

Elktoe (*Alasmidonta marginata*)

Freshwater Mussel Species of Concern

State Rank: S4 (apparently secure), Global Rank: G4 (apparently secure)

Identification

The Elktoe (*Alasmidonta marginata*) is a moderately sized mussel, commonly reaching 75 mm in length. The shell is trapezoidal or rhomboid shaped, inflated, and thin (Parmalee 1998, Strayer and Jirka 1997). The anterior margin is rounded, with a somewhat straight ventral margin. The ventral and posterior margins meet in a blunt, squared point (Parmalee 1998). The posterior ridge is the focal point of the shell and is sharply angled. The posterior slope is flattened with fine, well-developed ridges crossing the growth lines. The beaks are high, inflated, and are comprised of three to four heavy double-looped ridges. The periostracum (outer covering) is usually yellowish or greenish, with green rays and darker spots that may appear connected to the rays (rays may appear interrupted). Lateral teeth are vestigial and appear as nothing more than indistinct bumps along the hinge line. The nacre (inner iridescent coloring) is usually bluish-white (Parmalee 1998; Sietman 2003; Strayer and Jirka 1997).



Photo:
http://www.lwatrous.com/missouri_mollusks/mussels/images/a_marginata.jpg

Habitat

The Elktoe can be found in medium to large size streams, but is most common in smaller streams. This species is present in greatest abundance in small shallow rivers with a moderately fast current and riffles. The preferred substrate is fine gravel mixed with sand (Parmalee 1998; Sietman 2003; Strayer and Jirka 1997; NatureServe 2005).

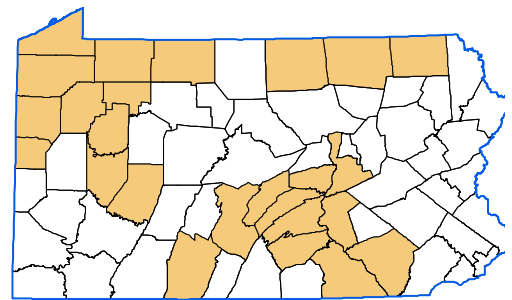
Host Fish

Hosts for Elktoe glochidia include the white sucker, northern hogsucker, shorthead redhorse, rockbass, and warmouth (Parmalee 1998; Strayer and Jirka 1997).

Status

Populations of *Alasmidonta marginata* can be found from Ontario, Canada to Alabama. Its eastern boundary ranges along the east coast from New York to Virginia and the western boundary ranges from North Dakota to Oklahoma. Most populations are located in Ohio, Indiana, and Illinois. This mussel is thought to have been extirpated from Alabama since it has not been reported during surveys for several decades (NatureServe 2005; Parmalee 1998; Strayer and Jirka 1997). This species is not common in Pennsylvania but has been found in the Susquehanna River and Ohio drainages. The proposed state status of the Elktoe is not ranked (N), meaning there is insufficient data available to provide an adequate basis for assignment to specific categories concerning the security of known populations (PNHP). The state rank of this species suggests it is secure at some sites within Pennsylvania state boundaries. However, more surveys are required to determine the status of this species and other freshwater mussels in Pennsylvania.

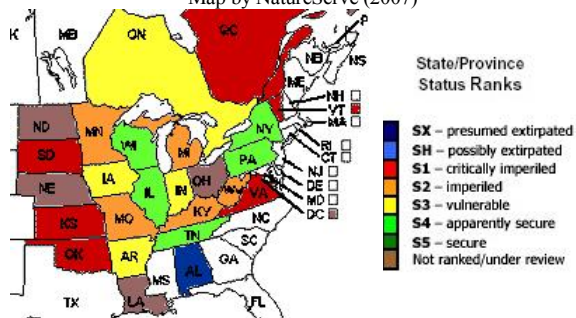
Pennsylvania Distribution by County



Pennsylvania Natural Heritage Program data 2007

North American State/Province Conservation Status

Map by NatureServe (2007)



Alasmidonta marginata is typically thought of as an interior basin species. It is not well understood how *Alasmidonta marginata* reached the Susquehanna River basin from its native range. Some researchers believe it may have drifted from the Allegheny River basin to Susquehanna via postglacial influences. An alternative theory states this species was introduced to the Susquehanna River basin via human activity (Strayer and Jirka 1997).

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 plate

