A question that we often get when we are out surveying for freshwater mussels is “what good are they?” Two other questions usually follow. “Can you eat them?” “Why are you looking for mussels?” Understandably, a typical first impression of our mussels may be that they resemble rocks since they are usually partially buried in the substrates of our streams and rivers. Using the “mussels-as-rocks” logic, what good would another rock in the stream really be? Fortunately for us (and the mussels), freshwater mussels provide many benefits to society and give us many reasons to care about them.

**What good are they?**

Mussels provide a source of clean water. As natural water filters, individual mussels can filter many gallons of water daily, removing silt and bacteria. Some more pollution-tolerant mussels can even remove modest levels of environmental contaminants such as heavy metals. Large mussel beds in rivers like the Delaware River can filter billions of gallons of water per day. This ecosystem service reduces the need for extensive water treatment and lowers treatment costs for towns and municipalities. If you are a consumer of public water, it literally pays to have a healthy population of freshwater mussels in your local streams and rivers.

Mussels serve a variety of important ecosystem functions including some that directly or indirectly benefit human beings. As living “rocks,” they serve to anchor and stabilize stream and river substrates. This anchoring of the substrate helps eliminate erosion of habitat. The shells of mussels themselves create habitat for fish and other aquatic invertebrates. In turn, small fish such as darters and minnows feed on the aquatic invertebrates, providing meals for larger fish such as smallmouth bass and trout. Mussels are also a food source for muskrats, raccoons and river otters. The presence of mussels in your stream usually means that you will have a healthy fish population present and translates into a quality fishing experience. The fact that mussels also provide a food source for other wildlife help further enhance the overall outdoor experience.

**Are mussels good to eat?**

Based upon large deposits of mussel shells at archaeological dig sites, we know that Native Americans ate freshwater mussels as a dietary supplement. Prior to European colonization, our streams and rivers were probably paved with mussels and could sustain a certain level of harvest. However, today, because of historical pollution and the ability of some mussels to accumulate environmental contaminants it is not advised to consume freshwater mussels. Additionally, recent regulatory action by the Pennsylvania Fish & Boat Commission prohibits the collection of live freshwater mussels.

**Why search for mussels?**

Freshwater mussels are indicators of water quality. Not unlike the canary in the coal mine, mussels can inform scientists that something is wrong in your watershed long before other species, such as fish, become sick or start dying. Using mussels as an early warning signal, remediation steps can be taken to address or correct the source of water quality degradation before the water becomes unsafe for swimming or fish become unsafe to consume. A recent, but extreme, example is a pollution event along Dunkard Creek in Greene County. During 2009, days before fish were observed dead or dying, freshwater mussels were observed dead and dying many miles downstream of a pollution source. Had it not been for mussels, the true extent and severity of the toxic event might not have been detected. Ultimately, the Dunkard Creek mussel population was destroyed.

Mussels have fascinated scientists for years because of their beautiful shapes, colors and unique life history. However, you do not need to be a biologist or a naturalist in order to appreciate or care about the many free services that they provide to you. If you like clean and cheap drinking water, good fishing, swimming or boating in the Commonwealth’s many streams, rivers and lakes, you have a reason to care about freshwater mussels.

For more information on freshwater mussels, contact the Pennsylvania Fish & Boat Commission, Natural Diversity Section, 450 Robinson Lane, Bellefonte, PA 16823, or call 814-359-5237.

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