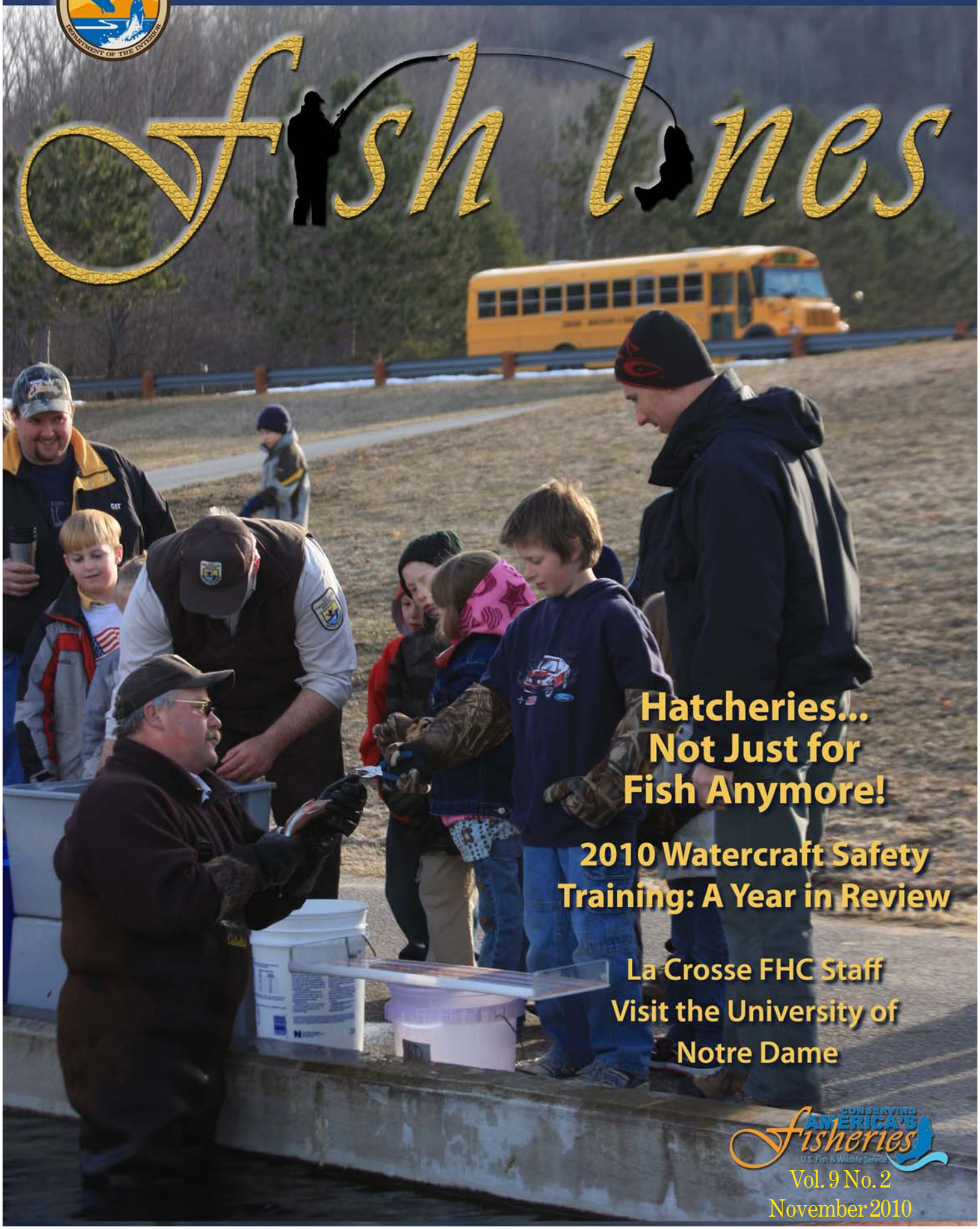
U.S. Fish & Wildlife Service - Midwest Region

Fisheries & Aquatic Resources Program

fish lines



Hatcheries... Not Just for Fish Anymore!

2010 Watercraft Safety Training: A Year in Review

La Crosse FHC Staff Visit the University of Notre Dame

Conserving America's Fisheries
U.S. Fish & Wildlife Service

Vol. 9 No. 2
November 2010

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.

Features

-USFWS

The Airboat Certification Course was held twice at the Horicon National Wildfife Refuge in 2010 with 14 students certified.

To view other issues of "Fish Lines," visit our website at:
http://www.fws.gov/midwest/Fisheries/library/fishlines.htm

Fish Lines

2010 Vol. 9 No. 2

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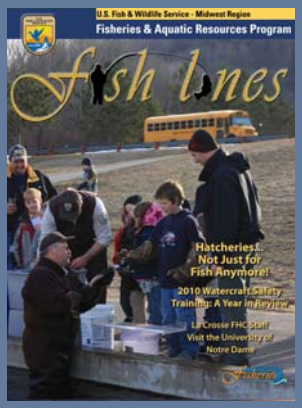


-USFWS/KarlaBarelt

Brook trout are marked at the Jordan River National Fish Hatchery as part of the "Baby Brookies" program, where school groups help culture fish for local fishing events.

