand. Kyle assisted in harvesting cages, cleaning mussels, and tagging and the stocking nearly 2,500 mussels in and around the Prairie Island Reservation.

As the team harvested the first couple of cages it became clear that the invasive zebra mussel had colonized the propagation site in Lake Pepin, Minnesota. Each sub-adult Higgins' eye pearl mussel was covered with hundreds of invasive zebra mussels. As biologists checked on the 2007 year class, they noticed that production was all but wiped out because of invasive zebra mussels. With zebra mussel numbers rising in Lake Pepin, the team has begun searching for new places to house Higgins' eye production that has low numbers of zebra mussels. Talks have begun between the Mussel Coordination Team and the Prairie Island Indian Community about using portions of the Mississippi River that flows through the reservation as a possible production site. These talks will explore the possible partnership that will continue the advance of endangered mussel recovery in the Midwest.

For further info about the Genoa NFH: <http://www.fws.gov/midwest/genoa/>

Great Lakes Native American Fish and Wildlife Society Meeting Held

BY HEIDI KEULER, LA CROSSE NFWCO AND KEN PHILLIPS,
LA CROSSE FHC

La Crosse NFWCO staff attended the 20th Annual Native American Fish and Wildlife Society (NAFWS)–Great Lakes Region conference in Lac du Flambeau, Wisconsin. A total of 180 individuals attended representing 23 Great Lakes tribes, Fish and Wildlife Service, U.S. Geological Survey, Environmental Protection Agency (EPA), Bureau of Indian Affairs (BIA), U.S. Department of Agriculture, U.S. Forest Service, Great Lakes Indian Fish and Wildlife Commission, Michigan State University, Central Michigan University, University of Wisconsin – Stephens Point, University of Wisconsin – Madison, many private organizations and the Wisconsin, Michigan and Minnesota DNR's. The opening ceremony included a parade of colors with law enforcement from most of the Great Lakes tribes and some U.S. military and a local drum group with a ceremonial drum. Speakers in the ceremonial opening included Bob Jackson -BIA, Victoria Doud -Lac du Flambeau Tribal President, Charlie Wooley –Deputy Regional Director Fish and Wildlife Service, Luke Jones -EPA, Don Reiter -Great Lake NAFWS Regional Director, and Joe Jay Pinkham -National NAFWS President. Later in the day, legislative and funding updates were given by John Leonard - Native American Liaison (Fish and Wildlife Service).

During the conference, approximately 70 presenters from various Federal, tribal and state organizations provided information on fisheries, wildlife, environmental and tribal historical preservation. Heidi Keuler presented her thesis, "Growth and condition of lake sturgeon (*Acipenser fulvescens*) in Legend Lake and the Wolf River –Lake Winnebago System of northeastern Wisconsin." Ken Phillips of the La Crosse FHC gave a presentation on viral hemorrhagic septicemia virus in the Great Lakes region.

For further info about the La Crosse NFWCO: <http://www.fws.gov/midwest/lacrossefisheries/>

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.

Set Lines Show Potential for Catching Elusive Pallid Sturgeon

BY NICK UTRUP, COLUMBIA NFWCO

Columbia NFWCO is evaluating set lines as a new gear for use in capturing fish for the Pallid Sturgeon Population and Assessment Program. A set line consists of a long rope set along the bottom of the



-USFWS

Columbia NFWCO technicians Chris McLeland and Lee Erickson pull in a trot line full of shovelnose sturgeon near Jefferson City, Missouri. Trot lines have proved to be an effective gear to sample sturgeon, including the Federally endangered pallid sturgeon.

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.

river with baited hooks attached

at 5 to 10 foot intervals. For years, fishermen have used set lines to catch catfish in lakes and rivers. Recently; however, set lines have been shown to be an effective method for capturing pallid sturgeon in the Missouri and Mississippi rivers. Over the past five years of sampling the Lower Missouri River, set lines have captured more pallid sturgeon per unit of effort than all other sampling gear combined. For example, Columbia NFWCO has captured 36 pallid sturgeons in standard gill nets since 2003, compared to 24 pallid sturgeons on set lines over just four months during 2007. Since 1999, 14 percent of all pallid sturgeon captured by Columbia NFWCO, regardless of gear type, have been captured on set lines with a fraction of the total effort.

