



## *Ferrissia rivularis* (Say 1817)

creeping ancyloid



**Taxonomy & Systematics.** The Ancyliidae is a small family of small basommatophoran pulmonates, including several dozen species in 6-8 genera worldwide. They are (at least embryonically) sinistral, although their direction of shell coil tends to be obscured by the cap-like or limpet shape of their shells. The gill has been lost, leaving respiration to occur across the entire mantle cavity, as is true for pulmonates in general. But ancyliids do not rise to breathe at the surface; their mantle cavity being filled with water throughout their lives. Thus unlike most pulmonates, they are not especially well-adapted for warm or

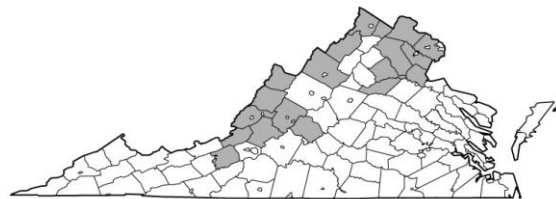
stagnant waters. Ancyliids are hermaphroditic, as again is true for pulmonates in general; often apparently self-fertilizing. They lay eggs in singletons or small clusters with little matrix.

Basch recognized five species in the genus *Ferrissia* - *F. rivularis* from stones, *F. fragilis* from vegetation and organic debris in flowing water, *F. parallela* on narrow-bladed plants in lentic environments, *F. walkeri* on broad-leaved plants in lentic environments, and *F. mcneilli* endemic to Alabama. The shell morphological criteria upon which his system was largely based seem to be subject to a great deal of ecophenotypic plasticity, however. The five taxa have recently been combined into two species, *parallela* subsumed under *rivularis* and *walkeri* and *mcneilli* under *fragilis*.

**Habitat & Distribution.** *Ferrissia rivularis* ranges throughout most of North America east of the Rockies, being found attached to rocks, cobbles and macrophytes in rivers, streams, and northern lakes. Populations seem to become more widespread in cooler, well-oxygenated waters at more northern latitudes. In Virginia the species appears restricted to the Potomac River and its tributaries, south up the Great Valley through the upper James and Roanoke River drainages..

**Ecology & Life History.** *Ferrissia rivularis* seems to be predominantly herbivorous, grazing almost entirely upon diatoms.

A. J. Burky reported a simple annual life cycle in one population of *F. rivularis* from New York and two generations per year in a second. The reproductive efforts of these two populations were in line with expectation from their adult sizes, leading Dillon to suggest that they are Undifferentiated in their life history strategy.



**Conservation Status.** NatureServe G5Q/S4 - Secure/Apparently secure.