

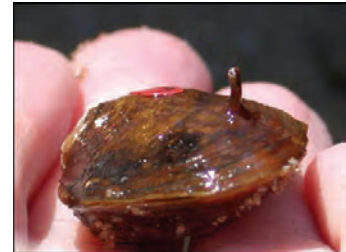


CRPA Press Release

June 23, 2009

Fort Lewis Lodge Becomes “Mussel Beach” for a Day

Millboro. On Sunday, June 21st, John and Caryl Cowden of Fort Lewis Lodge hosted an event that was a little off the beaten path of their usual roles as gracious hosts of a popular rural getaway. Amidst a busy day of making hay, they welcomed biologists from state and federal agencies, as well as regional nonprofit organizations to come to the riverbank at Ft. Lewis in order to hold the 3rd Annual Mussel Festival. This event has its roots in a program developed by the U.S. Fish and Wildlife Service (USFWS) along with Virginia’s Department of Game and Inland Fisheries (DGIF) under the leadership of Cindy Kane and Brian Watson to promote and assist population growth of fresh water mussels in highlands waterways. The program helps several species of mussels but a particular target has been the James spiny mussel, a native of the James River Basin that has been formally listed as endangered for many years. This year, the event was held on the Cowpasture River in the northern end of Bath County. The Cowpasture River courses for over 80 miles through Highland, Bath, Alleghany, and Botetourt Counties to merge with the Jackson to form the James River near the town of Iron Gate. The James spiny mussel was found by agency biologists in the Cowpasture in 2002, but in very small numbers.



Small, but incredibly important. The James spiny mussel is a critical part of the picture of health of Virginia’s fresh water systems. This and other threatened or endangered species of mussel are the focus of the Annual Mussel Festival. Photo courtesy of the USFWS/VaDGIF.

Mussels, like clams and oysters, are mollusks and get their nutrition by filtering water and gathering from it algae, bacteria, and other particles. So, they are actually one of the few animals that help to clean the water they live in. They exist in both salt and fresh water, but similar to the dwindling numbers of estuarine mollusks in the Chesapeake Bay, many species of fresh water mollusks are dwindling in numbers. Those people who have lived in this area for several decades probably remember seeing lots of mussels in the region’s streams and rivers in past years, but now finding them has become a real challenge. Mussels have many benefits in addition to cleaning the water such as providing food for other wildlife, and as indicators of stream health. If they occur in abundance, the stream is probably in good shape because they are very vulnerable to pollution and other factors that affect stream health.

The reduced numbers of freshwater mussels are partly due to loss of habitat, but also because their life cycle is complicated and everything has to go just right for them to thrive. In the case of the James spiny mussel this means having a fish host to attach to during the early part of its life. When they are



Displays were provided by each of the partnering agencies. Here, visitors pour over the information provided by Virginia’s Department of Game and Inland Fisheries. Photo: Keith Carson

babies, the mussels of this species actually attach themselves to the gills of nearby fish for a period of time before settling down in the stream bed where they spend the rest of their lives. Because of this need to partner with the fish in the stream, any reduction in numbers of those fish also means fewer mussels will survive. In order to try to reverse this process, the USFWS staff is growing baby mussels in the laboratory. Then, when the time is right, they capture local fish and combine them with the baby mussels in tanks long enough for the mussels to attach. Then they “reinfest” or place the mussel/fish partners into the rivers in which they have been found to occur naturally.

By repeating the process each year, the hope is to increase their numbers in the area headwaters over the long term. The reinfestation process was the primary goal of the Mussel Festival, but a group of partnering agencies has turned it into a delightful outreach and educational opportunity for families from the area and beyond. Partners in the effort included the USFWS, DGIF, the US Department of Agriculture's Forest Service and Natural Resources Conservation Service, the Mountain Soil and Water Conservation District, Virginia Tech, The Nature Conservancy, and the Cowpasture River Preservation Association. Mother Nature fulfilled her role by providing a beautiful, warm and breezy day to be on the river. And, because the event was held at Ft. Lewis, visitors from as far away as New York got to witness a fascinating afternoon of citizen science and to learn about rural conservation practices.



Kid scientists surround USFWS staff member Rachel Mair during release of fish and their mussel partners into the Cowpasture River. Engaging children in science at a young age is beneficial and can impact their perspective on the importance of nature and conservation for the rest of their lives.

And for the kids, well, the pictures tell the story. They had an opportunity not only to participate in helping to release the mussels, but got to join in an underwater scavenger hunt and had a chance to see many examples of freshwater creatures provided by the Fish and Wildlife Service, Game and Inland Fisheries, and the Cowpasture River Preservation Association. They also got to learn about the Karst topography of the region by making their own sinkholes at the display provided by the Nature Conservancy. A complimentary lunch completed the program for a perfect summer afternoon on the river. Mark your calendars for June of 2010. This is an event not to miss!



An underwater scavenger hunt allowed kids to get up close and personal with the river bed. Photo: Polly Newlon.



Hua Dan from Va Tech came dressed as a stone fly larva, one of the positive biological indicators of stream health. The real thing is shown at right. We've all turned over a river rock just to see what's there. But the creatures that occupy the cobbled riffles of our rivers tell an important story about the stream. Stone fly larvae live under cobble stones in shallow riffles on rivers and stream and are quite vulnerable to pollution. When "critter counters" monitoring the water quality of a stream find lots of these, it is a happy day. Photos: Keith Carson and Polly Newlon.

Marek Smith of the Nature Conservancy provided an educational program on Karst topography, a predominant geological characteristic of our area that has substantial impact on the ground water and its vulnerability to pollution in the highlands. Photo: Keith Carson.



For more information about this event or other river activities contact:
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