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Fish Tails

"Fish Tails" refers to articles that are submitted by field staff that do not appear as a feature in the current edition of Fish Lines. These articles provide examples of the diverse work that the Service's Midwest Fisheries Program and partners perform on behalf of our aquatic resources and for the benefit of the American public.

Field Notes

"Field Notes" is an online searchable database that showcases hundreds of employee-written summaries of field activities and accomplishments of the U.S. Fish and Wildlife Service from across the nation.

Last updated: August 11, 2016

Lake Sturgeon Reintroduction Efforts on White Earth Reservation and the Red River Basin

BY NICHOLAS BLOOMFIELD, LA CROSSE FWCO

Lake Sturgeon historically inhabited many of Minnesota's larger lakes and rivers. For many Native American cultures, these fish were a very important seasonal food source. Villages often times were situated near spawning sites to take full advantage of the bounty they could provide. It must have been a wonderful site at the end of a long Minnesota winter to see these prehistoric beasts arriving to provide some relief. By the middle of the 20th century, however, lake sturgeon were essentially extirpated from the Red River Basin likely due to habitat degradation, dam construction, overfishing, and pollution. For multiple generations of people at White Earth Reservation, this means they have missed out on an important icon from their past. That is all beginning to change thanks to efforts from a plethora of partners dedicated to reestablishing lake sturgeon in the Red River basin.

A sampling crew from USFWS and White Earth DNR sample lake sturgeon in Round Lake and White Earth Lake every fall to monitor populations and guide stocking recommendations. Credit USFWS

The White Earth Band of Ojibwe, Red Lake Band of Chippewa, Rainy River First Nations, Minnesota Department of Natural Resources (DNR), and US Fish and Wildlife Service (USFWS) are in the middle of a multi-decade plan with the goal to reintroduce lake sturgeon back into the Red River Basin to produce a self-sustaining population. For a species that grows slowly and matures later in life, like lake sturgeon do, a long term and multi-pronged approach addressing the aforementioned reasons for decline is necessary for success. It can take a female up to 25 years to become sexually mature. Therefore, stocking multiple year classes is a necessity. Protection by state and tribal laws relieved the potential of overfishing. Finally, reconnecting habitat through dam removals and modifications for eventual spawning fish is a critical component of the plans.

A Rock rapid structure that replaced a lowhead dam in the Ottertail River drainage. Barrier removal or modification is a critical component of restoring lake sturgeon throughout the basin. Credit: USFWS

La Crosse FWCO began working with the White Earth Band in the late 1990's to develop a plan to restore lake sturgeon to Round Lake and White Earth Lake on reservation lands. By 2001, sturgeon spawned from the Rainy River by Rainy River First Nations were being raised to fingerlings at Genoa National Fish Hatchery and released into the lakes. In 2012, a reservation land outlet and Red River tributary the Wild Rice River was added as a stocking site. Meanwhile, the Minnesota DNR and Red Lake Band have stocked several of their waters throughout the basin as well. In 2003, fish began showing up in annual surveys with the White Earth Department of Natural Resources. As of the 2015 survey, it is evident that there are several year classes present, including some fish surpassing 50 inches. At present, we have PIT (Passive Integrated Transponder) tagged over 600 sturgeon on the two stocked lakes. However, there are only a handful of recaptures so population estimates cannot be made until we increase our recapture percentage. Nonetheless, this suggests that a large number of fish are present. Minnesota DNR has begun to collect lake sturgeon during routine surveys and angler reports are on the rise. On another front, the USFWS Fish Passage Program has been busy at work with partners reconnecting habitats in the mainstem Red River and

throughout the basin, participating in 12 barrier modifications or removals.

This coordinated effort is beginning to reveal the fruits of its labor. Over 30 barriers have been modified amongst the group, with several more in various phases of completion. Fifteen year classes of lake sturgeon have been released into the watershed. As we approach 2020 and beyond the focus will begin to shift towards documenting reproduction and a unified sampling strategies among agencies. Where will spawning occur? Will they be successful and recruit young to the population? That is when the true measure of success will be determined and the hard work of many people across many agencies over many years will be rewarded.

Last updated: August 11, 2016

Mussel Relocation a Decade in the Making

BY NATHAN ECKERT, GENOA NFH

A winged maple leaf with PIT tag attached. Credit: USFWS

The last week of June saw a large group of interagency personnel working on the banks of the St. Croix River to begin the work of relocating over 600 Federally Endangered mussels. This is no small number and it's made even more impressive by the fact that they were produced in 2005 and were not discovered until 2014. In 2005 recovery efforts for the winged mapleleaf included placing a handful of mussel cages stocked with winged mapleleaf bearing channel catfish in the St. Croix River at Hudson, Wisconsin. At the end of the season the cages were retrieved and only 20 individuals were recovered. The process was repeated in 2006 with no juveniles being recovered and the site was abandoned as a cage culture location. Fast forward to 2014 and during routine monitoring of the site 385 adult winged mapleleaf were recovered in the exact location of the previous cage work.

