

# Genoa National Fish Hatchery News and Notes



March/April 2015



## About Genoa NFH

Genoa NFH was established over 80 years ago by the Upper Mississippi River Fish and Wildlife Act. The mission of the hatchery has changed from providing sport fish for area waters to a conservation hatchery concerned with the recovery of endangered aquatic species.

The hatchery is open for tours during business hours. For large groups, please call for an appointment. You can reach the hatchery at 608-689-2605 from 7:30 am to 3:30 pm. You can also find us online at: [fws.gov/midwest/genoa](http://fws.gov/midwest/genoa) And on Facebook at: [facebook.com/GenoaNFH](https://www.facebook.com/GenoaNFH)

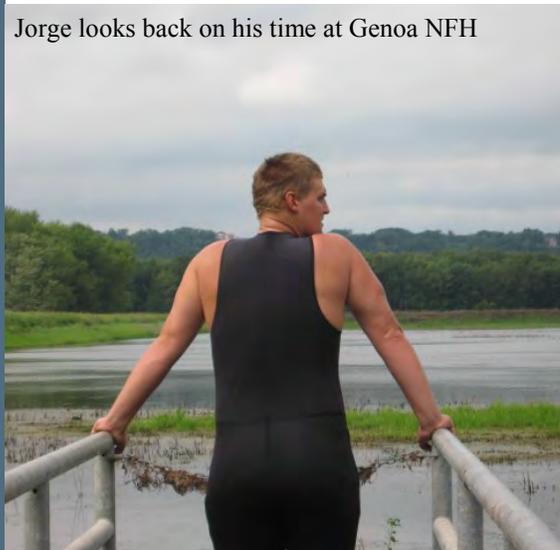


## A Fond Farewell to a Mainstay at Genoa NFH

After eight years at Genoa NFH Jorge Buening will be leaving the hatchery at the end of May. Jorge started as a STEP student in 2008 and worked with us through the end of his collegiate career. After a couple temporary positions here he found a permanent position at Genoa NFH as a fish biologist and will be taking the role of lead fish biologist for the Iron River NFH in northern Wisconsin. During his tenure here Jorge has become an integral part of the fish culture operation, heading the coldwater culture program for the last two seasons. He has also provided invaluable assistance to the mussel program as a certified SCUBA diver collecting mussels for propagation and conducting field surveys for monitoring purposes. One particular area where he has shined has been the expansion of our outreach programs. He pioneered our sturgeon and perch in the classroom programs, and has worked hard to make our outdoor classroom a success for area



Jorge looks back on his time at Genoa NFH



schools. Jorge is always willing to give a tour to school groups and curious travelers, and each receives his best effort with a cheerful attitude. While we are excited for him to embark on this new chapter in his career we are sad to see him go. He has certainly left some big shoes to fill. You can continue to contact him at

Jorge\_Buening@fws.gov and next week at 715-372-8510

Good luck Jorge!  
We know you'll do great.

**Kalamazoo River Streamside Rearing Trailer Ready for Fish**

After an eventful winter of 2014, the Kalamazoo River Streamside Rearing Facility is now deployed at its Allegan Michigan riverside location ready to receive lake sturgeon eggs and fry. This winter the trailer had been put through its paces, being deployed as a holding station in the U.S. Fish and

Wildlife Service's Green Bay Fish and Wildlife Conservation office garage. Lake Michigan water was recycled through its systems in an attempt to hold the a rare deep water whitefish species (*Coregonus hoyi*) in efforts to allow the green fish to mature and successfully spawn. Then the trailer came back to its natal hatchery to receive some much needed renovations. This was also a great opportunity for the 2015 trailer staff to really get a grasp of trailer systems and capabilities before the 2015 lake sturgeon production season. The trailer was then hauled over to Michigan and set up streamside and field tested. Lake sturgeon have begun their spawning migration up the river, indicated by radio tagged fish being detected at various upstream locations. This indicates that within a matter of days adult lake sturgeon weighing as much as 150 pounds will be gathered at the spawning grounds. Egg traps will be set at the site, with the eggs being gathered and brought into the trailer for rearing. Lake sturgeon will be reared from eggs to 8 inches and released in early fall, so they can complete their migration back to Lake Michigan. There they will eat and grow for 16-22 years, when they will be old enough to make the return trip up the Kalamazoo River to reproduce. The project has

successfully reared 3 year classes of juvenile lake sturgeon, and strives to ensure that every year class produced can be represented in future spawning runs to perpetuate this river specific population of lake sturgeon. This cooperative effort is made possible due to the help of our partners, the Michigan DNR, Green Bay FWCO, the Gun Lake Tribe, Allegan County Parks Department and Kalamazoo Chapter of Sturgeon for Tomorrow.

