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The milliped genus *Tidesmus* Chamberlin, 1943 (Polydesmida: Macrosternodesmidae)

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Abstract

The family Macrosternodesmidae is redefined and recorded from western North America. Four small-bodied species in Arizona and California, USA, and Baja California Norté, Mexico, are assigned to *Tidesmus* Chamberlin 1943; *Phreatodesmus* and *Oodedesmus*, both authored by Loomis, 1960, are placed in synonymy. *Phreatodesmus torreyanus* Loomis, 1960 and *O. variabilis* Loomis, 1960, are transferred into *Tidesmus* as valid species; *P. cooki* Loomis, 1960, is a synonym of *T. episcopus* Chamberlin, 1943, the type species, and *P. dentatus* Loomis, 1960, is a synonym of *P. torreyanus*. *Brachydesmus hastingsus* Chamberlin, 1941, also is referable to *Tidesmus*; a topotypical male is needed to establish its identity in the absence of authentic type specimens. *Tidesmus hubbsi* Chamberlin, 1943, based on unidentifiable females, is geographically segregated and incompatible with the otherwise coherent generic distribution. A topotypical male is also necessary to determine its identity; for now, we remove *hubbsi* from *Tidesmus* and leave it unassigned.

Key words: Macrosternodesmidae, Nearctodesmidae, *Tidesmus*, *Oodedesmus*, *Phreatodesmus*, California, Arizona, Baja California Norté

Introduction

Because they lack the functional desiccation barrier of an external waxy cuticle, millipeds primarily inhabit moist environments. Diversity diminishes as habitats become drier, but a few milliped species thrive in deserts. The southwestern United States (US) and northwestern Mexico harbor a surprising diversity of diplopods in, primarily, three families—Spirostreptidae (Spirostreptida), Atopetholidae (Spirobolida), and Schizopetalidae (Callipodida)—all of which have received initial alpha-taxonomic treatments (Hoffman & Orcutt 1960, Causey 1975, Shelley 1996*a*). Herein and in planned future contributions, we address a fourth component of the North American desert milliped fauna, the minute representatives of the order Polydesmida that have been labeled "micro-nearctodesmids" (Shelley 1994, Shelley & Shear 2006) and formally placed in the families Polydesmidae (Chamberlin 1943, Chamberlin & Hoffman 1958), Vanhoeffeniidae (Loomis 1960), Fuhrmannodesmidae (Hoffman 1999; Golovatch 1994), and "Trichopolydesmoidea of uncertain family position" (Hoffman 1980). They are active primarily in cooler seasons of the year in summit forests on inselberg mountains or in close proximity to springs and other water sources.

Tidesmus Chamberlin 1943 was proposed in the Polydesmidae (Polydesmida) to accommodate two new species in the western US that Shear (1969) thought were not congeneric and possibly not even confamilial: *T. episcopus*, the type species, represented by males and females from Los Angeles, and *T. hubbsi*, based solely on females from an unnamed cave in Cave Valley, Lincoln Co., Nevada. Both were cited in Chamberlin and

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