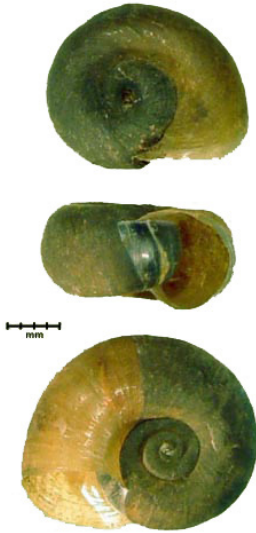




## *Helisoma trivolvis* (Say 1817)

marsh rams-horn



**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.

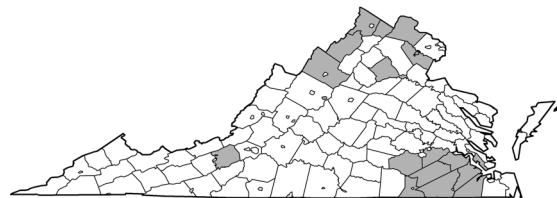
Planorbids are hermaphroditic, as is also true for pulmonates in general; typically capable of self-fertilization and laying eggs in circular egg masses with a tough outer covering. But the sinistral, typically planispiral axis of shell coiling, together with other derived aspects of their anatomy, suggests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

Baker placed Thomas Say's nomen *trivolvis* in the subgenus *Pierosoma*, which Burch subsumed under Baker's *Planorbella* and promoted to generic rank. VDGIF followed. But we agree with Hubendick that the relatively minor attribute of shell coiling apparently the basis for this move does not warrant recognition of *Planorbella* at the generic level. Junior synonyms of *trivolvis* include: *ammon*, *binnyi*, *corpulentum*, *intertextum*, *pilsbryi*, *subcrenatum*, *tenuis*, and *truncatum*.

**Habitat & Distribution.** *Helisoma trivolvis* is common in reservoirs, ponds, swamps, and the calm backwaters of rivers in the lower Piedmont and Coastal Plain in Virginia and throughout southern Atlantic drainages. Elsewhere it ranges throughout the entirety of North America, from arctic Canada to Florida, and has been introduced around the world. *Helisoma trivolvis* populations thrive in rich, eutrophic environments, and do not occur in especially acidic waters.

**Ecology & Life History.** *Helisoma trivolvis* is a weedy species, maturing at an age of around 3 - 4 months in the laboratory, laying perhaps 20 - 40 eggs per week thereafter, depending on culture conditions. Outcrossing is preferred but self-fertilization is possible.

The bulbous, planispiral shell of *H. trivolvis* typically enfolds a pocket of air, rendering it positively buoyant, adapting the animals to life among floating vegetation. *Helisoma* seems to have a stronger trophic apparatus than most freshwater snails; able to ingest macrophyte tissue as well as grazing rather nonspecifically on the periphyton. *Helisoma* hosts a variety of trematode parasites, including the worm that has become a pest in commercial catfish ponds. Its predators include leeches and crayfish.



**Conservation Status.** NatureServe G5/S4 - Secure/Apparently secure.