



## *Fontigens bottimeri* (Walker 1925)

Appalachian springsnail



**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, the Bithyniidae and the Pomatiopsidae, by the calcareous operculum of the former and the amphibious life habit of the latter.

Like other members of the hydrobiid subfamily Fontigentinae, *F. bottimeri* bears a rather striking triply-ducted penis. Of the nine *Fontigens* species monographed by Hershler and colleagues, this is among the rarest and most obscure. The shell (adult length 2 - 3 mm) is pupa-shaped, with a blunt apex and rounded shoulders.

**Habitat & Distribution.** Hershler gave the distribution of *F. bottimeri* as "a few localities in Potomac River basin of District of Columbia and Maryland, and Shenandoah River basin of northwestern Virginia. Found in both caves and small springs." The only Virginia population documented by Hershler was that of Ogden's Cave in Frederick County. We have discovered one additional population in a small spring run on private property in Frederick County. About ten animals were collected from organic debris in perhaps 30 minutes of effort.

**Ecology & Life History.** We are not aware of any good study on the life history of *Fontigens*. But populations typically seem to maintain high densities year round, as though reproduction might be continuous. The small spring run inhabited by our *F. bottimeri* population seemed rather rich and hard.

**Conservation Status.** State Endangered  
Virginia Wildlife Action Plan Tier II - Very High Conservation Need  
NatureServe G2/S2 - Imperiled.

