

# Genoa National Fish Hatchery News and Notes



February/March 2016



## 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://facebook.com/GenoaNFH)



## Megan Bradley arrives at Genoa

Megan Bradley, formerly the Southwest Virginia Freshwater Mussel Recovery Coordinator of the Virginia Department of Game and Inland Fishes, has joined us at Genoa as our new freshwater mussel propagation biologist. We are very excited to have her join our team as she brings a depth of experience in intensive mussel propagation systems with her that we plan to use in the "Clam Palace", our freshwater mussel propagation facility. Genoa's mussel program is a relatively new program, beginning in 2000, and originally concentrated on extensive mussel culture. This method focused on the placement of fish that have been "infested" with mussel larvae, or glochidia, and caged over suitable mussel habitat. As the field of mussel propagation has progressed, more intensive methods of mussel culture have been developed. These involve controlling temperature, water quality, and feed availability in specially designed culture units that typically recirculate or use standing aerated water. Megan did her Masters of Science work at Missouri State University with Dr. Chris Barnhart, one of the pioneers of modern freshwater mussel propagation. Some of the very systems that Dr. Barnhart developed have either been put into use or will be put into operation soon in order for us to further the station mission of freshwater mussel conservation. Megan will be working closely with Nathan Eckert, our senior mussel propagation biologist, on the many ongoing Recovery and Restoration projects that Genoa is working on. Welcome Megan to God's country!  
By: Doug Aloisi



### Mussel cages get a facelift on annual cage repair day

This year the Genoa NFH annual mussel cage repair day was held on February 10<sup>th</sup>. Both the Friends of the Upper Mississippi and the Friends of Pool 9 were represented with good numbers from both organizations. Thirteen volunteers came out to help repair our old mussel cages and get them ready for the upcoming production season. After a couple seasons in the river our mussel cages need to be refurbished. This is a long and labor intensive process that starts with sorting the cages into those which can continue in service, and those that need to be repaired. The next step is to remove the old wire mesh and have Jeff weld any broken frames. Then we are ready for the volunteers to come in and help us with the task of riveting the new wire mesh to the frames. This year we had a relatively small stack of just over 40 cages that needed some level of repair. The volunteers got right to work on the empty frames and made quick work of the job. In fact, the stack of cages was finished shortly after lunch leaving the volunteers more time in the afternoon for other pursuits like a short ice fishing trip. As has become hatchery tradition the staff at Genoa NFH treated the volunteers to a lunch of hamburgers with all the trimmings. It is a small price to pay for the amount of work this dedicated group of volunteers was able to accomplish for us in such a short amount of time. We look forward to putting the cages to good use; we know our friends will be ready next winter to put the damaged cages back together. By: Nathan Eckert

**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



Volunteers Al Brinkman and Don Schroder repairing mussel cages.



## Rainbow Trout Stocked in Fort McCoy Army installation Ponds

Fort McCoy is a United States Army installation and is used primarily as a military training center and a support site for military personnel and their families. Genoa National Fish Hatchery raises rainbow trout for spring stocking to six Fort McCoy locations: Squaw Lake, Sandy Lake, Big Sandy Lake, Stillwell Lake, Swamp Pond and Sparta Pond. Genoa receives rainbow trout eggs from Ennis National Fish Hatchery. Once the eggs hatch juvenile rainbow trout are reared in indoor raceways until they are about 6 inches. Once they outgrow their indoor space they are moved into overwinter ponds where they continue growing anywhere from 10-12 inches. As spring arrives hatchery staff seines the rainbow trout from the overwintering pond into a vacuum fish pump. The fish pump allows displacement of water as a means of determining the number of fish being loaded onto the truck for stocking. This year Genoa stocked 15,000 rainbow trout averaging 10-12 inches in length. In addition, Fort McCoy fisheries biologist have reported from creel surveys remaining fish from last year's stockings are anywhere from 16-20 inches. The stocking of rainbow trout provides a great recreational fishing opportunity for military staff and their families as well as for Fort McCoy visitors.

