

Rainbow Mussel

Villosa iris

Freshwater Mussel Species of Concern

State Rank: S1 (critically imperiled) Global Rank: G5 (secure)

Identification

The Rainbow mussel is subelliptical to subovate with straight dorsal and ventral margins. The shell is somewhat thin, becoming thicker towards the anterior end (www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7b1a1_31.htm, Parmalee 1998). It is slightly inflated and the beaks are low (not above the hinge line). The shell has a rounded anterior end with an arched posterior ridge. The periostracum (outer coloring) is yellowish brown with fine green radiating rays that become wider on the posterior portion of the shell (rays may appear interrupted at growth lines) (www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7b1a1_31.htm, Parmalee 1998, Strayer and Jirka 1997).



Photo:

www.lwatrous.com/missouri_mollusks/mussels/images/v_iris.jpg

Habitat

The Rainbow mussel is commonly found within or directly below riffles in small streams with moderate to strong currents. Preferred substrates include coarse sand, gravel, and mud in clean, well-oxygenated areas that are less than 1 m deep (www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7b1a1_31.htm, Parmalee 1998). It has also been found in large rivers and lakes (Strayer and Jirka 1997).



Photo: PA Science Office TNC



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Host Fish

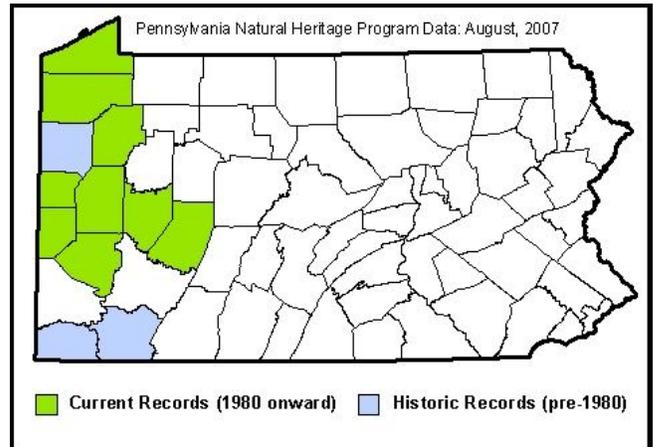
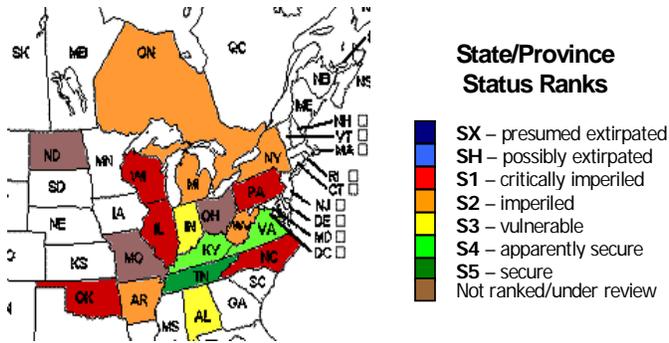
The Rainbow mussel may use one of several fish hosts to complete their life cycle, including largemouth bass, smallmouth bass, spotted bass, rock bass, Suwannee bass, and western mosquitofish (www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7b1a1_31.htm).

Status

The Rainbow mussel is widespread throughout the St. Lawrence, upper Mississippi, Ohio, Tennessee, and Cumberland River basins (www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7b1a1_31.htm, www.natureserve.org/explorer, Parmalee 1998). This species is rarely encountered in the Allegheny basin in New

York and Pennsylvania even though it appears to be widespread throughout other areas in New York (Strayer and Jirka 1997). The rainbow mussel is found in the Susquehanna drainage in Pennsylvania. The state status of the rainbow mussel is Pennsylvania critically imperiled (S1) since few individuals have been observed throughout their native range within state boundaries (www.naturalheritage.state.pa.us/invertebrates.aspx). The Rainbow mussel was listed as stable in an assessment of the conservation status of the freshwater mussels of the United States by the American Fisheries Society (Williams et al. 1993). More extensive surveys are necessary to determine the current status of this species in Pennsylvania and the United States.

North American State/Province Conservation Status
Map by NatureServe (2007)



References



Pennsylvania Natural Heritage Program



Missouri Freshwater Mussels Photogallery. Website:
www.lwatrous.com/missouri_mollusks/mussels/images/v_iris.jpg

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