



News Release Chequamegon-Nicolet National Forest

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Mussel Power!

Over 6,000 freshwater mussels relocated

Park Falls, Wisc. – October 14, 2008. Turn of the century logging and log drives wreaked havoc on most of the rivers across the Chequamegon-Nicolet NF. This activity on many rivers left them wide, shallow and lacking in large wood and deep pools. One of the rivers most severely impacted is the South Fork Flambeau River (SFFR). The SFFR starts at the outlet of Round Lake in Price County and flows in a southwesterly direction until it meets the North Fork Flambeau River. Inventories of the river found long stretches of wide shallow sand flats, shallow rapids areas, and very few pools.



Volunteers from South Fork Flambeau River Watershed Association digging up mussels

The Forest wanted to restore some of that habitat by narrowing and deepening the channel and adding large wood back into the system and developed a proposal for habitat restoration work on several thousand feet of the river. The SFFR is considered a warmwater river so it has a diverse biological community that includes some very cool aquatic critters! The usual suspects can be found like walleye, smallmouth bass, musky, suckers, and lake sturgeon but one of the most unique ones found is the freshwater mussel (That's MUSSEL, not MUSCLE used to run)! Mussels, like clams, are organisms that have two shells and a "tongue-shaped" foot used to pull it along the bottom of rivers and lakes. It breathes through gills and relies on the river to bring it tiny microscopic plants and animals, which it filters out of the water. Mussels may look a lot like clams but differ in one very important aspect! Mussels must

have a host species, like a fish, to complete their life cycle. Mussels are also an important food source for a variety of wildlife including birds, raccoons, otters and turtles.

The area of the river where the work was done supports a diverse and abundant assemblage of mussels. The highest densities were found in the coarse gravel/sand substrate that was not packed too tightly so that the mussels could easily burrow down without sinking. Densities were not as high in the “rapids” areas because the substrate was larger and more densely packed making it harder for a shell to burrow down. Unless you look closely when walking along a river you might not even notice mussels as they bury themselves into the substrate and leave just a small portion of the shell poking out for feeding.

The technique used to do the habitat restoration on the SFFR utilizes heavy equipment. An excavator digs within the existing channel than uses the excavated material to build new banks which results in a narrower/deeper channel. Mussels live within that excavated material.

Unlike fish, mussels cannot move far very fast! Although there were no threatened or endangered mussels found in the stretches of river where the work was done, the Forest wanted to try relocating some of them away from where heavy equipment would be operating. That’s where the South Fork Flambeau River Watershed Association (SFFRWA) came to the rescue. The SFFRWA is an organization of interested citizens whose mission is “To protect, enhance, and restore the SFFR for its ecological, recreational, aesthetic and cultural values for future generations”. The group was very excited to see the restoration work being done in the watershed and volunteered their services for the project.

Over the last two summers the SFFRWA spent over 2 days kneeling in the river digging up mussels and moving them to suitable areas directly upstream and downstream of the project areas. Over 6000 mussels, comprised of mostly of 6 species, were relocated safely out of the way of the heavy equipment.

Amazingly enough, even with all the excavation that occurred, if you walk through these areas today you will see many living mussels enjoying their new restored habitat. And thanks to the efforts of the SFFRWA a seed bank of mussels has been maintained so that mussel densities within the habitat areas will be restored to former glory.

About freshwater mussels

No other country in the world equals the United States in freshwater mussel variety. While all of Europe supports only 12 species, nearly 300 kinds live here, mostly within the vast watershed of the Mississippi River.

Freshwater mussels have played a long and varied role in people's lives. Native Americans used them for food, tools, and jewelry. From about 1890 until the invention of plastics around 1950, mussel shells supported this country's button industry. More recently, the world's cultured pearl industry relies on implant beads made from the superior shells of North

American mussels. In states where mussel collecting is legal, harvesting provides jobs and income to residents along rivers.

Mussels have other values more difficult to measure. In the rivers and lakes where they live, their filtering ability makes them natural water purifiers. They play an important role in the aquatic food chain as a food source for wildlife including muskrats and otters.

They also can tell us something about the health of the environment on which we both depend. Mussels respond to changes in water quality. Gradual mussel die-offs or sudden mussel kills are reliable indicators of water pollution problems and other environmental health concerns. Stable, diverse mussel populations generally indicate clean water and a healthy aquatic environment.