By: Orey Eckes



Staff monitor fish dropping into the truck tanks from the fish pump.



Crowding fish using a seine while using the fish vacuum to load the distribution truck.

### Aquaponics in the classroom

Last fall Genoa National Fish Hatchery partnered with the Bangor 8<sup>th</sup> grade Ag class on a project to start a small aquaponics system for the students. Aquaponics combines traditional fish culture with hydroponics (growing plants in water) in the same system. The uneaten fish food and waste excreted by the fish circulates through the system and provides plants the nutrients they require to grow, as that takes place the plants effectively remove waste that harms the fish and utilizes it providing clean water for the fish. In essence the fish and plants rely on each to keep a healthy ecosystem. The students at Bangor High School used three 55-gallon drums and linked them together in a recirculating aquaculture system with a pump that circulates the water. Floating media was used to hold the plants and provide substrate for them to grow. These systems are becoming increasingly popular as a way for individuals to grow plants and fish in homemade systems. This system provides an educational opportunity for students to learn both traditional aquaculture and agricultural practices. This spring a hatchery biologist visited Bangor High School to check out the students system and how everything was going and gave an educational talk on the hatchery and the basics of aquaculture. The staff at Genoa National Fish Hatchery hopes to maintain these important partnerships and provide educational outreach and opportunities to young people interested in fisheries science.

By: Aaron Von Eschen



Bangor High School's manmade aquaponics system.  
Photo credit: Bangor High School Ag class.



The plant and floating media section of the aquaponics system.  
Photo credit: Bangor High School Ag class.

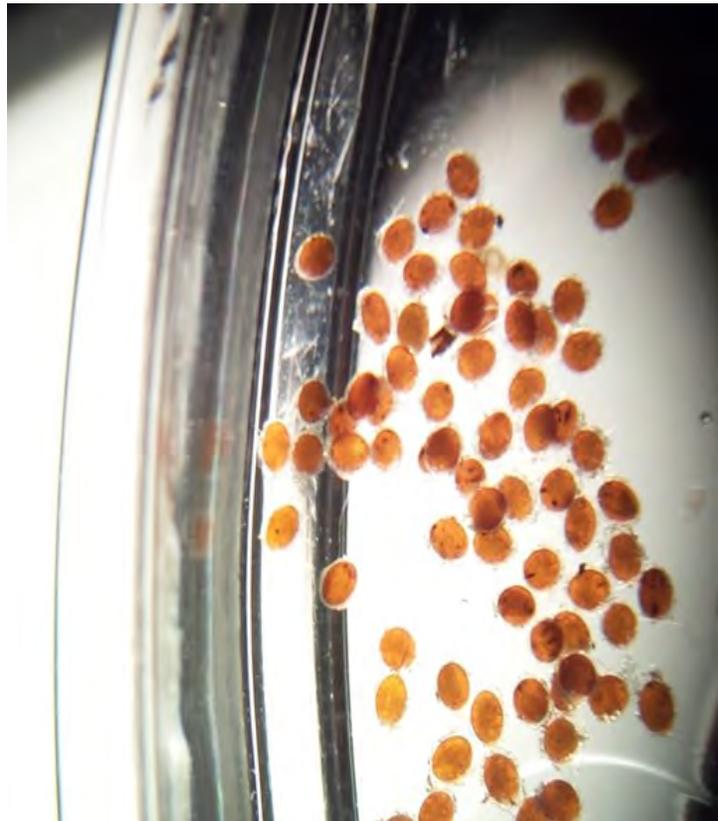


The bile drum section of the aquaponics system.  
Photo credit: Bangor High School Ag class.