By: Doug Aloisi



Spawning bloaters on Lake Michigan

**Genoa National Fish Hatchery's** mission is to recover, restore, maintain and enhance fish and aquatic resources on a basin-wide and national level by producing over 35 aquatic species of varying life stages, participating in active conservation efforts with our partners, and becoming a positive force in the community by educating future generations on the benefits of conservation stewardship



Sturgeon trailer set and ready for fish

## Spring Trout Exodus!

Spring signals the start of the major switch up at Genoa National Fish Hatchery. Like many other hatcheries it is the time when tank space and water use is almost at the maximum, little fish growing bigger and the big fish even bigger! The warmer weather allowed the hatchery to start moving the trout off station to the stocking sites that were finally ice free and over 3 weeks 19,000 brook trout and 21,000 rainbow trout went to new homes. As part of a cooperative agreement, Ft. McCoy received 15,000 rainbow trout in 6 ponds just in time for their trout season opener. These fish provide fishing opportunities for active and retired military as well as the local community. The hatchery also provides fish to the Veterans Administration Hospital in Tomah, WI for their fishing pond. The VA has an annual fishing event for area veterans to come out and fish, with the local middle school children coming out for the day to help those with more limited abilities to get to the pond, baiting hooks or helping to get the fish off the hooks. This great event helps to provide an afternoon outside for the veterans while providing an opportunity for the students to interact with members of their community they might not normally see. In addition to the rainbow trout, Genoa is able to provide coaster brook trout for stocking in tribal waters in Minnesota, Wisconsin and Michigan. Each year Grand Portage Indian Community receives 10,000 yearling brook trout and at least 25,000 spring fingerling brook trout for restoration programs. This long standing effort is working to restore self-sustaining populations of this native fish back to the Lake Superior tributaries. This fish is similar to the eastern brook trout, but their behavior and eventual size sets them apart. The coaster brook trout will live in Lake Superior, running up and down the coastline of the lake returning to the tributaries to spawn in the fall. In addition to Grand Portage, the Red Lake Band in MN, Oneida Nation, Forest County Potawatomi, Stockbridge Munsee Community in WI and the Keweenaw Bay Indian Community and Lac Vieux Desert Band in MI all received brook trout. The hatchery is anxiously awaiting for June to finish off the trout stocking for the season with the departure of over 35,000 spring fingerlings to Hollow Rock Creek in Grand Portage!

By Angela Baran

## Genoa Completes First Round of Vaccinations

Part of the Coldwater fish culture process at the Genoa National Fish Hatchery is vaccinations. We vaccinate all of our Coldwater species (Lake Trout, Brook Trout, and Rainbow Trout) against two certifiable pathogens by the means of an immersion dip. Basically, we let the fish soak in a bath of diluted vaccine for one minute and during that time their bodies are able to develop a resistance to the pathogen. The two pathogens that we vaccinate for are Furunculosis and Enteric Red Mouth (ERM). Both of these pathogens are caused by bacterial infections. Furunculosis is caused by the by *Aeromonas salmonicida* species of bacteria and ERM is caused by *Yersinia ruckeri*. A positive test for either of these bacteria during routine fish health inspections will result in an inability to stock the fish. The vaccine for both of these bacteria is essentially an inactive strain of the bacteria that is suspended in solution. When the fish are dipped in this solution they are exposed to the bacteria through their gills and subsequently their bodies develop immunity. Part of the hatcheries mission is to stock healthy, disease-free fish into the management areas for which they were produced. These vaccination protocols help us to achieve that goal. By: Jorge Buening

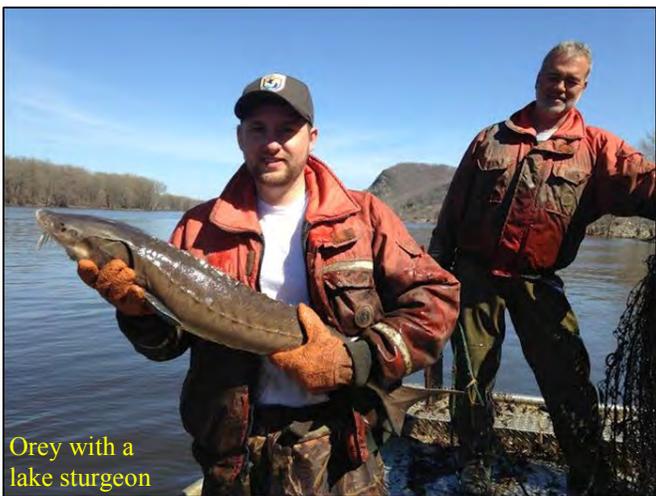


Stocking Hollow Rock Creek



Rainbow trout in a vaccination bath

## Genoa Publishes Sturgeon Research in North American Journal of Aquaculture!!!!



Orey with a lake sturgeon

For the past decade Genoa staff members have been monitoring key development stages for lake sturgeon in relation to water temperature. Recently a development index has been created to allow fisheries resource managers to predict percent development of eggs and larvae at any given temperature, and daily development can be cumulatively added to predict the percentage of development at any given date. Establishment of a development index for Lake Sturgeon serves as a valuable tool for fish culturists to enhance production planning and restoration efforts at sturgeon rearing facilities. This index is also useful in culture of Lake Sturgeon at facilities with variable water temperature, such as streamside rearing facilities (SRF). A development index is useful for fisheries resource managers to raise strain-