For the next two years our conservation partners worked on a plan to relocate the mussels to formerly occupied habitats. So last month roles around and a large group from the US Fish and Wildlife Service, Minnesota and Wisconsin Department of Natural Resources, National Park Service and the Minnesota Zoo all gathered to collect, mark and relocate the mussels. Divers were able to collect a total of 648 winged mapleleaf from the site, all of which appear to be from the same cohort produced in 2005.

Group participants split three ways and all mussels were measured and fitted with two separate tags. The first is a standard shellfish tag with a serial number identical to those used at Genoa National Fish Hatchery (NFH) to monitor broodstock mussels. The second is a PIT (Passive Integrated Transponder) tag. These tags are secured with superglue and then protected with a layer of dental cement or two-part epoxy. The PIT tag also has a unique number, but requires a meter with antennae to record the number from the animal. It is our hope that by using multiple tags we'll be able to track the individuals in stream and if either tag is lost we'll still know it is one of our individuals. The 648 individuals were divided into three groups. The first group will continue to live in the St. Croix. The second was relocated to our previous stocking location in the Mississippi River at Hidden Falls in Pool 2. The third group will be taken to the Chippewa River to reestablish a population in there. The mussels destined for the Chippewa River will spend at least a month in quarantine at the Minnesota DNR mussel propagation facility to ensure that no zebra mussels are present before their introduction into that zebra mussel free facility.

Megan Bradley from Genoa NFH and Lisie Kitchel from the Wisconsin DNR work to PIT tag adult winged mapleleaf for release. Credit: USFWS

This project has taken several agencies and over 10 years of "soaking time" for the animals for the big move to arrive. Hopefully they will be happy, healthy and prolific in their new homes.

Youth Conservation Corps Summer Students Partner to Accomplish Projects at Genoa NFH

BY OREY ECKES, GENOA NFH

The U.S. Fish and Wildlife Service offers a wide variety of opportunities and experiences for young adults to peak interest in pursuing a career path related to natural and aquatic resource management. These opportunities for some come as early as high school through the Youth Conservation Corps Program (YCC). The YCC program was established for young adults to accomplish conservation work on public lands, provide gainful employment experience and to develop an understanding and appreciation for natural resources. For the past few years YCC enrollees from the Necedah National Wildlife Refuge (NWR) have teamed up with the Genoa National Fish Hatchery (NFH) YCC crew to accomplish annual trail maintenance and lake sturgeon coded wire tagging. This provides a unique opportunity for the Necedah YCC crew members to experience fisheries related work, while in return providing necessary help to accomplish projects at the Genoa NFH. Crew members from Necedah NWR spend the majority of their summer improving hiking trails on wildlife refuge grounds, biological and visitor services activities, maintenance projects and helping with other biological surveys.

Genoa National Fish Hatchery and Necedah National Wildlife Refuge YCC group photo. Credit: USFWS

YCC members with Necedah NWR assist in Genoa's annual lake sturgeon tagging project. Credit: USFWS

On the other hand, YCC crews with Genoa NFH play an integral role in the hatchery's lake sturgeon restoration program through daily maintenance and feeding. The students also prepare walleye nets for spring, harvest fat head minnows for forage, and maintain buildings and grounds on the hatchery property. Once the YCC crew from Necedah NWR arrives at the hatchery they are welcomed with a tour of the facilities focusing on aquatic work at the hatchery and career opportunities in fisheries. As the morning progresses the two main tasks for the day are trail maintenance and lake sturgeon tagging. Annually the hatchery mulches the walking trail which serves as an essential outdoor education tool for the hatchery's outdoor classrooms and school groups. It provides the opportunity for staff and local schools to teach and learn about various habitats, the importance of diverse habitats and the effects that invasive species have on native species. In addition the trail provides an excellent recreation opportunity for the public to enjoy. Crew members also kicked off the annual lake sturgeon coded wire tagging project at the hatchery. The crew tagged over 1200 lake sturgeon destined for Missouri Department of Conservation this fall. This continued partnership with Necedah NWR gives these students an opportunity to experience both career fields in fisheries and refuges. Genoa NFH appreciates the valuable work of the YCC crew members in accomplishing these tasks.