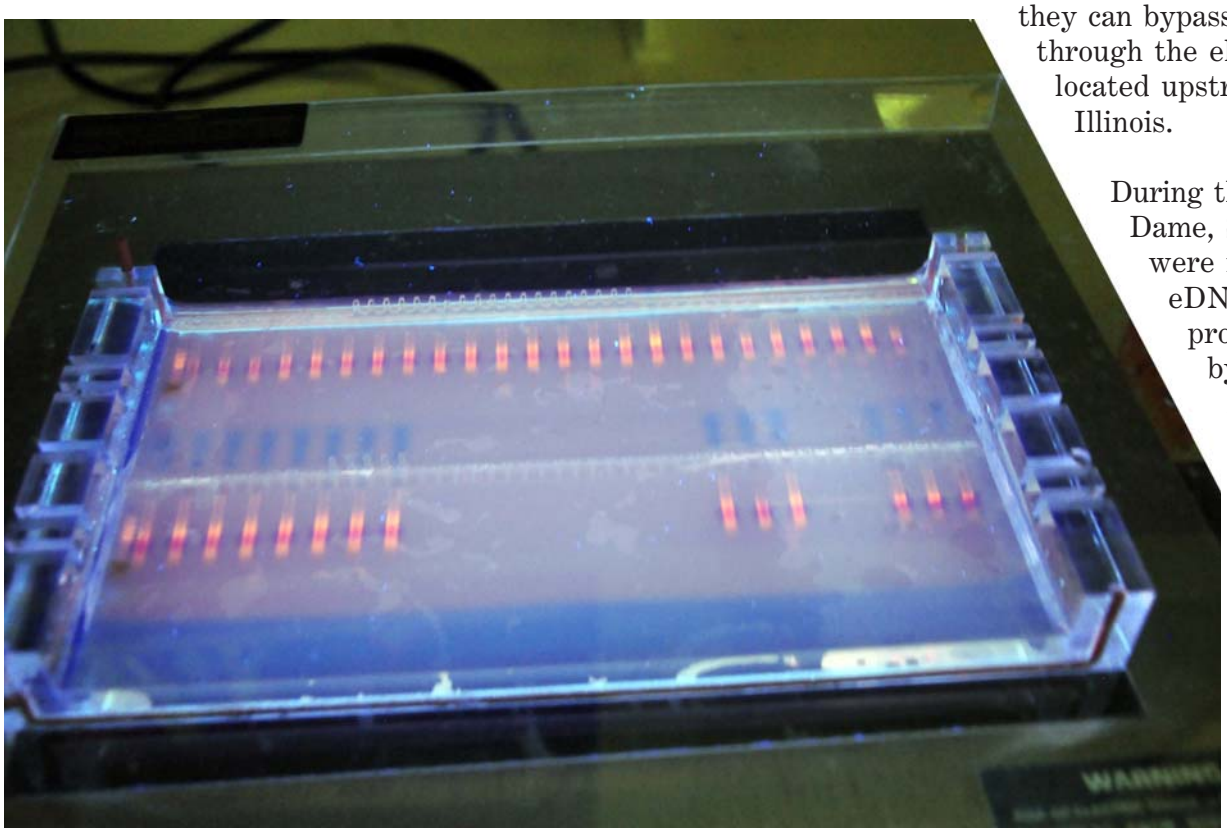
Fish Lines is produced by the Fisheries and Aquatic Resources Program, Region 3, U.S. Fish & Wildlife Service, Ft. Snelling, Minnesota. Items included are selected from monthly reports submitted by Region 3 fisheries offices. Photos included are used by permission and may be copyrighted.

Conservation Briefs 9-18

La Crosse FHC Staff Visit the University of Notre Dame

BY TERRY OTT, LA CROSSE FHC

Sarah Bauer and Terry Ott with the La Crosse Fish Health Center (FHC) traveled to "Fighting Irish" country, the University of Notre Dame in South Bend, Indiana, on October 31st to meet with Dr. David Lodge and his staff at the Center for Aquatic Conservation. The meeting was to discuss the Fish and Wildlife Service assuming the role of environmental DNA (eDNA) sampling for Asian carp and provide the Fish and Wildlife Service with background information on eDNA development at Notre Dame. The eDNA sampling is a type of polymerase chain reaction (PCR) technique used in molecular biology to amplify a single or a few copies of a piece of DNA across several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence. Notre Dame eDNA sampling is a process whereby genetic material is collected onto filter paper from filtering water samples taken from the Chicago Sanitary and Shipping Canal, in Chicago.



-USFWS/SarahBauer

Illumination of a polymerase chain reaction (PCR) gel in a laboratory at the University of Notre Dame.

The genetic material is being shed by two species of Asian carp- bighead and silver. These two carp species were brought to North America in the early 1970s for algae control in catfish culture ponds in the south. These invasive fish were accidentally introduced into the Mississippi River through flooding anomalies in the early 1980s and have slowly been making their way upstream in the Mississippi River basin. Now they are threatening to enter the Great Lakes via the Chicago Sanitary and Shipping Canal, if they can bypass or navigate through the electrical barriers located upstream of Lockport, Illinois.

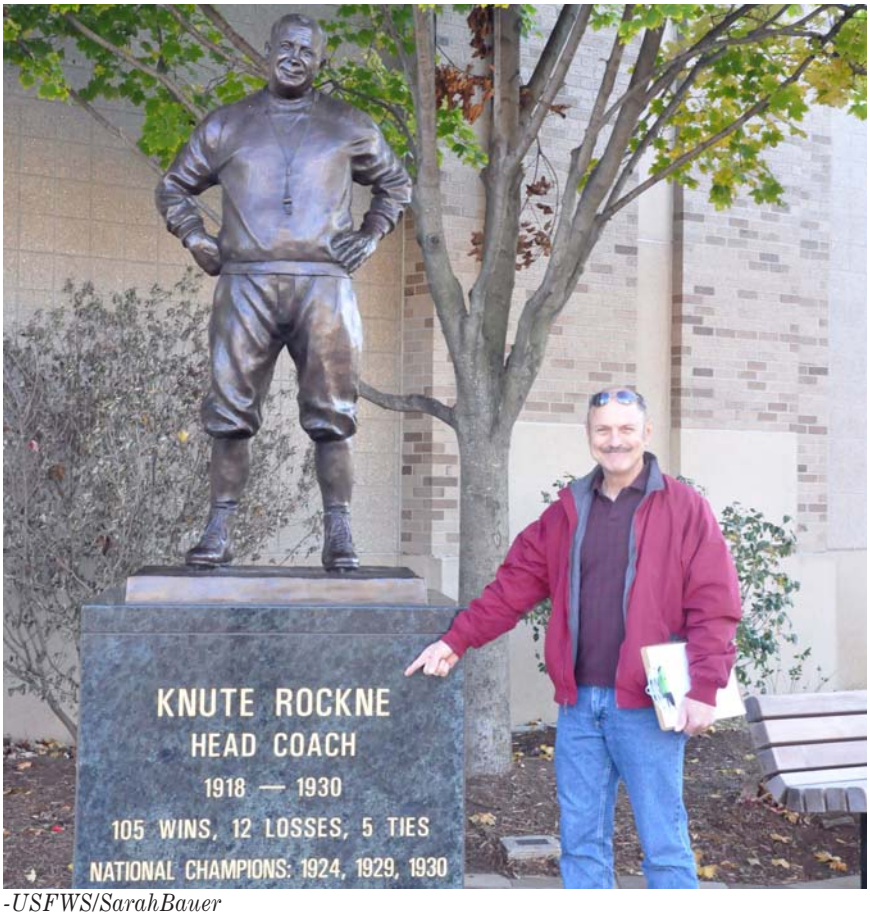
During their visit to Notre Dame, Sarah and Terry were introduced to the eDNA surveillance project by Dr. Lodge, by discussing many facets of the project like false positives versus alternate pathways, development of new genetic markers and the possibility of developing a qPCR assay for Asian carp within the next several years. Dr. Christopher Jerde, postdoctoral research associate and member of the eDNA team, talked to both of them about the process of collection and data entry. He continued to discuss field sampling and collection of two liter water samples, cooler controls, and data collection before, during and after each sample site. Dr. Jerde discussed how to effectively disinfect sample gear and boats between sample collection sites. Dr. Andrew Mahon, research assistant professor at Notre Dame, discussed sample filtration in the laboratory and DNA extraction methods. Sarah and Terry participated in a hands-on demonstration of water filtration of the samples, observed lab equipment in use during the extraction processes, and viewed biological kits necessary to perform the