specific Lake Sturgeon in SRFs where daily water temperatures are variable and to estimate the time of migration of larval fry downstream from spawning grounds, which may aid in their capture. Currently USFWS and Michigan Department of Natural Resources are using this index at SRF located on the Kalamazoo River and Ontonagon River, Michigan. Genoa hatchery manager (Doug Aloisi) and fish biologist (Orey Eckes) in collaboration with the University of Wisconsin LaCrosse (Mark Sandheinrich) paper entitled “Egg and Larval Development Index for Lake Sturgeon” has been accepted for publication. Recently, the results of this study have been published in the North American Journal of Aquaculture (Taylor and Francis). This study provides a tool for accurately predicting and manipulating timing of specific development stages. This development index will assist with planning hatchery production programs and field monitoring. Fish culturists and fisheries resources managers may also use this index in ongoing restoration programs to assist in the recovery and management of Lake Sturgeon populations. Check it out online at Taylor and Francis website..... By: Orey Eckes

## Engaging Youth In The Great Outdoors

With Summer break almost underway, students from Lincoln Middle School, La Crosse WI, spent the day trading in textbooks for hands on learning at the Genoa National Fish Hatchery. Tim Sprains class is one of the many that partners with the hatchery and utilizes the outdoor classroom to promote outdoor education and conservation for aquatic resources. His class visits the hatchery twice annually as part of its learning curriculum. In the first session the students rotated through six stations. The day starts out with a tour of the fish hatchery, looking at a variety of stages of eggs, fry and fingerlings. Hatchery biologists explain the role the fish hatchery has in conserving and enhancing fisheries for future generations through a variety of stocking programs. With the hatcheries unique geographic location, it is home to many habitats with a large fauna of wildlife. On a nature trail hike through the forest students learned about native and invasive species of plants such as garlic mustard and purple loosestrife. The nature trail consists of a boardwalk through a wetland area. At this station students had time to relax outdoors and read (ROAR) environmental education books. The tour continued with bird identification. Students used field guides and previously listened to bird calls in the classroom to help them identify different species of birds. The day ended with a math lesson, consisting of counting animal tracks to estimate deer populations. This fall students will come back to the hatchery for round two to see how the fish have grown. By: Orey Eckes

Students view the new walleye eggs



### Collecting Eyes!

The spring thaw kicked walleye spawning into high gear in the month of April. The staff at Genoa National Fish Hatchery set out 50 hoop nets along the shores of the Mississippi River in an effort to capture male and females to collect eggs and fertilize them. Unusually low water and little current presented a difficult challenge to the staff this year as the walleye stayed deep and out of reach of many of the nets. Additionally, fluctuating water temperatures also posed a problem as unripe females being held were not ripening up as the staff hoped. Nets were checked daily and emptied of fish, walleyes were kept in a live box during the spawning season waiting for green females to ripen up and ensure enough males were available for the egg takes and all other by catch was returned to the river. Once all the nets were checked, staff headed to the live box to check females being held there to determine if they were ripe and ripe females collected that day were spawned. Eggs were stripped from females into a one gallon bucket and once collected the females are immediately released back into the river. Males are then used to fertilize the eggs. Well water is then used to activate the sperm and stirred for one to two minutes. A mixture of bentonite clay and well water is then added to the bucket to ensure that eggs do not clump and stick together, this could result in suffocation of the eggs. After two minutes in the clay mixture eggs are then rinsed with well water and placed into a larger bucket containing an iodine mixture to ensure they are disinfected before returning to the hatchery. Once at the hatchery eggs are rinsed of the disinfectant and placed into hatching jars. The following day after the eggs have water hardened they are then enumerated to determine how many eggs were collected. This process is repeated each day during the spawn until wild fish have completed spawning at which point the nets are collected and returned to the hatchery to wait until the following year.

All said and done 95 females were spawned which allowed the staff to ship seven million eggs to state and tribal partners while still meeting the station's production requests for stocking and future freshwater mussel hosts and allowing for a percentage to be returned back to the Mississippi River. Walleye are the host fish for the black sandshell mussel, an endangered or species of concern for several states. In an effort to supplement existing populations or re-introduce black sandshell mussels to various state waters, the walleye are a key species at Genoa NFH.



