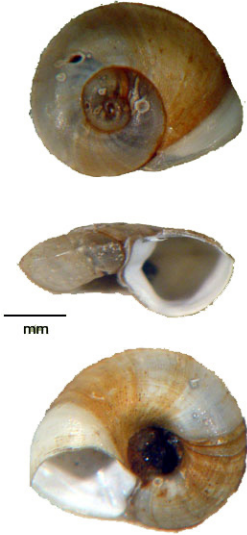




Promenetus exacuous (Say 1821)

sharp sprite



Taxonomy & Systematics. The Planorbidae is the most diverse family of basommatophoran pulmonates, including hundreds of species in perhaps 30-40 genera worldwide. The gill has been lost, leaving respiration to occur across the entire mantle cavity, as is true for pulmonates in general. The ability of pulmonate snails to enfold an air bubble within this cavity can be seen as an adaptation to the colonization of warm or stagnant freshwaters, where the concentration of dissolved oxygen may be reduced.

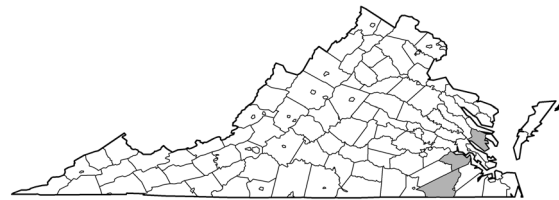
Planorbids are hermaphroditic, as is also true for pulmonates in general; typically capable of self-fertilization and laying eggs in circular egg masses with a tough outer covering. But the sinistral, typically planispiral axis of shell coiling, together with other derived aspects of their anatomy, suggests that the Planorbidae may be among the most recently-evolved of the basommatophoran pulmonates.

Thomas Say originally assigned his specific nomen *exacuous* to the genus *Planorbis*. Baker split *exacuous* first to his genus *Menetus*, then into his *Promenetus*. The spelling "*exacutus*" is a synonym.

Habitat & Distribution. This is an uncommon species in southern Atlantic drainages, sporadically distributed in ponds and sluggish streams of the Coastal Plain. Populations of *P. exacuous* are much more common further north, ranging through Canada south to New Mexico in quiet, shallow areas of lakes and rivers, as well as intermittent or permanent streams and ponds, across the range of productivity. Individuals are typically associated with dead and decaying plant matter, rarely occurring in the absence of these resources. We speculate that *P. exacuous* populations in our study area may originate from dispersal by migratory waterfowl.

Ecology & Life History. The sparse life history studies focusing on this species suggest that *P. exacuous* populations are semelparous, with two cohorts produced each year.

Even in favorable situations, *P. exacuous* is rarely found in great abundance. Although populations may inhabit eutrophic lakes and ponds, they may be sensitive to environmental degradation. Abundance and frequency of occurrence declined precipitously in southern Manitoba as intensive agriculture and other human land-use impacts increased. *Promenetus exacuous* also seems to have been extirpated from Oneida Lake, NY, between 1968 and 1992, perhaps as a consequence of hypereutrophication.



Conservation Status. NatureServe G5/SU - Secure/Under review.
Virginia Wildlife Action Plan Tier IV - Moderate Conservation Need.