



Marstonia lustrica (Pilsbry 1890)

boreal marstonia

Taxonomy & Systematics. The Hydrobiidae is a diverse group in the worldwide Superfamily Rissoacea - prosobranch gastropods typically small in body size, shallow or even amphibious in their habit, bearing cusps around the base of their median radular tooth. Sexes are separate in almost all cases, eggs being laid singly and attached in a spare capsule to solid substrates. The penis arises from the neck. Hydrobiids are distinguished from their two sister groups in freshwater, the Bithyniidae and the Pomatiopsidae, by the calcareous operculum of the former and the amphibious life habit of the latter.

The specific nomen *lustrica* was originally described in the genus *Ammicola*, and then transferred to the subgenus *Marstonia* in 1926, which was elevated to the genus level in 1969. *Marstonia* was briefly subsumed under the genus *Pyrgulopsis* in 1987, then resurrected to the genus level in 2002. VDGIF currently recognizes *Pyrgulopsis*. Junior synonyms of *M. lustrica* include *decepta* and *perlustrica*.

Habitat & Distribution. We have not confirmed *M. lustrica* from southern Atlantic drainages, although a population has been reported from Fairfax County, Virginia. The species becomes much more common further north, from New York through southern Ontario and Quebec to Minnesota. Populations of *M. lustrica* seem to reach their greatest abundance in lakes and river pools above the glacial maximum, especially on stones and aquatic vegetation.

Ecology & Life History. *Marstonia lustrica* can become the numerically dominant gastropod in large, rich lakes, where individuals do not seem restricted to any particular habitat type, substrate, or depth. In such situations *M. lustrica* populations may comprise an important element of the diet of fish, crayfish, and other predators.

Quantitative samples taken in the early twentieth century from Oneida Lake, NY, suggested that *M. lustrica* may have been positively associated with *Lymnaea catascopium* and *Gyraulus parvus*, perhaps as a mechanism to minimize competition. More recent surveys of Oneida Lake suggest, however, that the *M. lustrica* population has been greatly reduced, perhaps a result of either artificial eutrophication or invasive species.

Conservation Status. NatureServe G5/SNR - Secure/Not assessed.