

# Northern Riffleshell (*Epioblasma torulosa rangiana*)

*Pennsylvania Endangered Freshwater Mussel*  
State Rank: S2 (imperiled) Global Rank: G2T2 (imperiled)

## Identification

A small to medium size mussel with an oval shaped shell 2-3 3/4 inches long and 1-2 1/2 inches high. Base color is light tan to olive-green with numerous fine greenish wavy lines radiating outward. Male and female species are of different shapes (see photo). Internal shape of a dead shell aids in identification.

## Biology-Natural History

All 65 species of PA's freshwater mussels filter food and absorb dissolved oxygen from water drawn in and released by way of a tubular siphon system. A muscular "foot" allows some slow movement, but this species, like most others, is largely sedentary. The male discharges sperm into the surrounding water, which fertilizes eggs when siphoned in by a mature female. After gestation, tiny larvae are discharged and quickly attach to certain fish for several days before dropping to the stream bottom where they grow, adding concentric rings of shell material similar to the growth rings of a tree. The life span of the riffleshell is about 15-20 years; much less than other species. Predators include the muskrat and raccoon.

## Habitat

The mussel occupies swift runs and rimes with beds of clean gravel, sand and stones. In Pennsylvania it has been recorded from streams ranging from medium size creeks to large rivers in drainages of glacial landscapes of the Ohio River basin. The riffleshell shuns areas of calm water or deep silt.

## Reasons for Being Endangered

Imperiled throughout its range, the surviving Pennsylvania populations are some of the best remaining in the world. Water pollution, darn construction and dredging are the major causes for its decline, but other threats include stream sedimentation, channelization and reduced host fish populations. The *Epioblasma* mussels are some of the most environmentally sensitive species in North America.

## North American State/Province Conservation Status

Map by NatureServe (August 2007)

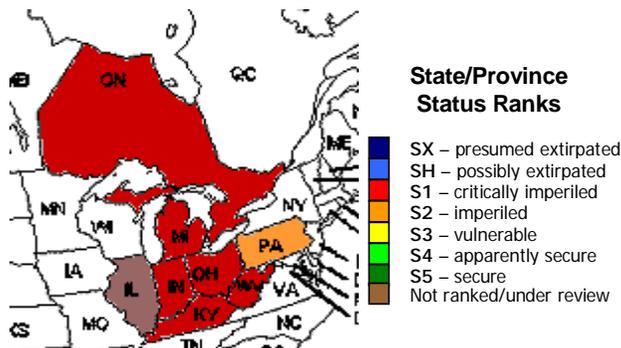
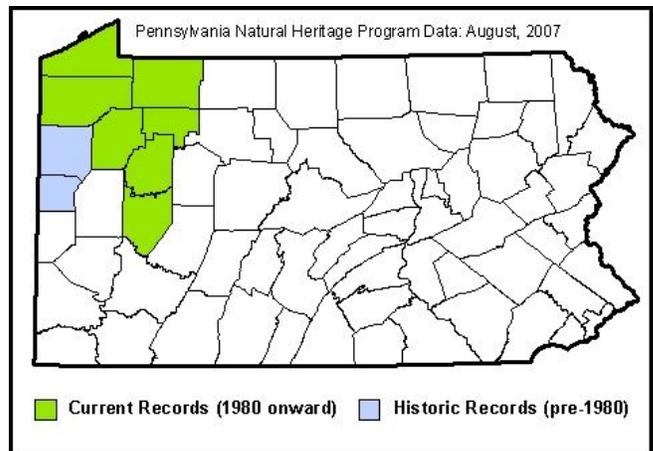


Photo Credit: Charles Bier, Western Pennsylvania Conservancy



## Management Practice

In Pennsylvania, responsibility for aquatic organisms and is supporting on-going research to describe the riffleshell's range and status. Threats to this species should be monitored. The host fish or fishes needs to be identified. Because the host fish is the critical factor in the reproductive cycle and allow for dispersal, such fish must also be protected. If damaged habitat is reclaimed, the northern riffleshell might expand to recolonize parts of its earlier range.

## References:

- NatureServe. 2007. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.2. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: August 21, 2007).



Pennsylvania Natural Heritage Program

Fact Sheet adapted from: Felbaum, Mitchell, et al. Endangered and Threatened Species of Pennsylvania. Harrisburg, PA: Wild Resource Conservation Fund, 1995.

