



Cave millipeds of the United States. VI. *Sequoiadesmus krejcae*, n. gen., n. sp., from Sequoia and Kings Canyon National Parks, California, USA (Diplopoda, Polydesmida, Polydesmidea, Macrosternodesmidae).

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Abstract

Sequoiadesmus krejcae, n. gen., n. sp., a minute, depigmented polydesmidan milliped, is described from caves in Sequoia and Kings Canyon National Parks, Tulare County, California. It is provisionally assigned to the Macrosternodesmidae pending further research on representatives of the polydesmidean superfamilies Polydesmoidea and Trichopolydesmoidea in the western United States. Attributes of Macrosternodesmidae, Nearctodesmidae (Trichopolydesmoidea) and Polydesmidae (Polydesmoidea) are compared and contrasted.

Key words: Trichopolydesmoidea, Polydesmoidea, Macrosternodesmidae, Polydesmidae, Sequoia & Kings Canyon National Parks

Introduction

The composition of the milliped family Polydesmidae (Polydesmida: Polydesmidea: Polydesmoidea) in North America was reviewed by Shelley (2003a), who noted that six genera and 15 species occur west of the Continental Divide. He particularly referenced "micropolydesmids," species less than 6 mm long that typically inhabit soil and litter and are active primarily in cool weather seasons of the year; they are strikingly diverse, differ anatomically from the larger-bodied polydesmids of the Palearctic and eastern Nearctic regions, and exhibit gonopodal patterns that are diagnostic for suprageneric as well as generic taxa. Hoffman (1975, 1980, 1999) noted that the automatic placement of small-bodied polydesmideans in the nominate family was not always supported by the basic gonopodal architecture, and he assigned *Chaetaspis* Bollman, 1887, occurring from the Ozark and Ouachita Plateau Physiographic Provinces of Arkansas and Missouri eastward, to the otherwise European family Macrosternodesmidae Brölemann 1916. Simonsen (1990) and Shelley (1994) noted the similar ground plans of macrosternodesmid and nearctodesmid gonopods, the latter being the dominant polydesmidean family along the Pacific Coast in northwestern North America. Shelley (1993) examined *Harpogonopus confluentus* Loomis, 1960, originally assigned to the Polydesmidae (Loomis 1960), and while uncertain as to its familial position, concluded that it belonged to the superfamily Trichopolydesmoidea, containing the Fuhrmannodesmidae Brölemann, 1916, which is absent from the United States (US), Macrosternodesmidae, and Nearctodesmidae Chamberlin & Hoffman, 1950 (Shelley 2003b). Subsequently, he (Shelley 1994) referred *Harpogonopus* to the Nearctodesmidae as potentially a separate subfamily from the genera in the Pacific Northwest. We believe some small-bodied polydesmideans in the western US that represent undiagnosed genera actually constitute "micronearctodesmids" (Shelley & Shear 2006), and we recently diag-