The set line shows great potential for improving our success at capturing the elusive pallid sturgeon. This increase in catch rate will ultimately improve our ability to monitor the pallid sturgeon population, which will allow for better management of this endangered species.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Sunlight Inhibition Study Undertaken at Jordan River NFH

BY TIM SMIGIELSKI, JORDAN RIVER NFH

Through June 2008, Jordan River NFH staff will be conducting an investigation of cataract incidence in cultured lake trout. High prevalence of “nuclear” cataracts in the Seneca Lake strain of lake trout—which could inhibit survival—has been documented during pre-stocking health and quality examinations in the past. Staff at Jordan River NFH hypothesize that sunlight in open raceway conditions causes the formation of cataracts and increases the development of existing cataracts. In September, two separate lots of Seneca Lake strain fingerlings were isolated, repre-

senting all egg takes from Fall 2006. The treatment group is being kept indoors in a “sunlight inhibited,” or dark environment. The other group, the control, is being reared under standard conditions outdoors in open raceways. Throughout the rearing cycle, random samples will be collected with a total of 600 pairs of eyes to be examined from each group per month. The eyes will be categorized with regard to the presence of and stage of cataract formation. A final report will be available by September 2008.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Whitetail Waters Wetland Project Completed

BY TED KOEHLER, ASHLAND NFWCO

Construction is complete on the Whitetail Waters Wetland Project, a Partners for Fish and Wildlife project that restored 12.5 acres on 6 sites. The uplands around the wetland restoration sites are in a deferred



-USFWS

The Whitetail Waters Wetland Project has been completed and restores six wetland sites for a total of 12.5 acres.

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.

haying and grazing agreement to enhance ground-nesting bird habitat. The restored sites will provide nesting and brood rearing sites for waterfowl such as mallards, wood ducks and blue-winged teal, as well as songbirds such as eastern meadowlarks and bobolinks. The restored wetlands and protected uplands will also provide rest and refueling areas for many species of waterfowl, shorebirds and neotropical migrant songbirds during their annual migrations. This project will enhance wildlife habitat on the Whitetail Waters property and surrounding countryside. A Wetland Development Agreement was signed to protect the project site for ten years.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

Coastal Program – Great Lakes 2007 Accomplishments

BY TED KEOHLER, ASHLAND NFWCO

The East Lansing Ecological Services Field Office and the Ashland NFWCO jointly administer the Coastal Program – Great Lakes. In 2007, the program funded 27 projects that will result in the enhancement, restoration or protection of 6,561 acres of coastal fish and wildlife habitat. Miles of stream and riparian area enhanced, restored or protected totaled 5.5, and 2 fish passage barriers will be removed opening 8.5 miles of stream. Projects will affect all five Great Lakes, the Detroit and St. Mary's rivers, and Lake St. Clair.

These cooperative projects help to conserve fish, wildlife, plants and their habitats in coastal lands and waters. Interjurisdictional fish such as coaster brook trout and lake sturgeon will benefit from research and restoration projects. Declining migratory waterfowl species such as lesser scaup and American black ducks will reap the rewards of coastal wetland restoration projects. Federally listed plant species such as dwarf lake iris and Michigan monkey-flower will be able to take root in additional locations because of invasive species removal and habitat restoration projects. As the Coastal Program – Great Lakes moves into 2008, we look forward to once again work with our ever growing list of partners on many new projects.

For further info about the Ashland NFWCO: <http://www.fws.gov/midwest/ashland/>

Proposals Submitted for National Fish Passage Program Funding

BY JOANNE GRADY, COLUMBIA NFWCO

Columbia NFWCO submitted five proposals for Fish Passage Program funding for fiscal year 2008. The proposals portray a range of projects where our partners in Missouri and Iowa participate. Proposed projects would benefit habitat such as streams and water crossings that protect the endangered Topeka shiner and Eastern Massasauga rattlesnake, threatened Niangua darter, imperiled freshwater mussels, and other species of concern to the Fish and Wildlife Service. If approved, projects would open more than 50 miles of fish passage and improve water quality, as well as improve weir structures to benefit flathead chub and other target fish species.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Hatchery Volunteers and STEP Move On

