

The milliped family Trichopetalidae, Part 1: Introduction and Genera *Trigenotyla* Causey, *Nannopetalum* n. gen., and *Causeyella* n. gen. (Diplopoda: Chordeumatida, Cleidogonoidea)

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Abstract

Introductory materials for a revision of the milliped family Trichopetalidae are presented, and the species of three of the five genera are described (*Nannopetalum* n. gen., *Trigenotyla* Causey, 1951, *Causeyella*, n. gen.). *Nannopetalum* is related to *Trichopetalum*, and includes three new species from the Appalachian piedmont: *N. pattersonorum* (Virginia), *N. vesperilio* (North Carolina), and *N. fontis* (Alabama). *Trigenotyla* Causey includes four species: *T. parca* Causey (Arkansas), *T. vaga* Causey (Oklahoma), *T. blacki* n. sp. (Oklahoma), and *T. seminole* n. sp. (Oklahoma). *Causeyella* n. gen. is based on *Scoterpes dendropus* Loomis (Missouri and Arkansas), and also contains two new species: *C. causeyae* n. sp. (Arkansas) and *C. youngsteatorum* n. sp. (Arkansas). *Causeyella* and *Trigenotyla* are closely related.

Key Words: Milliped, Diplopoda, Chordeumatida, Cleidogonoidea, Trichopetalidae, *Trigenotyla*, *Causeyella*, *Nannopetalum*, *Trichopetalum*, *Scoterpes*, *Zygonopus*, *Mexiterpes*, taxonomy, North America, troglobionts

Introduction

The millipeds of the chordeumatidan family Trichopetalidae Verhoeff, 1914, range in size from small to minute (close to the apparent size minimum for chilognath millipeds), are found in soil and litter or as obligate cave inhabitants, and are for the most part winter-active. Given these characteristics, it is not surprising that a revision of the family has never been attempted, that accurate illustrations of many of the described species have never been published, and that a substantial portion of the species in the family have not been named or described. Of the major chordeumatidan families of North America, only the Trichopetalidae have never been given a first revision. Despite the lack of fundamental knowledge of the diversity, classification and phylogeny of the trichopetalids, these