extraction process. Quality Assurance/Quality Control in eDNA surveillance work was discussed in some length to assure water samples were not compromised in any way. Dr. Mahon discussed the process of how a negative and positive water sample is determined. Sarah and Terry processed and examined the final product, a gel electrophoresis of silver carp at ~200 bps and bighead carp at ~300bps.

At the end of the day, Sarah and Terry spent the night at the famous Morris Inn on the campus of the University of Notre Dame. The inn is within walking distance of all of the major campus attractions like the Administration building with its' famous golden dome to the "House that Rock Built." The football stadium that legendary head football coach Knute Rockne had built in 1930, which produced over the decades seven Heisman trophy winners, numerous All Americans, and the movie "Rudy" and the "Four Horsemen." A short walk across campus and you can literally see thousands of vigil candles burning at the Grotto of Lourdes, which was built by immigrant stone cutters during the late 1800s as a replica of the one in Lourdes, France. Or walk inside the beautiful Basilica of the Sacred Heart to observe the painted art work on the ceiling done by Vatican painter Luigi Gregori. Or just sit in a pew and gaze at the beautiful stained glass windows along the sides of the church letting the late autumn light in. Notre Dame is truly a special place to visit.

-USFWS/SarahBauer

Terry Ott filters water samples as part of the eDNA sampling procedure, which will be used to detect the presence of Asian carp genetic material.



-USFWS/SarahBauer

A trip to Notre Dame is not complete without experiencing some of the history such as the Knute Rockne statue.

For further info about the La Crosse FHC: http://www.fws.gov/midwest/LaCrosseFishHealthCenter/

2010 Watercraft Safety Training: The Year in Review

BY DAVE WEDAN, LACROSSE FWCO

The past year was another busy and rewarding one for the Regional Watercraft Safety Instructor Team with more than 120 students successfully completing the following courses:

Winter Airboat Training: This course was developed by Region 3 Instructors specifically for winter operation on snow, ice and open water. Two one-day courses were attended by regional airboat operators and instructors, the Regional Safety Team, the Region 6 Watercraft Safety Coordinator, and a Twin Cities area Fire/Rescue Team. The U.S. Geological Survey National Watercraft Safety Coordinator has reviewed this training course and is adding a chapter on winter airboat operation to the Department of Interior (DOI) Airboat Manual. All certified airboat operators who work in winter conditions are encouraged to take this specialized training.

-USFWS

Winter airboat training on the Upper Mississippi River near LaCrosse, WI.

Motorboat Operator Certification Course (MOCC): This 24-hour course is mandatory for all Department Of Interior (DOI) watercraft operators. Courses were held at Ludington and Alpena, Michigan; Onalaska, Wisconsin; and Crab Orchard National Wildlife Refuge (NWR). Fifty three students were certified. There is also a mandatory five year MOCC recertification refresher course. Many watercraft operators completed the refresher in 2010 to keep their certificates current.

-USFWS

These watercraft operators have completed their mandatory Motorboat Operator Certification Course.

Airboat Certification Course: Two one-day courses were held at Horicon NWR in August with fourteen students certified. This is a mandatory course for airboat operators after completion of the MOCC course.

Open-Water/Great Lakes Module: This advanced "big water" course trains operators in navigation, charting, GPS, radio communications, rescues, and watercraft operations out-of-sight of land. The class was held in June at Bayfield, Wisconsin (on Lake Superior) with thirteen students successfully participating. MOCC certification is a course prerequisite.

-USFWS

Open-Water/ Great Lakes Course students and instructors practicing emergency life-raft deployment and teamwork survival techniques.

M/V Spencer F Baird Safety Module: The "*Baird*" is a 95-foot fisheries vessel used for work on the Great Lakes and is staffed by a full-time crew.

-USFWS

The *M/V Spencer F. Baird* is a 95-foot fisheries vessel used for work on the Great Lakes and is staffed by a full-time crew.

The second annual Baird Course was held at the Lake Huron port of Cheboygan, MI, in June, with thirteen students attending. This mandatory training is designed for the biologists, technicians, and scientists who occasionally work on the vessel doing lake trout stocking, fish population assessments, and research, and familiarizes them with the vessel crew, the vessel configuration, and their assigned workstations. The students learn all the safety rules and protocols designed to protect them while working on board, and the location and operation of all safety and emergency equipment provided on the Baird.

Tribal Watercraft Safety Instructor Training Course: A "train the trainer" modified Instructor Training Course was successfully completed in August near Cloquet, Minnesota, on the Fond du Lac Indian Reservation. Seven Conservation Officers and Biologists from the Fond du Lac and Grand Portage Bands of Lake Superior Chippewa were certified as Motorboat and Airboat Watercraft Safety Instructors by the Regional Watercraft Safety Coordinator and three Region 3 Instructors. This "first of its kind" cooperative training was designed specifically to equip and prepare our Tribal Partners to teach the Department of Interior (DOI) watercraft safety training courses to their own people.

-USFWS

Tribal Leaders, newly certified Instructors from the Fond du Lac and Grand Portage Tribes pose with the Fish and Wildlife Service (Service) Region 3 Native American Liaison and Service Watercraft Safety Instructors.

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

Hatcheries… Not Just for Fish Anymore!