BY WAYNE TALO, JORDAN RIVER NFH

Volunteers Hannah Edwards and Dan Myers left Jordan River NFH to begin their college careers at Michigan State University. Hannah volunteered full-time for more than two months. During her tenure, she gained experience in fisheries survey work with the Alpena NFWCO and



-USFWS/WayneTalo

Volunteers Hannah Edwards (left) and Dan Myers (right) and temporary employment program enrollee Chris Olds were presented appreciation certificates for their summer work at the Jordan River National Fish Hatchery.

sea lamprey control activities with the Ludington Biological Station. Dan has

volunteered at the hatchery since 2005, helping take care of fish and serving as a board member of the *Friends of the Jordan River National Fish Hatchery*. Chris Olds has been in the Student Temporary Employment Program (STEP) at Jordan River since 2004. He is in his junior year at Lake Superior State University in Sault Ste Marie, Michigan, studying fisheries biology. Chris has recently been hired into the Student Career Experience Program (SCEP). Upon successful completion of his SCEP assignment, he will be eligible for non-competitive placement into a permanent position with the Fish and Wildlife Service.

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.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Biologist Serves on Education Advisory Committee

BY TIM SMIGIELSKI, JORDAN RIVER NFH

Jordan River NFH biologist Paul Haver was asked to serve on an advisory committee to give input for the Boyne City High School curriculum. Natural resources instructor Don Lochman formed the committee late this summer, and the group will have input on class activities, employment opportunities, job shadowing and volunteering in natural resource fields. Comprising of local natural resource professionals, the committee will meet two to three times annually. Paul will also assist the class with "Trout in the Class Room." The class will be raising a couple dozen lake trout this year. Lochman brings his classes to the hatchery annually for a tour and for specialized programs on careers and education.

For further info about the Jordan River NFH: <http://www.fws.gov/midwest/JordanRiver/>

Fisheries and Aquatic Resources Program Management Team Meets

BY TRACY HILL, COLUMBIA NFWCO

Columbia NFWCO Project Leader Tracy Hill and Branch Chief for Fish Conservation Joanne Grady traveled to Ashland, Wisconsin, in September to participate in Region 3's Fisheries and Aquatic Resources Program Management Team meeting, which brought together key staff from the field, Regional and Washington offices to discuss how to more effectively manage the region's fisheries and aquatic resources. The meeting also provided the program a chance to address common challenges and opportunities and was a great opportunity to network with project leaders and management staff from across the Midwest Region and see presentations from a variety of topics ranging from conserving aquatic habitat to aquatic invasive species prevention strategies.

For further info about the Columbia NFWCO: <http://www.fws.gov/midwest/columbiafisheries/>

Congressional Actions

H.R. 1495 (enr) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Enrolled bill]

S. 1248 (pcs) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Placed on Calendar Senate]

H.R. 1495 (eas) [Engrossed Amendment Senate]

H.R. 4455 (ih) To authorize the Secretary of the Interior to provide international wildlife management and conservation programs through the Wildlife Without Borders Program in the United States Fish and Wildlife Service, and for other purposes. [Introduced in House]

H.R. 2764 (eah) This Act may be cited as the "Consolidated Appropriations Act, 2008". [Engrossed Amendment House]

H.R. 3891 (ih) To amend the National Fish and Wildlife Foundation Establishment Act to increase the number of Directors on the Board of Directors of the National Fish and Wildlife Foundation. [Introduced in House]

H.R. 767 (rh) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Reported in House]

H.R. 767 (ih) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Introduced in House]

H.R. 767 (eh) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Engrossed in House]

H.R. 1533 (ih) To provide for the establishment of a national mercury monitoring program. [Introduced in House]

S.J.Res. 17 (rs) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Reported in Senate]

S. 843 (is) To provide for the establishment of a national mercury monitoring program. [Introduced in Senate]

H.R. 767 (rfs) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate harmful nonnative species, and for other purposes. [Referred in Senate]

H.R. 767 (rcs) To protect, conserve, and restore native fish, wildlife, and their natural habitats at national wildlife refuges through cooperative, incentive-based grants to control, mitigate, and eradicate

harmful nonnative species, and for other purposes. [Reference Change Senate]