Necedah NWR YCC member works on trail maintenance at Genoa NFH. Credit : USFWS

Alpena Fish and Wildlife Conservation Office

Collaborative Efforts to Tag More Lake Sturgeon

BY ANDREWS BRIGGS, ALPENA FWCO - WATERFORD, MI SUBSTATION

Volunteers hold a lake sturgeon prior to being released at Purdy Fisheries, Inc. Credit: USFWS

Collaboration is key to the successful rehabilitation of threatened and endangered species. This is no different with lake sturgeon, which are threatened in the Great Lakes region. In the St. Clair – Detroit River System, many agencies have collaborated to construct artificial spawning reefs to restore lake sturgeon and other native fish species. These reefs replace a portion of the spawning habitat that was removed from the system to make way for commercial shipping traffic.

Another collaborative effort is taking place between the U.S. Fish and Wildlife Service (Service) Alpena Fish and Wildlife Conservation Office (FWCO), the Ontario Ministry of Natural Resources and Forestry (OMNRF), and Purdy Fisheries, Inc. (Purdy's). Purdy's is a commercial fishing company based out of Point Edward, Ontario. They set commercial trap nets and gill nets targeting walleye, lake whitefish, and yellow perch in southern Lake Huron and often catch lake sturgeon in trap nets as by-catch. As part of the collaborative effort, Purdy's transports any lake sturgeon they catch to their facility and keep them in large tanks called raceways. Then staff from the Alpena FWCO – Waterford Substation and OMNRF meet at Purdy's to collect biological information such as length, weight, girth, and a section of fin ray for aging and genetic analysis purposes and tag and release the fish. This collaboration has been taking place since 2002, but the effort to collect lake sturgeon has grown tremendously in the last few years.

This year, Purdy's collected 106 lake sturgeon including three recaptures. This collaborative effort is important because of the numbers of fish that Purdy's is able to catch during their routine netting activities without Service or OMNRF staff having to actively commit staff time to setting and pulling gear themselves. In addition, this collaboration allows the Alpena FWCO and OMNRF to tag and recapture more fish to better understand the lake sturgeon population in southern Lake Huron.

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Neosho National Fish Hatchery Says Farewell to Inspiring Leader

BY KATIE STEIGER-MEISTER REGIONAL OFFICE - EXTERNAL AFFAIRS

His smile and signature cowboy hat have greeted countless visitors, volunteers and employees at Midwest hatcheries, but after more than 40 years with the U.S. Fish and Wildlife Service, David Hendrix is retiring.

David Hendrix (center) retired as project leader from Neosho National Fish Hatchery on July 22, 2016. Credit: USFWS.

A pillar at Neosho National Fish Hatchery in Missouri for the past 26 years of his career, David built and led the Neosho team who to-date are responsible for successfully growing and stocking thousands of pallid sturgeons and Topeka shiners into the waters of the Midwest. Their efforts earned the 2015 Recovery Champions award, one of the Service's highest honors. In addition to his success at rearing iconic fish species, David's warm and welcoming nature gave him the invaluable ability to build and nurture relationships with a wide array of partners both within the Service and externally with state agencies, non-governmental organizations and academia.

For more than 40 years Hendrix, with his signature cowboy hat and friendly smile, helped to educate the public on the role of national fish hatcheries in the recovery of iconic freshwater species, such as the pallid sturgeon. Credit: USFWS

In his career David worked at nearly all of the Midwest Region's fisheries facilities. He started as a Cooperative Research Unit (CO-OP) student and worked his way up the ladder, culminating his career as Project Leader at Neosho National Fish Hatchery. He is known as a champion for the resource and for working tirelessly to educate others about the importance of the work undertaken by the Service in pursuit of our mission.

As a leader, mentor and friend to many, David Hendrix will be missed. Join us in celebrating his career and in wishing him the very best in retirement!

Jordan Hatchery
Boosting Life on Land and Sea

By Chris Engle –Special to the Gaylord Herald Times July 19, 2016 | PETOSKEY NEWS.COM

ELMIRA — The completion of a massive raceway building at the Jordan River National Fish Hatchery means more room for fish and more space for native wildflower gardens, the hatchery's latest large-scale endeavor.

The monolithic concrete structure is bigger than a football field and will expand the hatchery's primary purpose of raising lake trout for stocking in the Great Lakes. It will house a series of long, skinny pools, called raceways, where the fish will swim and feed until they are about six inches long and ready to stock. The building replaces outdoor raceways that were susceptible to predation and disease and puts the hatchery's capacity at about 3.2 million lake trout fingerlings. It will stock about 1.8 million lake trout next spring.

One quarter of that new building will house an ambitious cisco-rearing operation that Hatchery Manager Roger Gordon hopes will boost stagnant lake herring populations in the northern parts of Lake Michigan and Lake Huron starting in 2017.

Credit: Sandra L. Adair

Nestled between the new and existing raceway buildings is about an acre of empty hillside where hatchery staff and a small Youth Conservation Corps crew are busy building the facility's newest garden of native plants and wildflowers.

"We're in the midst of planting our biggest garden yet," Gordon said Monday. "We need to have some native plants on there to control erosion."