BY CHRIS OLDS, GENOA NFH

Raising mudpuppies indoors during the winter has been a challenge at the Genoa National Fish Hatchery (NFH). Mudpuppies are very aggressive when placed into a confined space with nowhere to hide. They tend to fight, injuring each other which creates sources for infection. There have been many techniques employed to prevent fighting and keep them healthy, but with limited success. In a pond or lake, mudpuppies are active year round, hiding in the sediment or under rocks during the day and feeding at night. This is difficult to accomplish at the hatchery as most of the outdoor ponds are drained and frozen during the winter months. This winter, the mudpuppies were brought indoors and placed into large tanks with flat rocks and pieces of plywood. To date, the hatchery has been successful and we have not lost a single mudpuppy. They will be returned to a pond this spring where the females will hopefully lay their eggs.

We raise mudpuppies to create a captive brood stock population which are used as hosts for the salamander mussel. Collecting wild mudpuppies each year opens up the hatchery to potential pathogens that could infect the endangered fish and mussel species cultured at the station. The salamander mussel is a threatened species in the states of Wisconsin and Minnesota; an endangered species in Illinois and Michigan; a Species of Special Concern in Indiana; a Species of Special Interest in Ohio as well as a Federal species of concern.

Continued success with this new technique of raising mudpuppies indoors will allow us to expand propagation efforts for the salamander mussel in the spring. Our goal is to restore local populations of the mussel to preclude listing as a Federally Endangered Species.

-USFWS

A mudpuppy, which is used a a host species for the salamander mussel at the Genoa National Fish Hatchery, waits patiently for a passing minnow!

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

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.

Annual Discussion of NESP Fish Passage Monitoring Efforts on the Upper Mississippi River

BY ROB SIMMONDS, CARTERVILLE FWCO

The Navigation and Ecosystem Sustainability Program (NESP) has formed over the past several years as a means for the U.S. Army Corps of Engineers and others to concurrently move forward navigation and ecosystem improvements. To date, efforts have been focused on project identification, project design and pre-project monitoring. The Carterville Fish and Wildlife Conservation Office (FWCO), as well as the Rock Island and Marion Ecological Services Field Offices, have been active participants in the design and monitoring of fish passage projects at Mel Price Locks and Dam and Locks and Dam 22.

Discussions at our annual meeting of monitoring efforts included reviews of efforts (e.g., telemetry, fixed hydro acoustics, DIDSON, fish passage modeling), and discussion of projections for decreased funding in Fiscal Year 2011. Carterville FWCO biologist Nate Caswell completed and provided a report on a pilot project using DIDSON sonar, investigating the effect of attraction flows on fish passage through the auxiliary lock at Mel Price. Nate was unable to attend the meeting so the report was summarized by Carterville FWCO Project Leader Rob Simmonds. The good news is that each year our increased knowledge is leading to better design of fish passage projects, so that when construction funding becomes available, we will be in a good position to improve fish passage on the Upper Mississippi River.

For further info about the Carterville FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/carterville.pdf

Connecting Across the Ocean

BY ANGELA BARAN, GENOA NFH

Members of the Wetlands Restoration Delegation from China visited Genoa National Fish Hatchery (NFH) on Nov.7. A group of 10 people, complete with translator, drove to the hatchery in a tour bus ready to learn about how we raise fish and culture mussels.

Several representatives of the *Friends of the Upper Mississippi River Fisheries Services* Friends group came out to the hatchery to talk to the visitors about the roles that Friends groups play in assisting the three La Crosse area Fisheries Offices (La Crosse Fish and Wildlife Conservation Office, La Crosse Fish Health Center, and Genoa NFH) to accomplish their many missions. This required some explanation and a lot of translation; there is no real equivalent group in China to use as a quick reference.

After some refreshments and time to talk with the Friends group members, everyone loaded up on the tour bus to begin the hatchery tour. Thanks to the impressive driving skills of the bus driver, the group was able to get a full tour of the hatchery grounds, learning about the earthen ponds and how Genoa uses both pond culture and intensive raceway culture to grow the various species of fish, mussels and salamanders. They were also fortunate to see some of the brood (larvae bearing) mussels displaying lures to attract a host fish while touring the "Clam Palace". Hatchery Manager Doug Aloisi explained the life cycle of mussels while letting the group get some "hands on" experience with mussels and sturgeon. They were pretty excited to handle the live animals and enjoyed the hatchery as one of their last stops on a two week tour in the United States.

-USFWS

Genoa National Fish Hatchery manager Doug Aloisi shows members of the Chinese Wetland Restoration Delegation a native mussel (left) and a lake sturgeon (right).

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

La Crosse Fish Health Center Solves Goldfish Mystery

BY COREY PUZACH, LA CROSSE FHC

In October, the La Crosse Fish Health Center (FHC) received 27 goldfish from Ottawa National Wildlife Refuge in Ohio. A concerned biologist contacted the La Crosse FHC about numerous species of fish with tumor-like growths and hemorrhages on many different areas of the body. The affected fish were discovered during a routine fishery survey being conducted on the refuge.

-USFWS/SarahBauer

Hemorrhaging is evident on the body of this goldfish captured during a fishery assessment at the Ottawa National Wildlife Refuge in Ohio.

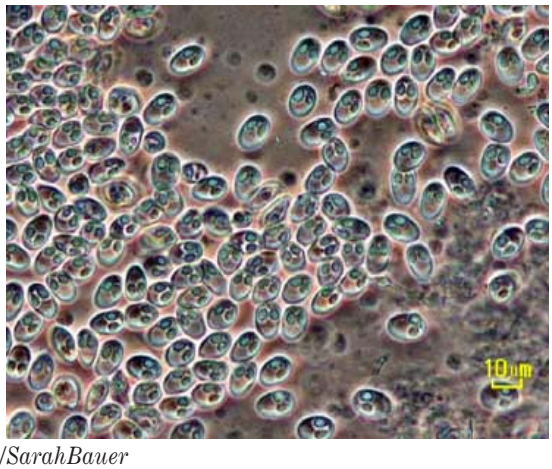
The fish were shipped to the La Crosse FHC overnight on ice for a diagnostic examination. A diagnostic examination is performed when fish are suffering mortalities, or numerous signs of disease are present in fish. The goldfish received had hemorrhages in the eyes, skin, and fins, and tumor-like growths behind the head. Eyes, fins, skin, gills and internal organs were viewed using a microscope for clues to what was causing the clinical disease in the fish. The only thing observed were red blood cells from the hemorrhaging. Next, material from the tumors was observed under the microscope. Millions of spores from the genus *Myxobolus* were located in the material from the tumors.

