

## ***Kootenaia burkei*, a new genus and species of slug from northern Idaho, United States (Gastropoda: Pulmonata: Arionidae)**

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### **Abstract**

A new genus and species of arionid slug, *Kootenaia burkei* n. gen. et n. sp., are formally described from northern Idaho, United States. This taxonomic decision is based on comparative anatomical and molecular data involving representatives of a total of ten species and three additional genera (*Hemphillia*, *Prophysaon*, and *Zacoleus*) of the family Arionidae.

The anatomical analyses show that the new genus is characterized by a major autapomorphy, the complete absence of an epiphallus, which is found in all other arionids. The molecular analyses using two mitochondrial genes and the anatomical data produce congruent topologies. Overall, there is a high degree of concordance between the anatomical and molecular datasets.

**Key words:** Gastropoda, Arionidae, *Kootenaia burkei*, Pacific Northwest, Idaho, anatomy, mtDNA, phylogenetic inference

### **Introduction**

In the course of surveying for terrestrial gastropods in northern Idaho, we encountered a slug taxon of the family Arionidae (as defined by Pilsbry 1948 and Roth and Sadeghian 2003) that could not be assigned to a particular species. During subsequent surveys, we found this species at four additional localities in an adjacent watershed. Body form, coloration, and markings of this slug roughly resembled those of the species *Prophysaon coeruleum* Cockerell, 1890. However, a preliminary anatomical analysis revealed considerable differences not only from *P. coeruleum* but also from all other known arionid taxa. Two major anatomical differences include the lack of a line of abscission on the tail, which is