



# Neosho National Fish Hatchery

## NEWSLETTER

### March and April 2015

This time of year bridges the cold winter months with the hot summer months in a wonderfully pleasant springtime in Neosho. It is the time when life renews, fish are spawning, flowers blooming and visitation to the hatchery is on the increase.



For the first time, Pittsburg (KS) State University brought their foreign student program for a hatchery visit. The English Learner department brought these students to visit the hatchery as one of their excursions for some public interactions to help them assimilate into the American culture. They were so curious and happy to visit. And the countries they came from are so diverse: Malaysia, Brazil, South Korea, China, India, Mexico, and Jordan. We were glad they came!





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For our fourth annual Veterans Fishing Derby we really swung for the finish line and hit a touchdown over the fences that day. With the weather being cold and wet for the 24 hours prior, we had our reasons to question how it would be. But once the day dawned, we knew it wasn't time to punt, but rather time to pull out all the stops.

This year we had 208 veterans register and dip their lines in the pond, and there were some real lunkers landed. We put a few thousand trout in that pond a few months back so that they would be ready for this day. Some of the big ones were holdovers from the previous year, and some others were big brooders donated from Shepherd of the Hills state fish hatchery in Branson MO. Whether their hooks found the largest fish or not, all seemed to catch their limit of trout by the time the ending whistle sounded. There was no overtime for this event, but most had departed long before then, full of pleasant memories and full of a tasty hotdog lunch.

It is always a pleasure to hear the stories as I walk around and watch the activity around the pond during a fishing derby. One veteran was 93 years young, and it was fun to see him fish with friends by his side. Most participants wore some hat or shirt or other emblem of their service, so there was a colorful display from all their different branches and experiences. Everyone was so thankful that we put on this event each year – for them to be acknowledged like this is a Lombardi Trophy and Stanley Cup all rolled into one. We are pleased to present it to them and so pleased that our volunteers stepped up to bat in a big way.

Springtime at the hatchery is a time of beauty, and also increased visitation. For a nearby town, the hatchery was able to represent an important historical resource for that school's Missouri Day rotations.



Big school groups LOVE to see our dinosaur fish!





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## Veterans Derby



This March we celebrated our fourth annual fishing derby for service men and women. The weather was mostly cooperative this year; we had over 200 soldiers stop in to have a joyful time at the hatchery.



So many thankful folks participated – some with tears, others just smiles – it was the perfect way to say THANK YOU for their service. We are pleased as punch to oblige!



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Local metal shop GD Construction constructed this amazing grill for all our outdoor cooking needs! Wow!



Speaking of sturgeon, spring is a very busy time. These endangered fish are spawned in May, so the months leading up contain many preparatory details, such as ultrasound sex determination, genetic survey, ovary inspection, and egg readiness inspection. Of the nine adult wild-caught pallid sturgeon we had at this time, the conclusions were that only one female and one male were separated as being candidates for the upcoming spawn.





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Since 2002, we have been working with the endangered pallid sturgeon, breeding them each May and stocking their Missouri River home with thousands of young. We actually started this program by raising paddlefish in the mid-1990s, then transitioning to lake sturgeon before finally being entrusted with the precious rare pallids. In much the same way we are experimenting and learning how to raise endangered mussels at the hatchery now. Our largest pond on the east end of the property is entirely devoted to our mussel program. And while we do not currently have any federally endangered mollusks on hand, we are making great strides in that direction with the similar fatmucket mussel and its host fish, the freshwater drum.

In March we started witnessing signs of healthy and happy mussels – reproductive behavior. The actual mating process is simply a matter of males broadcasting their contribution into the currents and hoping for the best. The females are constantly circulating water through their shells, and any sperm cells will fertilize any eggs through timing and chance. This process doesn't take any human involvement and it doesn't look like anything special.

What is special is what happens next. The females will hatch the little eggs in special brood chambers in the gills, and will be held there. A decorative flap of tissue grows that is wiggled and displayed for passing fish to notice. And we noticed it too, for the very first time! Certain fish are needed for the baby mussels, called glochidia, to hitchhike on gills and fins for a few weeks. This flap is a lure to attract the fish to bite, after which the female squirts the microscopic young up into the fish's mouth. After successful implantation and following the incubation period, they drop off and grow there into regular mussels.

We harvested glochidia for the first time and inoculated them onto drum and trout with the hopes of successful propagation

efforts. All this is helping us learn and lay that firm foundation for the next steps ahead for the hatchery and building up for our next endangered species.





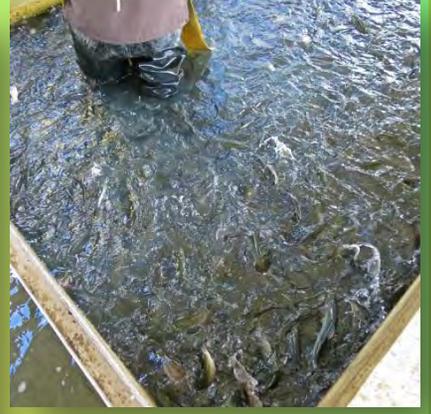
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The first hints of spring in Neosho along with a couple of wild hatchery visitors...