Myxobolus sp. are microscopic parasites which belong to the group of organisms called the Myxozoans. There are over 200 described species of myxozoans in freshwater fish of North America. The parasite is found in numerous types of tissue depending on the species, and high population numbers can cause significant problems in the fish host.

After the external examination was complete, internal samples were collected for viral and bacterial screening. No viruses were detected. After the bacterial screening was complete, the second problem was diagnosed. The bacterial pathogens *Aeromonas hydrophila*, *Aeromonas sobria* and *Aeromonas veroni* were isolated from many of the goldfish from kidney tissues. These pathogens cause a disease called Motile Aeromonad Septicemia in fish. Signs of the disease include the observed hemorrhaging throughout the body, but also fluid in the body cavity, pale and swollen liver, swollen kidney, empty gut, bloody discharge and mortality.

-USFWS/SarahBauer

A large tumor has formed on the head of this goldfish.



-USFWS/SarahBauer

The Myxobolus sp. was recovered from tumors in goldfish from the Ottawa National Wildlife Refuge, which are microscopic parasites which belong to the group of organisms called the Myxozoans.

For further info about the La Crosse FHC: http://www.fws.gov/midwest/LaCrosseFishHealthCenter/

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.

Sullivan Creek NFH Ships 'Eyed" Lake Trout Eggs

BY CRYSTAL LEGAULT ANDERSON, PENDILLS CREEK NFH

Sullivan Creek National Fish Hatchery (NFH) ships eyed lake trout eggs to other federal, state, tribal and educational facilities every November and December. This year, Sullivan Creek NFH shipped more than 5.2 million eggs in total. Most of the eyed eggs are going to Jordan River NFH, Iron River NFH and the Michigan Department of Natural Resources Marquette State Fish Hatchery for the purpose of lake trout rehabilitation in the Upper Great Lakes. Sullivan Creek NFH is one of only three lake trout brood fish stations in the Fish and Wildlife Service.

-USFWS

The Sullivan Creek National Fish Hatchery shipped more than 5.2 million eyed lake trout eggs in 2010.

The whole egg process begins with spawning season, which usually starts by the middle of September and runs until the middle of November each year. The adult lake trout are anesthetized so the eggs and milt can be collected and mixed together for fertilization. This allows the staff to handle the adults without harming them, and the fish will come out of the anesthetic in about twenty minutes. Once the eggs are fertilized, disinfected with iodine and water hardened (or pull enough water inside their shells for the eggs to become hard), they are measured and counted into vertical stack incubators.

The eggs will slowly develop inside the incubators for one to two months depending on how cold the water temperatures are. They will become "eyed" eggs, where you can see the little fish eyes thru the outer shell of the eggs. At this point, the eggs are "shocked" or bounced fairly hard to get the bad eggs, ones that didn't fertilize, to turn opaque white when the yolk is broken inside the egg. This process does not harm the good eggs. The next step is to run all the eyed eggs through mechanical egg pickers which have a light sensitive photo-eye. The pickers shoot a ray of light through each egg, and if the light goes through the egg, it is a good egg and goes in one bucket. If the light cannot go through the egg, it is a bad egg and goes into a different bucket. We run all eggs through two mechanical pickers and hand pick them with tweezers or suction bulbs at least once. The good eyed eggs are again measured and put back in their incubators until shipments to fish production hatcheries can be set up.

Eyed eggs are carefully packed into Styrofoam coolers and either shipped via Federal Express, United Parcel Service or transferred between facilities by hatchery staff. The little fish inside the eggs are looking at you the entire time, 5.2 million sets of eyes.

For further info about the Pendills Creek NFH/Sullivan Creek NFH: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/pendills.pdf

La Crosse FHC Completes Health Inspection at Jordan River NFH

BY ERIC LEIS AND RYAN KATONA, LA CROSSE FHC

The La Crosse Fish Health Center (FHC) conducted the annual fall hatchery inspection at the Jordan River National Fish Hatchery on October 5th. Six lots, or groups, of lake trout and brook trout were tested for certifiable pathogens. In addition, fish from the hatchery's water supply were tested for disease to ensure that these fish are not carriers of pathogens that could threaten the hatchery. No pathogens were detected.

For further info about the La Crosse FHC: http://www.fws.gov/midwest/LaCrosseFishHealthCenter/

Green Bay FWCO Assists with Lake Whitefish Tagging Study in Lake Michigan's Green Bay

BY TED TRESKA, GREEN BAY FWCO

Biologist Ted Treska of the Green Bay Fish and Wildlife Conservation Office (FWCO) participated in an effort to tag more than 2,500 lake whitefish, which are part of a growing spawning run that occurs in the Menominee River, Wisconsin. Biologists hope to determine their impact on the Lake Michigan fishery. Whitefish were collected by electrofishing along the river, after which fish were measured and tagged with floy tags in an attempt to discover the dispersal patterns from this re-emerging historical run of this important commercial species. The waters of Green Bay and the surrounding area are producing large numbers of whitefish, and part of this response is likely due to the re-establishment of runs in rivers that historically produced large numbers of whitefish, but had all but disappeared until recent years. Project coordinators are hoping to find out how much of a role these river spawning fish are having through tag returns from commercial and recreational fishers, and how far the fish are traveling throughout the year.

-USFWS/TedTreska

A "fish's eye view" of the lake whitefish spawning run in the Menominee River, Wisconsin.

-USFWS/TedTreska

Green Bay Fish and Wildlife Conservation Office (FWCO) biologist Ted Treska displays one of the over 2,500 lake whitefish that were tagged as part of a study to analyze contributions to the fishery.

For further info about the Green Bay FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf

La Crosse FHC Completes Health Inspection at Keweenaw Bay Tribal Fish Hatchery

BY ERIC LEIS AND RYAN KATONA, LA CROSSE FHC

Ryan Katona from the La Crosse Fish Health Center (FHC) conducted the annual fall hatchery inspection at the Keweenaw Bay Tribal Fish Hatchery on October 26th in L'Anse, Michigan. Ryan sampled five different lots of brook and lake trout. A lot is based on fish species, year class and strain. Sixty fish were sampled from each lot. Each lot is screened separately for certifiable fish pathogens. Kidney and spleen samples were taken from each fish to screen for the presence of any target bacteria and target viral pathogens. Sixty heads were also taken from lake trout and brook trout, and screened for the presence of *Myxobolus cerebralis*, a parasite that causes whirling disease and affects members of the Salmonid family. No pathogens were detected.