S.J.Res. 17 (es) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Engrossed in Senate]

S.J.Res. 17 (is) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Introduced in Senate]

S.J.Res. 17 (rcs) Directing the United States to initiate international discussions and take necessary steps with other Nations to negotiate an agreement for managing migratory and transboundary fish stocks in the Arctic Ocean. [Reference Change Senate]

H.R. 3663 (ih) To amend the Fish and Wildlife Act of 1956 to establish additional prohibitions on shooting wildlife from aircraft, and for other purposes. [Introduced in House]

H.R. 1495 (eh) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Engrossed in House]

H.R. 1495 (pcs) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Placed on Calendar Senate]

H.R. 3227 (ih) To direct the Secretary of the Interior to continue stocking fish in certain lakes in the North Cascades National Park, Ross Lake National Recreation Area, and Lake Chelan National Recreation Area. [Introduced in House]

H.R. 1495 (ih) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Introduced in House]

H.R. 1495 (rh) To provide for the conservation and development of water and related resources, to authorize the Secretary of the Army to construct various projects for improvements to rivers and harbors of the United States, and for other purposes. [Reported in House]

S. 1766 (is) To reduce greenhouse gas emissions from the production and use of energy, and for other purposes. [Introduced in Senate]

S. 2302 (pcs) To provide for the continuation of agricultural programs through fiscal year 2012, and for other purposes. [Placed on Calendar Senate]

H.R. 2643 (rh) Making appropriations for the Department of the Interior, environment, and related agencies for the fiscal year ending September 30, 2008, and for other purposes. [Reported in House]

H.R. 2643 (eh) Making appropriations for the Department of the Interior, environment, and related agencies for the fiscal year ending September 30, 2008, and for other purposes. [Engrossed in House]

Source is <http://www.gpoaccess.gov/bills/index.html>
Searched database by keyword = "fish"

Midwest Region Fisheries Divisions

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.

National Fish and Wildlife Conservation Offices

National Fish and Wildlife Conservation Offices conduct assessments of fish populations to guide management decisions, perform key monitoring and control activities related to invasive, aquatic species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; play a key role in targeting and implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Partners for Fish and Wildlife and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency fisher-

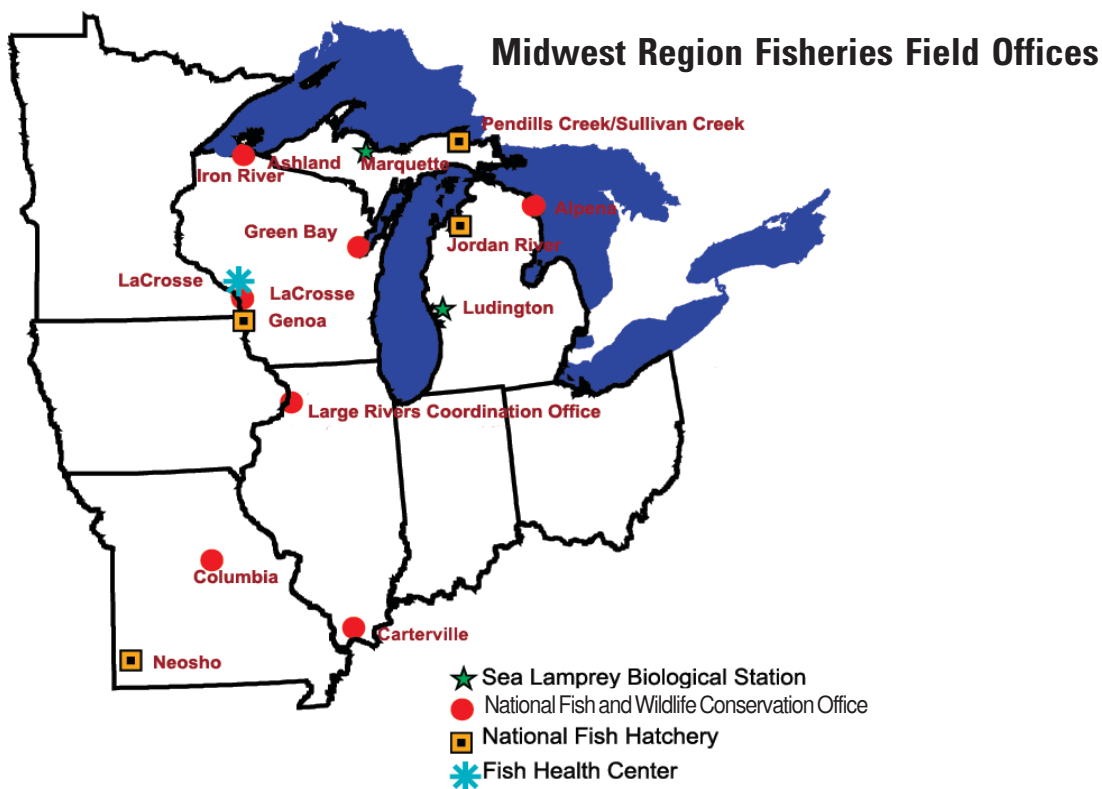
ies databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

