

# Creek Heelsplitter

## *Lasmigona compressa*

### *Freshwater Mussel Species of Concern*

State Rank: S2S3 Global Rank: G5

#### Identification

The creek heelsplitter (*Lasmigona compressa*) is a moderately sized mussel, usually less than 100 mm in length. The shell is subtrapezoidal in shape, compressed, and moderately thick. Juvenile specimens can sometimes have a small dorsal wing (Strayer and Jirka 1997). The periostracum (outer covering) is somewhat smooth and varies from greenish (juvenile) to greenish-black (adult), sometimes with fine green rays (usually apparent in young individuals). The beak sculpture is obvious and double-looped (Sietman 2003; Strayer and Jirka 1997). Pseudocardinal teeth are present but are usually smooth and lamellar (reduced). Lateral teeth are delicate, but functional and interlocking. There is a prominent interdental tooth in the left valve between the lateral teeth and pseudocardinal teeth (Strayer and Jirka 1997). The nacre (inner iridescent coloring) is usually white, but can be cream or salmon colored (especially toward the beak cavity) (Sietman 2003; Strayer and Jirka 1997).



[www.darbycreeks.org/creekheelsplitterLittleDarby72.jpg](http://www.darbycreeks.org/creekheelsplitterLittleDarby72.jpg)

#### Habitat

The creek heelsplitter is typically located in creeks, but can sometimes be observed in streams too small to adequately support other species of freshwater mussels (Strayer and Jirka 1997). It is most commonly found in headwaters of small or medium rivers in fine gravel or sand (Sietman 2003; [www.nps.gov/miss/features/mussels/musselpages/creekheelsplitter.html](http://www.nps.gov/miss/features/mussels/musselpages/creekheelsplitter.html)).



Photo: PA Science Office TNC



Photo: PA Science Office TNC

#### Host Fish

Suitable host fish for the creek heelsplitter include the slimy sculpin, spotfin shiner, black crappie, and the yellow perch (Strayer and Jirka 1997; [www.nps.gov/miss/features/mussels/musselpages/creekheelsplitter.html](http://www.nps.gov/miss/features/mussels/musselpages/creekheelsplitter.html)).

#### Status

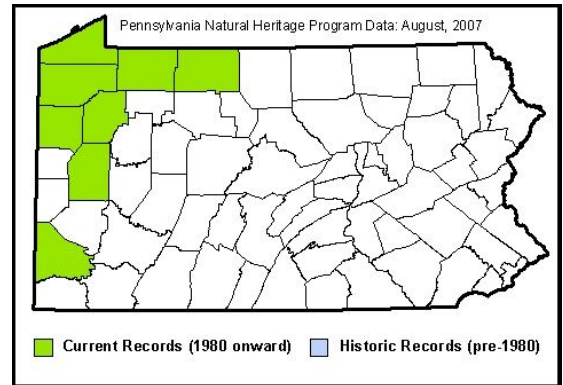
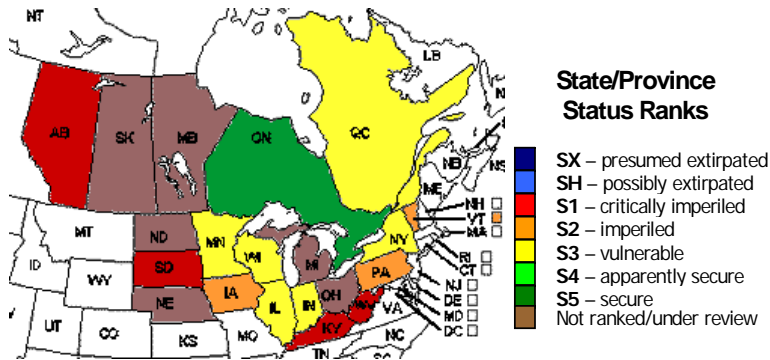
*Lasmigona compressa* lives in the Mississippi River basin from Kentucky north, as well as in the St. Lawrence basin, the Great Lakes basin, and the Hudson River basin (Strayer and Jirka 1997; [www.natureserve.org/explorer](http://www.natureserve.org/explorer)). Additionally, *Lasmigona compressa* has been located in the northeastern headwaters of the Susquehanna River

basin (Strayer and Jirka 1997). It is not well understood how this species migrated to these locations. The Pennsylvania proposed state status of the creek heelsplitter is condition rare (CR) due to a lack of individuals located during mussel surveys ([www.naturalheritage.state.pa.us/invertebrates.aspx](http://www.naturalheritage.state.pa.us/invertebrates.aspx)). Little is known about the status of freshwater mussels in Pennsylvania and the United States. Because of this, more surveys are required to determine the status of this species and other freshwater mussels in Pennsylvania.

The creek heelsplitter can be characterized by its compressed, trapezoidal shape, small dorsal wing, and large interdental tooth. However, it can be confused with *Lasmigona subviridis*. The latter species is smaller, more ovate, and has a significantly smaller interdental tooth. Additionally, its beak sculpture only has three to four smaller, less deeply curved double-looped bars that are distinctly nodulous. The beak sculpture of *Lasmigona compressa* consists of four to five large, deeply grooved double-looped bars of even height. Additionally, *Lasmigona compressa* is one of the few freshwater mussels that are hermaphroditic (Strayer and Jirka 1997).

### North American State/Province Conservation Status

Map by NatureServe (2007)



Pennsylvania Natural Heritage Program



### References

- National Park Service. U.S. Department of the Interior. Mississippi National River and Recreation Area. Website: [www.nps.gov/miss/features/mussels/musselpages/creekheelsplitter.html](http://www.nps.gov/miss/features/mussels/musselpages/creekheelsplitter.html)
- 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 31, 2007).
- Pennsylvania Natural Heritage Program. Biota of Concern In Pennsylvania (BOCIP) Lists. Website: [www.naturalheritage.state.pa.us/invertebrates.aspx](http://www.naturalheritage.state.pa.us/invertebrates.aspx)
- Sietman, B. E. 2003. Field Guide to the Freshwater Mussels of 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, NY 113 pp and plates