For further info about the La Crosse FHC: http://www.fws.gov/midwest/LaCrosseFishHealthCenter/

New Water Source for the Genoa NFH

BY DOUG ALOISI, GENOA NFH

A new high capacity well project at the Genoa National Fish Hatchery (NFH) was awarded to Kraus Anderson Construction Company from Minneapolis, Minnesota, in November of this year. Local contractors from Tri-County Well Drilling in West Salem, Wisconsin, were also sub-contracted for the well drilling portion of the contract. This new high-capacity well will allow the station to expand its ability to fill its ponds with well water. Well water is free of any fish populations and the diseases that they may carry, which will allow the station to continue to meet its biological security plans and safeguard both wild and hatchery fish and aquatic resource populations. Surface waters such as raw river and pond water can contain fish populations and their pathogens when used as fish culture water without sterilization. This can spread fish diseases to cultured fish populations and threaten to spread them to wild populations after cultured fish are stocked.

The hatchery has an ample source of groundwater from aquifers reaching 100 feet and 500 feet below the ground surface due to its location between the bluffs of the Mississippi River and the Bad Axe River drainage. This allows the hatchery to supply groundwater to all of its tanks, raceways, and ponds to effectively close off all of its water supplies to wild fish populations. This new well will also allow current ponds to be filled within a reasonable amount of time to ensure zooplankton populations and their body size will match the associated larval fish mouth size, and more of the appropriate sized zooplankton will be available for larval fish to eat, increasing pond survival of cultured fish.

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

First Full Scale Auto Tagging a Success at Iron River NFH

BY NICK STARZL, IRON RIVER NFH

Beginning in October 2010, Jim Webster and Allen Lane fired up two state-of-the-art auto tagging fish trailers at the Iron River National Fish Hatchery (NFH). In prior years, the lake trout were fin clipped manually by seasonal help. This is the first year that all of the lake trout reared at our three lake trout hatcheries (Jordan River NFH, Pendills Creek NFH and Iron River NFH) will be coded-wire tagged along with an adipose clip.

The new tagging program calls for unique tag codes for separate strains and stocking sites. The information gained from the marking program should benefit the Great Lakes community by allowing biologists to know which strains of lake trout perform better in varying habitats.

The two experienced technicians finished up the other two hatcheries on time, and began tagging Iron River's fish on October 18th. The new process was a learning curve for everyone, but the weary tagging operators were able to have all 1.7 million lake trout done before the Wisconsin Rifle Deer Season Opener on November 20th. Jim and Allen were great to work with and we look forward to seeing them again next year.

-USFWS

A look inside of the Auto Fish trailer: This technology reduces handling stress and greatly increases the quality of adipose fin clips and coded-wire tag placement in lake trout.

For further info about the Iron River NFH: http://www.fws.gov/midwest/ironriver/

Neosho NFH Staff and Partners Lead "Fall PEEP Day"

BY MELISSA CHEUNG, NEOSHO NFH

Biologist Melissa Cheung and volunteer Greg Davidson educated more than 150 middle school kids about water quality at George Washington Carver National Monument in November. As a member of the Partnership for Environmental Education Programs (PEEP), Neosho National Fish Hatchery (NFH) works with seven other local environmental facilities to educate students about science and their local environment.

-USFWS

Set around the pond at George Washington Carver National Monument, Melissa Cheung of the Neosho National Fish Hatchery teaches students about local invertebrates.

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.

For further info about the Neosho NFH: http://www.fws.gov/midwest/neosho/

Round Two of "Sturgeon in the Classroom"

BY JORGE BUENING, GENOA NFH

The second year of *Sturgeon in the Classroom* kicked off this month with three more classes receiving sturgeon, bringing the program total to five. Sturgeon in the Classroom is a program at Genoa National Fish Hatchery (NFH) that allows teachers to bring a live lake sturgeon into their classroom. The teachers can then incorporate the sturgeon into lesson plans and give students the responsibility of taking care of their new classroom friend.

Joining the Sturgeon in the Classroom program this year are Lynn Harden, Landon Harger and Erica Johnson. Lynn is a fourth grade teacher for the North Crawford School District. Landon and Erica both work at the Kickapoo School District, with Landon teaching morning and afternoon 4-K classes and Erica teaching kindergarten class. The two returning veterans of the program are Brian Buening teaching fourth grade and Lori Lomas who teaches first grade, both of the Viroqua School District.

The goal of the Sturgeon in the Classroom program is to teach children of any age about the Genoa NFH and the restoration programs it is associated with. These programs help the children gain an understanding of how the Fish and Wildlife Service and other organizations work to maintain ecosystems and natural resources. Hopefully, this will create more ecologically conscious adults and even perhaps lead them down a career path with the Fish and Wildlife Service!

-USFWS

This lake sturgeon was provided to a classroom as part of Genoa National Fish Hatchery's "Sturgeon in the Classroom" program.

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

Fish and Wildlife Service - 101

BY MARK STEINGRAEBER, LA CROSSE FWCO

Eleven students from Viterbo University in La Crosse, Wisconsin, who enrolled in Biology 310 – Limnology during the current fall term paid a visit to the Fish and Wildlife Conservation Office (FWCO) in Onalaska. They came here at the request of their instructor, Dr. Michael Alfieri, to learn more about the La Crosse FWCO partnership efforts to conserve, protect and enhance fishery resources and aquatic habitats of the Midwest. In addition to a challenging academic environment, students who attend this Catholic Franciscan University are encouraged to participate in volunteer activities to instill a lifelong desire to provide service to others. Based on the genuine interest these students showed for the mission and diverse work performed by the La Crosse FWCO, a new cohort of young and eager volunteers may be on their way to help us in the New Year!

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

Gifts from a Far

BY KAY HIVELY, *FRIENDS OF THE NEOSHO NFH*

There is a bit of seafaring history on display in the bookstore at the new Neosho National Fish Hatchery (NFH) Visitor Center. On the top shelf of the tallest bookshelves, there is a well-used life preserver, and a rare and beautiful glass fishing net float. The two pieces of history, now on display, were given to the hatchery by Zella Mae Collie.