The need comes from the roughly one-acre sloped roof of the new raceway building which, during severe storms, dumps a torrent of rainfall onto the hillside. Much of that erosive force is halted with a strip of river rocks under the eve, but Gordon is looking to deep-rooted native plants to stabilize the hillside from washing away.

Another benefit of the new garden falls in line with the latest mission of the hatchery directed not at ailing populations of fish, but at struggling species of pollinating insects.

A combination of bacterial and viral diseases and agricultural pesticides have been blamed for hurting honeybee populations, but butterfly species like monarchs and other native insects that pollinate fruit trees and crops are seeing precipitous drops in their numbers.

"We're losing native pollinators and we really don't know why," Gordon said. "Our gardens don't do a lot to help but do give people an idea of what they can do in their own yards and that can add up to thousands of acres nationwide."

Gardens planted on the hatchery grounds in the last couple years are currently exploding with native plants in full bloom. Stems and blossoms literally vibrate with the beating of tiny wings of bees, butterflies, grasshoppers, beetles and other insects that have taken up residence in the sprawling gardens.

"There's one small garden here that was just a round patch of grass and weeds and home to nothing but ants," Gordon said. "Now it's a little oasis of life, with thousands of insects and even some rodents, snakes and toads, all in a little round garden that had been a biological desert."

The hatchery is open to the public every day during daytime hours. It is located at 6623 Turner Road, off U.S. 131, south of Elmira.

http://www.petoskeynews.com/gaylord/sports/outdoors/jordan-hatchery-boosting-life-on-land-and-sea/article_0e24b34c-cf0f-5678-9a36-cc08d668adb6.html?utm_medium=social&utm_source=facebook&utm_campaign=user-share

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Summer Help Arrives at Genoa in the Nick of Time

BY DOUG ALOISI, GENOA NFH

The Genoa National Fish Hatchery (NFH) is full of activity in the summer time, or as we say in Wisconsin, we are busy making hay while the sun shines. Being cold blooded animals (or poikilothermic), fish growth is regulated by water temperature. The fish growing season is a short one in the higher latitudes, and trying to get them as big as possible before release in order to increase survival and avoid predation is a major goal of the staff every summer season. In order to do this, especially with the lake sturgeon, a species that does not accept prepared diets, the staff must be temporarily increased in order to meet our production goals.

This summer we welcome Laura Chappell to the staff as one of our Pathways Interns. Laura is a natural resource major with Coast Guard experience on the Great Lakes. Having boating experience helps at the Genoa NFH due to the large amount of time hatchery staff spend on the water to complete their mission. Laura has been able to jump right in and help with hatchery chores involving boating (such as minnow harvesting) that helps us feed our mussel host fish and broodstock without skipping a beat. The hatchery also hired two home grown high school students, Manning and Brynn from the local area. They are also helping out with sturgeon chores and completing some small maintenance chores that the staff can't normally slow down to accomplish.

Summer jobs allow young people to test drive a natural resource career to see if they would like to participate in active conservation for a majority of their lives. It also gives some of our more advanced program enrollees such as our Pathways interns, on the ground experience in their fields which assists them when they graduate and begin the exciting and somewhat scary process of applying for jobs in their field. We welcome all of our summer helpers and hope that their experience enriches them both in the present and the future.

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Midwest Region Fisheries Divisions

National Fish Hatcheries

The Region's National Fish Hatcheries (NFH) focus on native species recovery and restoration. Primary species include: lake trout, endangered pallid sturgeon, and endangered, threatened, and native mussels. Other major programs include coaster brook trout and lake sturgeon restoration, fulfilling tribal trust responsibilities for native aquatic species, and cost reimbursed rainbow trout production for recreational fishing. Hatcheries also provide technical assistance to other agencies, provide fish and eggs for research, and develop and maintain brood stocks of various species and strains.

Fish and Wildlife Conservation Offices

Fish and Wildlife Conservation Offices (FWCO) conduct assessments of fish populations to guide management decisions, play a key role in targeting and implementing native fish and habitat restoration programs; perform key monitoring and control activities related to aquatic invasive species; survey and evaluate aquatic habitats to identify restoration/rehabilitation opportunities; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's National Fish Passage Program, National Fish Habitat Partnerships, 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. The Whitney Genetics Lab serves as a leading edge genetics laboratory and conducts environmental DNA (eDNA) sample processing for early detection of invasive species.

Whitney Genetics Lab

The Whitney Genetics lab provides environmental DNA (eDNA) surveillance for the early detection of invasive Silver and Bighead carp as part of the Asian Carp Regional Coordinating Committee's plans to detect, monitor, and respond to the threat of invasive carp in the Great Lakes. The lab also provides analysis for determining the ploidy of wild-caught Black and Grass carp, two more invasive carp species.

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