



Gyraulus deflectus (Say 1824) flexed gyro



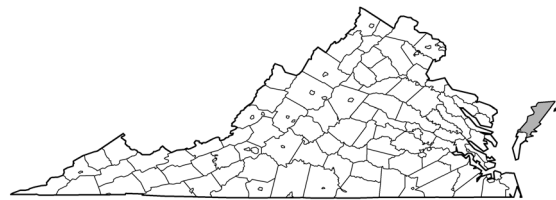
Taxonomy & Systematics. The Planorbidae is the most diverse family of basommatophoran pulmonates, including hundreds of species in perhaps 30-40 genera worldwide. The gill has been lost, leaving respiration to occur across the entire mantle cavity, as is true for pulmonates in general. The ability of 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.

The assignment of *deflectus* to the worldwide genus *Gyraulus* has remained stable. *Gyraulus hirsutus* is a synonym.

Habitat & Distribution. We have a single record of *G. deflectus* in our study area, that from a tributary of Coards Creek on Virginia's eastern shore. The literature also includes one record of a North Carolina population we have been unable to confirm. Elsewhere, *G. deflectus* populations are much more common throughout Canada north to the central Arctic and south to Missouri, in quiet mesotrophic and eutrophic bodies of water, including wetlands, and shores of rivers, ponds, and lakes. Populations have been reported from mud, sand, vegetation, decomposing organic matter, and logs at depths of 0.3-9 m in northern lakes. In a survey of gastropods inhabiting the Precambrian Shield of Manitoba, Pip found *G. deflectus* populations in 56% of lakes greater than 10 ha in size, and 44% of rivers greater than 2 m deep, but never found it in ponds less than 10 ha and creeks less than 2 m deep. At New York and Connecticut sites inhabited by this species, pH ranged from 5.6-8.5, and calcium concentrations ranged from 1-89 ppm.

Ecology & Life History. Populations of *G. deflectus* demonstrate a bivoltine life cycle in Connecticut, eggs first appearing when water temperature exceeds 23° C in late June or July. Hatchlings from the first generation mature and produce a second batch of eggs from early September through early October, which overwinter. Jokinen classified *G. deflectus* as a "High-S species", characterized by low dispersal rates, good competitive ability, a tolerance for low resource (i.e., food) levels, and persistence at low population densities.



Conservation Status. NatureServe G5/SU - Secure/Under review.