The story of how they came to Neosho is worth telling. In 1963 Bill Collie, a Neosho businessman, was in Alaska on a hunting trip. While there he was transported into the back country in a small plane. After the hunt was over, the plane came to pick him up. As Collie and the pilot were returning to "civilization" they flew low along the coast line just off the Aleutian Peninsula, near Port Heiden. From the air, they spotted something on the beach. The pilot turned around and set the plane down nearby. Collie went to retrieve the item. It was a glass float and the preserver tied up together. While they knew what the items were, they didn't know anything about them. The writing on them was in Japanese.

Although the little plane was full of hunting gear and supplies, Collie was determined to get the objects home. With no spare room in the private plane, Collie set the float in his lap and wore the life preserver around his neck. At the airport, to fly home on a commercial flight, he paid to have the float and preserver air freighted home to Neosho, Missouri.

The float and life preserver hung in Collie's home for several years. Finally, he talked to Sinabu Marchbank, a lady of Japanese descent, who sold vegetables on the Neosho square. He asked her if she could read Japanese, and she said she could. He brought the items down to her and she translated what was written on the life preserver. According to Sinabu, the items belong to a Japanese fishing trawler the *Prosperous Dragon # 3*. She speculated the trawler had been lost at sea because the life preserver would not normally be adrift in the ocean. The float could have broken away from the fish net, but not a life preserver. Before his death, Mr. Collie said he wanted the two items donated to the Neosho NFH when the new Visitor Center was complete. His wish has been granted.

-Kay Hively

A fish net float and life preserver found by Bill Collie on a beach near the Aleutian Peninsula was donated to the new Neosho National Fish Hatchery Visitor Center.

For further info about the Neosho NFH: http://www.fws.gov/midwest/neosho/

Largemouth Bass Used to Study Endocrine Disruptors

BY ANGELA BARAN, GENOA NFH

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.

On November 16th Angela Baran drove to Missouri with 1,500 largemouth bass for the U.S. Geological Survey (USGS) Lab in Columbia. James Candrl met Angela halfway for a roadside exchange! Many of the people passing by stopped to find out what kind of fish were on board, where they were going, and to let the staff know that using nets to fish was cheating!

-USFWS

These largemouth bass were reared at the Genoa National Fish Hatchery and will be used in on-going and widespread studies conducted at U. S. Geological Survey labs nationwide.

The largemouth bass are going to be used in the on-going and widespread studies of endocrine disruptors in fish by USGS offices nationwide. Scientists are studying the effects that low-level contaminants such as synthetic hormones and pesticides have on various animals when they are introduced into soils and watersheds.

Water contamination has been on the increase from everyday uses of things like prescription drugs. Wastewater is treated for biological contaminants, but not necessarily for removal of pharmaceutical contaminants. Efforts are now underway to educate the public on how to responsibly dispose of unused pharmaceutical drugs and pesticides, reducing the levels of contaminants. The results from these studies are starting to show skewed sex ratios, improperly developed reproductive structures, and insufficient immune system development among a long list of effects on various animals.

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

November Shocking – Its Freezing!

BY SCOTT YESS, LA CROSSE FWCO

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.

La Crosse Fish and Wildlife Conservation Office (FWCO) staff recently assisted the Wisconsin Department of Natural Resources (DNR) with a late fall electrofishing survey in Upper Mississippi River (UMR) Pool 9. This assessment documented fish abundance and habitat use during late fall at three sites where Upper Mississippi River Environmental Management Program Habitat Rehabilitation and Enhancement Projects (HREPs) are being planned for Capoli Slough, Harper's Slough Islands and Winneshiek Islands. The survey area also included portions of three completed HREP sites: Pool 9 Islands, Cold Springs and Bank Stabilization; however, the total numbers of fish increase in areas where structures like islands exist, with the greatest diversity and numbers of fish found in backwater areas near Lansing, Iowa. These areas have greater habitat diversity (backwater lakes, islands and channels) than the relatively homogeneous habitat common of most open water locations in Pool 9.

-USFWS

Late fall fishery assessments are used to judge the benefits of completed habitat projects and plan new projects to benefit fish at other Upper Mississippi River sites.

Although these findings come as no surprise, data collection like this is critical for pre- and post-project assessments to quantify and document the benefits that HREPs have on fishery resources. Capoli Slough Upper Mississippi River Pool 9 Survey data is used to judge the benefits of completed habitat projects and plan new projects to benefit fish at other UMR sites. Data collected within the boundaries of the completed projects will be used for post-project assessments and will likewise serve as 'control' areas for the proposed projects now being planned. According to Jeff Janvrin of the Wisconsin DNR, preliminary results indicate there are relatively few fish utilizing open water portions of Pool 9 during early November. This scarcity may be due to a lack of suitable habitat.

-USFWS

Upper Mississippi River Environmental Management Program Habitat Rehabilitation and Enhancement Projects (HREPs) are being planned for Capoli Slough. Fishery assessments at sites such as Cold Springs assesses the post-project benefit to fishery resources.

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

Great Lakes Mass Marking Team Participates in Tagging Workshop

BY JAMES WEBSTER, GREEN BAY FWCO

Great Lakes Mass Marking Program staff including Charles Bronte, Allen Lane and Jim Webster traveled to Portland, Oregon, this November to take part in a two-day fish tagging workshop. The workshop was hosted by the manufacturer of the AutoFish tagging system, Northwest Marine Technology, Inc., and was attended by representatives from most agencies that use the AutoFish tagging system. The workshop was an excellent opportunity to present an overview of the developing Great Lakes tagging program, as well as to learn from the experiences of established programs. In addition to presentations and discussion from all participating agencies, the workshop included a technical session focused on the repair and maintenance of the tagging equipment.

The Great Lakes Mass Marking Program, headquartered at the Green Bay Fish and Wildlife Conservation Office (FWCO), currently operates two AutoFish trailers and one manual tagging and marking trailer. The program began using these trailers for production tagging in March of 2010. Throughout the year, 5,688,675 lake trout and chinook salmon were adipose fin clipped and coded-wire tagged at state and federal hatcheries in Michigan and Wisconsin.