Approximately 47 times a year we schedule a "fish trip" to transport our rainbow trout to Lake Taneycomo near Branson MO.





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For months now the Neosho National Fish Hatchery in Missouri has anticipated a new arrival. Actually lots of new arrivals. In early 2014, conversations were happening regarding empty raceways that were used years ago for breeding brown trout. The brown trout project came and went, like many other projects in the 127 years of the hatchery's history. For more than a decade, its deeper raceways were unused.

The quest to put the brown trout raceways into use led us to an endangered fish that needed federal support. The diminutive Topeka shiner is a minnow, hardly one that you might take notice of, and yet it is in serious trouble and headed for extinction. This species is completely intolerant of turbid water and pollution – they need clear, cold water in which to live. Most of their decline can be traced back to human activities of some sort. As people have moved into regions these fish call home, road construction, livestock usage and other developments made great changes to their habitat. Whether it was muddying up the waters, drying up ponds and wetlands, disconnecting populations or adding pollutants, the shiners were dying off at an alarming rate throughout their range. In 1998, this little fish was officially placed on the endangered species list.

When a plant, animal or other organism is formally designated as “endangered,” there are all sorts of ways to proceed to help things get better. For the Topeka shiner, a recovery plan was established in 2004 by the U.S. Fish and Wildlife Service that identified its critical habitat needs and helped each affected state move into action.

The shiner has been on the radar for a while, but now the parts and pieces have all aligned to bring them to Neosho. There is another hatchery, run by the state of Missouri, that is breeding them for reintroduction and recovery. Dr. Paul McKenzie at the Service's Columbia Ecological Services Field Office has advocated for a federal participant in the shiner's recovery, and suggested the Neosho facility's involvement.

Dr. McKenzie is an endangered species expert, and he knows that working with partners in an endeavor as important as this is as vital as it is fragile. To make this project a success, Neosho staff hosted discussions with him and a host of scientists a year ago in March 2014. This fruitful meeting along with the suitable facility requirements they found was a positive step in the process. More discussions over the following months culminated in the signing of a Memorandum of Understanding between the Neosho National Fish Hatchery, the Columbia Ecological Services Field Office, and the Missouri Department of Conservation in November 2014.

All this propelled us to this moment where we have our new arrivals. The timing was finally right for the Topeka shiners to make their Neosho debut Friday March 6, 2015. Hatchery manager David Hendrix and assistant manager Roderick May brought about 200 of the adult minnows from Warsaw, Missouri at the Lost Valley State Fish Hatchery and placed them gently in their new raceway home in Neosho.

In the near future, we will also obtain the partner species, the Orangespotted sunfish. Much like the cowbird that uses another bird's nest and parenting abilities, the Topeka shiner uses the skills of the male sunfish to scoop out a gravel nest and watch after the delicate fry of both species. The Neosho project will be the first time these two fish are reared in a raceway environment. With our pristine spring water and watchful biologists, we are anticipating good things for this troubled minnow.



*Shiner photos by  
Rosalee Poncé*





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Even though there was rain during the lunchtime hour, we had a wonderful **Open House** for 2015. The sun peeked through the clouds before and after, and most people were able to stay dry. Under the direction of our longtime manager, David Hendrix, this annual event was started in 1997 as yet another way to say THANK YOU to the community of Neosho. The support we receive from our neighbors is second to none!



With our dry and hopeful start to the day, we got our presenters set up outside at the various tables along the sidewalk. The ever-popular tree giveaway from the Missouri Department of Conservation was prominently located at the first tables. They had about 3000 dogwood, redbud, bald cypress, pine and tulip trees for anyone who wanted them. There were actually a few still left by the time we closed up shop, probably a result of the showers earlier. We hope that a majority of those trees have found their new homes in the ground nearby, and that they thrive for many years to come.





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The Final Word, from hatchery manager David Hendrix.



Hello Everyone ☺,

This is a great time of the year to visit our nation's oldest operating federal fish hatchery. The weather is beautiful, flowers are blooming, and the fish are always ready to receive fish pellets from our visitors. Right now, the endangered Topeka shiners and endangered pallid sturgeon are both approaching spawning, rainbow trout are on hand at various sizes, and we're readying up for our second hosting of the Neosho MusicFest to honor our Wounded Warriors on Memorial Day weekend. We're also looking forward and gearing up for the big Kid's Fishing Day (June 5) and Seniors/Individuals with Disability Fishing Event (June 12).

We invite everyone to stop by if the opportunity presents itself and enjoy this wonderful time of year at this special national treasure as we wind down our 127th year of operation. Until Next Time, Take Care ☺ !!!!!!!!!

*Newsletter and photos by Bruce Hallman,  
Environmental Education Specialist*