### Just in from Chicago...

On March 31<sup>st</sup>, Hines Emerald Dragonfly coordinator Rachel Demots arrived on station at Genoa National Fish Hatchery with dragonfly eggs. They were collected last summer and fall from sites in Wisconsin and Illinois, taken back to the University of South Dakota to overwinter in a cooler, mimicking natural condition. This cooling slows development down, increasing survival of the dragonflies thus preventing an early hatch as there would not be food available for the larvae to eat. The hatchery is receiving eggs from 5 females in sites around Chicago, IL as well as from 3 females in sites around Door County, WI. Eggs should begin hatching within a couple days of arriving on station and the resulting larvae will begin eating zooplankton from the hatchery's pond water the next day. The eggs and larvae will be cared for in the newly constructed mobile rearing unit, equipped with tanks, pumped pond water, UV disinfection on the effluent water and oxygen. This set up will allow the larvae to grow up in a more controlled environment until they are large enough to be placed in cages in the hatchery pond. In addition to the natural food sources in the pond water, the larvae will be fed newly hatched brine shrimp ensuring they have adequate food at all times. Hatchery staff will be working closely with Rachel to adapt the methods used by USD to a larger scale production and station specific methods for the hatchery in addition to troubleshooting any issues that may arise as the larvae begin hatching. Stay tuned for the hatching update next month!

By Angela Baran



Hines Emerald Dragonfly eggs, the dark spots on the eggs are the eye spots of the developing larvae.



Genoa's newly constructed mobile rearing unit.

## Hines Emerald Dragonflies ready for spring!

Genoa's 240 Hines Emerald Dragonfly larvae are ready for spring! New cages have been built and larvae have officially moved in. Over the past few weeks we have transferred hibernating larvae into newly constructed cages where they have settled into one of our on-site ponds. The winter was spent building new cages with different mesh sizes and preparing our new trailer. For the plastic cages three sections were cut into an eight inch PVC pipe enclosed with a 1 mm mesh with a removable cap at one end. In addition to the plastic cages large rectangular metal cages consisting of 24 smaller compartments were built. These metal cages were built using both 3m and 5mm mesh sizes. Different size mesh was used for the cages based on head width of the larvae to keep them contained whilst allowing food to flow through. Before deployment growth rate and weight were taken and recorded for each larva. Amongst the inventory we saw a slight increase in growth from the handful of larvae that were left out in the pond over the winter months. This showed a good indication of our pond quality and survival of the larvae in cold temperatures. Throughout the next few months into fall, cages will be checked once a week to check survival and remove any other aquatic competition. Monthly sub-samples of the larvae will also be taken and recorded to track growth rates. The next step in our HED rearing program will be to acquire eggs from target rehabilitation sites and raise them up to their emergent state.

By Erin Johnson



Newly constructed larvae cages.



Genoa's 240 HED larvae settled into their summer home.

Upcoming calendar of events

**May 2016**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>1</b>	<b>2</b> Diving in Cordova	<b>3</b> Forklift Training Captive Rearing Augmentation meeting Onalaska Middle School Tour	<b>4</b> Platteville HS Tour	<b>5</b> Stock Trout-Red Lake Chicago, IL	<b>6</b> Lincoln MS Tour Necedah Nat'l Wildlife Refuge Tour Stock Tomah VA Pond	<b>7</b>
<b>8</b> Mothers Day	<b>9</b> Stock Trout-Red Lake	<b>10</b> Stock Trout-Grand Portage	<b>11</b>	<b>12</b> Stock Brook Trout to Oneida Nation	<b>13</b>	<b>14</b>
<b>15</b>	<b>16</b>	<b>17</b> Tour-Winona 1st/2nd graders	<b>18</b> Tomah VA Fishing Day	<b>19</b> Outdoor Classroom -Southern Bluffs West Salem HS Tour Summit Outreach	<b>20</b> De Soto Elementary Tour	<b>21</b>
<b>22</b>	<b>23</b> Northwoods Elementary Tour	<b>24</b> Southern Bluffs Outreach Program	<b>25</b>	<b>26</b> Viroqua 1st graders Tour	<b>27</b>	<b>28</b>
<b>29</b>	<b>30</b> Memorial Day	<b>31</b>				