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 Green Bay FWCO: http://www.fws.gov/midwest/Fisheries/library/StationFactSheets/greenbay.pdf

Biologist Attends Leadership Training

BY COREY PUZACH, LA CROSSE FHC

Biologist Corey Puzach of the La Crosse Fish Health Center (FHC) attended the Leadership Challenge workshop in November. The workshop was held in the Regional Office in Bloomington, Minnesota. There were 24 participants from all areas of the Fish and Wildlife Service. Current and future leaders learned valuable skills about themselves through participant assessments, team building activities, writing assignments and small group discussions. The workshop was administered by the National Conservation Training Center.

For further info about the La Crosse FHC: http://www.fws.gov/midwest/LaCrosseFishHealthCenter/

Congressional Actions

Congressional Bills, 112th Congress
For: "FISH"

S. 52 (is) To establish uniform administrative and enforcement procedures and penalties for the enforcement of the High Seas Driftnet Fishing Moratorium Protection Act and similar statutes, and for other purposes. [Introduced in Senate]

H.R. 49 (ih) To direct the Secretary of the Interior to establish and implement a competitive oil and gas leasing program that will result in an environmentally sound program for the exploration, development, and production of the oil and gas resources of the Coastal Plain of Alaska, and for other purposes. [Introduced in House]

S. 230 (is) To amend the Federal Food, Drug, and Cosmetic Act to prevent the approval of genetically-engineered fish. [Introduced in Senate]

S. 229 (is) To amend the Federal Food, Drug, and Cosmetic Act to require labeling of genetically engineered fish. [Introduced in Senate]

S. 238 (is) To amend the Magnuson-Stevens Fishery Conservation and Management Act to require that fishery impact statements be updated each year and for other purposes. [Introduced in Senate]

S. 205 (is) To amend the Outer Continental Shelf Lands Act to require that oil produced from Federal leases in certain Arctic waters be transported by pipeline to onshore facilities and to provide for the sharing of certain outer Continental Shelf revenues from areas in the Alaska Adjacent Zone. [Introduced in Senate]

S. 97 (is) To amend the Federal Water Pollution Control Act to establish a grant program to support the restoration of San Francisco Bay. [Introduced in Senate]

H.R. 56 (ih) To provide for restoration of the coastal areas of the Gulf of Mexico affected by the Deepwater Horizon oil spill, and for other purposes. [Introduced in House]

S. 29 (is) To establish the Sacramento-San Joaquin Delta National Heritage Area. [Introduced in Senate]

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

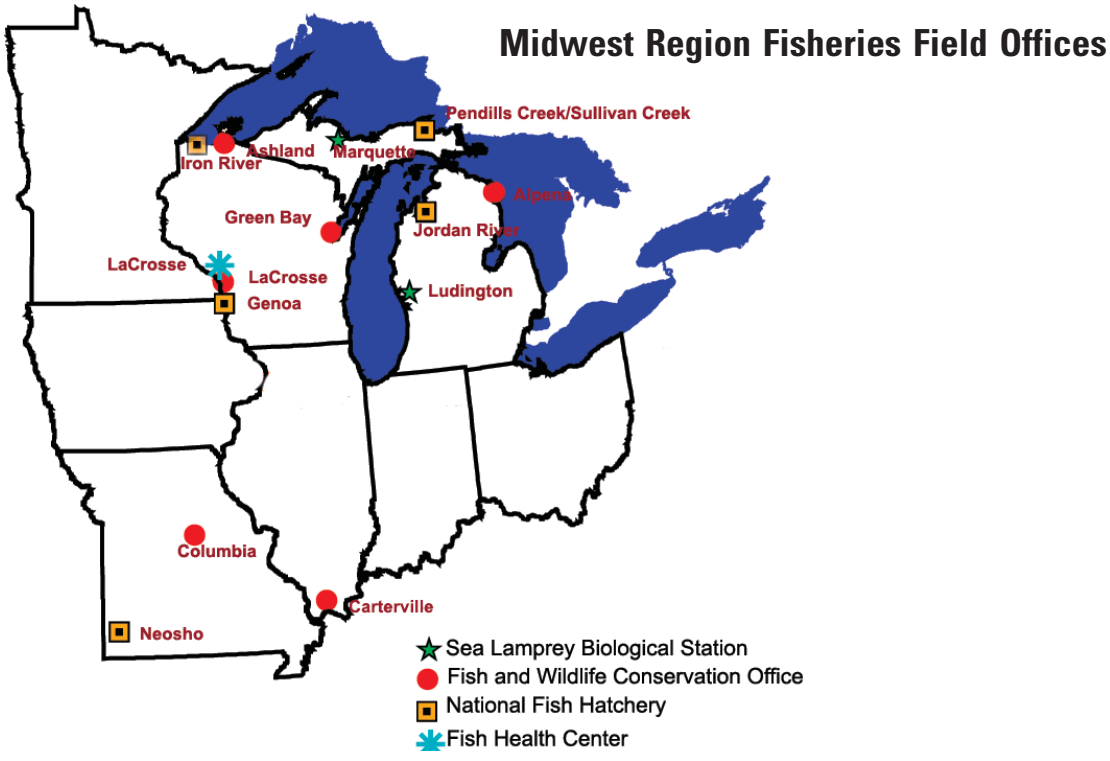
Midwest Region Fisheries Divisions

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.

Fish and Wildlife Conservation Offices
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 fisheries databases; provide technical expertise to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and relicensing; 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 and tribal 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

- **Sullivan's Final Brood Stocking Numbers**
  - Crystal LeGault-Anderson, Pendills Creek NFH

Aquatic Species Conservation and Management

Aquatic Invasive Species

Public Use

Cooperation with Native Americans

Leadership in Science and Technology

Aquatic Habitat Conservation and Management

Workforce Management

Dedication of Flags at Neosho National Fish Hatchery's New Visitor Center

A week before the actual grand opening of the Neosho National Fish Hatchery (NFH) visitor center, the Daughters of the American Revolution (DAR) and the local Rotary Club formally dedicated flags and the flagpole area, or "Patriotic Courtyard", to the hatchery. Missouri state flags were independently donated by State Representatives Kevin Wilson and Marilyn Ruestman, and the DAR. The DAR also donated an American flag that flies above the Department of the Interior flag and Missouri state flag.

Earl Reynolds, previous Rotary Club president, ensured that the hatchery was given the "Patriotic Courtyard" at the main entrance to the new visitor center. He was responsible for designing landscaping, and securing the funds for the dedicated flag area. Crossland Construction assisted in the project by installing the flagpoles. The contribution to the hatchery is marked with a beautiful plaque.