Orey with a nice female walleye

Jars of rolling walleye eggs



By Aaron Von Eschen

Photos by TJ Turner



Jeff stirs some eggs on the River

### With a Little Help from Our Friends...

Genoa National Fish Hatchery has been beyond fortunate to have people in the surrounding communities who care about the hatchery and its various programs, stepping in to help whenever needed. Each year, the hatchery pairs up with the Midwest Fisheries Resource Office in Onalaska, WI to thank these volunteers for helping the service accomplish its mission, acknowledging their hard work and dedication. This year, Genoa was able to thank everyone involved with sturgeon tagging, walleye spawning, kids fishing days, mussel cage repair as well as those who are involved with the different Outdoor Classroom groups. In addition to the volunteers, the hatchery staff wanted to recognize two of the teachers who help the Outdoor Classroom program grow. Susan Houlihan worked with hatchery staff to develop and start the first classroom program out at the hatchery. She has been bringing children each year from her class and having staff come out and visit the school since 2008. That first group of children is now getting ready to graduate from high school! Her enthusiasm has spread throughout the school system and now that pilot program has expanded to over 5 groups and many more classes just coming to tour the hatchery. She will be retiring this year from teaching and while we will miss her in the classroom, she will remain a strong supporter in our friends group! The hatchery also presented Erica Rasmussen of Summit Elementary with an award to recognize her work with the Outdoor Classroom program. She originally worked with hatchery staff while participating with another teacher from Lincoln Middle School and then when she moved to Summit, she expanded her classroom's program from just visiting the hatchery to including a service project to teach the children environmental responsibility. Her classroom has been working with a local garden club on the station's pollinator gardens for the last 3 years. The students now are not only planting in the gardens, but harvesting the wild flower seeds, such as milkweed, planting them in the classroom and then transplanting the seedlings to the hatchery gardens. The students get a better understanding of how the plants grow and how they will help later on with birds and butterflies, providing a critical food source, as well as why these pollinators are needed for us to get things like vegetables and fruits.

By Angela Baran



Susan (L) and Erica (R) receive recognition for their efforts

### A New Arrival On-Station

In mid-April, hatchery biologists Orey Eckes and Aaron Von Eschen visited Shawano Dam in Shawano Wisconsin to assist in the spawning of Wolf River lake sturgeon. A nicer day could not have been asked for to be a part of this event. Spectators gathered to witness Wisconsin DNR and USFWS personnel collect and spawn lake sturgeon that were grouping up below the dam. Wisconsin DNR fisheries biologists waded into the river and collect males and females which are brought back to shore, checked to determine the sex of the species, and then spawned on the spot. Males are typically gathered first and milt is collected and put on ice. This ensures the milt stays alive and in good condition until eggs are collected. Once fertilized, the eggs are then boxed up for safe transport and taken back to the hatchery where restoration efforts get underway. In total over 150,000 Wolf River lake sturgeon eggs were brought back to Genoa NFH from five different females. The sturgeon have hatched and are just beginning to feed at the hatchery. The first food item offered to them at the hatchery is brine shrimp that are hatched right on station in a 24 hour period. Every day the staff hatches brine shrimp for the sturgeon to eat until they are of adequate size to consume bloodworms.



An adult sturgeon is netting prior to spawning



Clay keeps the eggs from sticking

The Wolf River strain of lake sturgeon is just one of five different strains that will be on station this year. From Wisconsin we will raise fish from the Wolf, Wisconsin, and Yellow River Systems. We will also have fish from the Rainy River in Canada and the St. Lawrence River in New York. The purpose of having all the different strains is to meet management objectives for different management areas around the country. The Wisconsin River fish will be arriving on station soon as well as the Yellow River and Rainy River strains. The St. Lawrence River lake sturgeon are typically a little later in their spawning efforts and will likely be arriving towards the beginning of June. By: Aaron Von Eschen

### ON THE WAY OUT.....

#### A couple final shots of Jorge



Upcoming calendar of events

**June 2015**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	<b>1</b> School Tour	<b>2</b>	<b>3</b> Stocking Trout at	<b>4</b> Pendills Creek	<b>5</b>	<b>6</b>
<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>
<b>14</b>	<b>15</b> Basic Financial Assistance Course, R3	<b>16</b> ECAP Safety Inspection	<b>17</b> Office, Bloomington, MN	<b>18</b>	<b>19</b>	<b>20</b>
<b>21</b>	<b>22</b> Administrative	<b>23</b> Motorboat Operators Certification Course, Onalaska, WI	<b>24</b> Officer Meeting R3	<b>25</b> Office, Bloomington, MN	<b>26</b>	<b>27</b>
<b>28</b>	<b>29</b>	<b>30</b>				