Sea Lamprey Biological Stations

The Fish and Wildlife Service is the United States Agent for sea lamprey control, with two Biological Stations assessing and managing sea lamprey populations throughout the Great Lakes. The Great Lakes Fishery Commission administers the Sea Lamprey Management Program, with funding provided through the U.S. Department of State, U.S. Department of the Interior, and Fisheries and Oceans Canada.

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; 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.



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Fish Tails

“Fish Tails” includes articles that are included in field station reports that are not published in the “Conservation Briefs.” These articles are categorized by focus area and includes the article title, author and field station. The website link, where the full article can be viewed, is highlighted in blue type.

Partnerships and Accountability

- [National AFS Meeting provides Insight into Sturgeon Conservation](#)
 - Nick Utrup, Columbia NFWCO
- [Fall Meeting of Missouri River Natural Resources Committee Meeting](#)
 - Tracy Hill, Columbia NFWCO
- [Fish Health Presentations](#)
 - Rick Nelson, La Crosse FHC
- [Adopt a Highway Draws Volunteers to the Hatchery](#)
 - Tim Smigielski, Jordan River NFH

Aquatic Species Conservation and Management

- [Genoa's Lake Sturgeon Get Wired](#)
 - Nick Starzl, Genoa NFH
- [Genoa NFH Utilizes Stock Tanks as an Affordable Alternative](#)
 - Nick Starzl, Genoa NFH

Aquatic Invasive Species

Public Use

- [Wisconsin Bass Find a Home in Missouri at the Big Muddy Refuge](#)
 - Wyatt Doyle, Columbia NFWCO
- [Genoa National Fish Hatchery Partners with Cabela's to Promote National Hunting and Fishing Day](#)
 - Jenny Walker, Genoa NFH
- [Columbia NFWCO Takes Stock at DeSoto National Wildlife Refuge](#)
 - Brian Elkington, Columbia NFWCO
- [Floating the Big Muddy](#)
 - Andy Plauck, Columbia NFWCO
- [Wooden Pony Daycare Visits Hatchery](#)
 - Wayne Talo, Jordan River NFH
- [Former Jordan River NFH Volunteer Speaker at Autumn Series](#)
 - Wayne Talo, Jordan River NFH

- [Michigan “In the Woods” at Jordan River NFH](#)
 - Tim Smigielski, Jordan River NFH
- [Northern Classical Academy Students Learn About the Service](#)
 - Tim Smigielski, Jordan River NFH
- [Au Sable Institute Students Enjoy Educational Opportunities at Jordan River NFH](#)
 - Tim Smigielski, Jordan River NFH

Cooperation with Native Americans

- [Assistance with Lake Whitefish Surveys](#)
 - Wayne Talo, Jordan River NFH

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management



-Jerry French Postcard Collection; Medina Lake (1925)

Water Under the Bridge A Glimpse into our Proud Past

Medina Lake is on the San Antonio River and lies a few miles northwest of the City of San Antonio, Texas. The lake is divided by the county line separating Medina and Banderita counties. The U.S. Fish Hatchery was established in 1924 and ceased operations in 1930. Historical information indicates the entire production of the hatchery was used to maintain the lake.