

Cylindrical Papershell

Anodontooides ferussacianus

Freshwater Mussel Species of Concern

State Rank: S2S3 (imperiled/vulnerable) Global Rank: G5 (secure)

Identification

The cylindrical papershell (*Anodontooides ferussacianus*) is a small mussel, usually less than 75 mm in length. The shell is subelliptical, elongate, thin, and moderately inflated (Parmalee 1998; Sietman 2003; Strayer and Jirka 1997). The anterior margin is rounded whereas the posterior margin is bluntly pointed. The posterior ridge is rounded but distinct. The dorsal margin is straight and the ventral margin has a slight indentation, appearing “pinched” at the midpoint. The beaks are somewhat inflated and slightly raised above the hinge line (Parmalee 1998). The beak sculpture is fine and consists of two or three concentric ridges at the peak of the umbo (beak). Hinge teeth are absent but pseudocardinal teeth appear as irregular swellings along the hinge line. The periostracum (outer covering) is usually light green to yellowish brown, sometimes displaying green rays (may appear faint in adult specimens). Black concentric bands on the surface are indicative of rest periods during growth. The nacre (inner iridescent coloring) is bluish white or silvery (Parmalee 1998; Sietman 2003; Strayer and Jirka 1997).



Photo:

http://webdev.museum.state.il.us/ismdepts/zoology/mussels/gallery.html?RollID=mussel_01&FrameID=anodontooides_ferussacianus6

Habitat

The preferred habitat of the cylindrical papershell is shallow water near shore in silt. It is thought to inhabit small streams, creeks, and lakes in sand or fine gravel (Parmalee 1998; Sietman 2003; Strayer and Jirka 1997).



Photo: PA Science Office TNC



Photo: PA Science Office TNC

Host Fish

Known glochidial hosts for the cylindrical papershell include the bluegill, black crappie, spotfin shiner, largemouth bass, mottled sculpin, bluntnose minnow, common shiner, Iowa darter, white sucker, and the sea lamprey (Parmalee 1998; Strayer and Jirka 1997; www.natureserve.org/explorer).

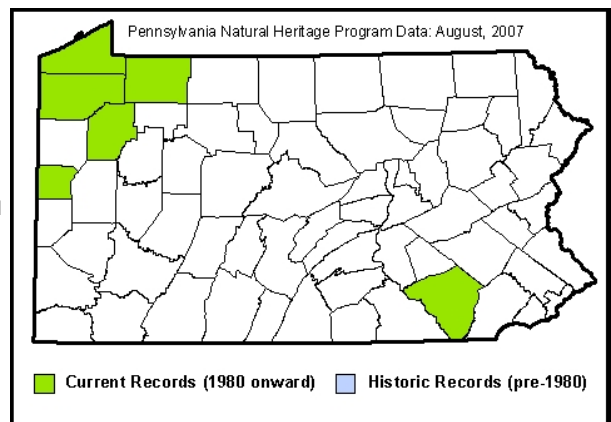
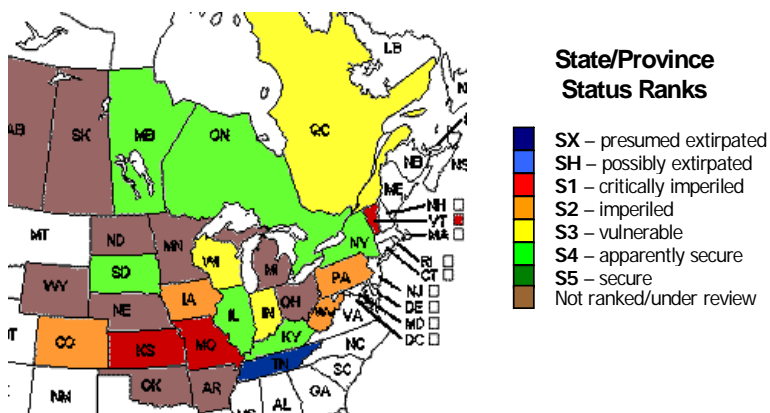
Status

Populations of *Anodontooides ferussacianus* can be found in the Mississippi River basin from Pennsylvania and West Virginia west to Minnesota and Colorado. Individuals have been located throughout the St. Lawrence River system and the Great Lakes, James Bay and Hudson Bay drainage from central Ontario to southeastern Saskatchewan (Parmalee 1998; Strayer and Jirka 1997). This mussel is thought to possibly be extirpated from Tennessee since it has not been reported during surveys for several decades (Parmalee 1998; www.natureserve.org/explorer). This species is not common in Pennsylvania but has been found in the Susquehanna River system and Delaware basin.

The Pennsylvania proposed state status of the cylindrical papershell is condition rare (CR) due to the lack of individuals located during mussel surveys (www.naturalheritage.state.pa.us/invertebrates.aspx). The distribution and origin of *Anodontooides ferussacianus* populations call for further study because it is not well understood how this species crossed over into the Susquehanna River basin. It could have migrated due to postglacial influences or it may have been introduced by humans (Strayer and Jirka 1997). More surveys are required to determine the status of this species and other freshwater mussels in Pennsylvania.

North American State/Province Conservation Status

Map by NatureServe (2007)



Pennsylvania Natural Heritage Program



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: September 4, 2007)
- Parmalee, P.W. and Bogan, A.E. 1998. The Freshwater Mussels of Tennessee. The University of Tennessee, Knoxville, TN 328 pp.
- Pennsylvania Natural Heritage Program. Biota of Concern In Pennsylvania (BOCIP) Lists. Website: www.naturalheritage.state.pa.us/invertebrates.aspx
- Sietman, B.E. 2003. Field Guide to the Freshwater Mussels of Minnesota. Minnesota Department of Natural Resources, St. Paul, MN 140 pp.
- Strayer, D.L. and K.J. Jirka. 1997. The Pearly Mussels of New York State. The New York State Education Dept., Albany, N.Y. 113 pp and plates.