



Cave millipeds of the United States. VII. New species and records of the genus *Pseudotremia* Cope. I. Species from West Virginia, USA (Diplopoda, Chordeumatida, Cleidogonidae)

WILLIAM A. SHEAR

Department of Biology, Hampden-Sydney College, Hampden-Sydney, Virginia 23943 USA. E-mail: wshear@hsc.edu

Abstract

The milliped genus *Pseudotremia* as it occurs in West Virginia, USA, is reviewed, with new records, mostly from caves. Four new species, *Pseudotremia handi*, *P. kerboi*, *P. fongi* and *P. schneiderae* are described, for a total known West Virginia fauna of 11 species, though additional species are predicted to occur. *Pseudotremia* species could be useful model organisms for the study of speciation and phylogeography in cave-dwelling animals.

Key words: Troglobionts, speleobiology, caves, West Virginia, *Pseudotremia*, Cleidogonidae

Introduction

The milliped genus *Pseudotremia* Cope 1869 is the second largest genus in the milliped family Cleidogonidae, and its members are among the most commonly encountered invertebrates in limestone caves in the Appalachian Mountains and Cumberland Plateau. *Pseudotremia* also includes some of the largest known species of chordeumatidan millipeds, ranging in length up to 36 mm, and most of the species are also unusual in the prominent, angular shoulders and rough sculpture of the metatergites.

Pseudotremia was first revised by me in 1972, a work in which I added 22 new species to the genus (Shear 1972). Relatively little taxonomic work has been done on *Pseudotremia* subsequently. Hoffman (1981) synonymized *P. cottus* Shear 1972 with *P. fracta* Chamberlin 1951, and described three subspecies. New species from Indiana and Tennessee, USA, have been added by Hoffman and Lewis (1997) and by Lewis (2000, 2003, 2005), so that at present the total number of described species in the genus stands at 47, making *Pseudotremia* one of the most speciose milliped genera in North America. Shear, Lewis & Farfan (2007) extended the range of the genus north of the Ohio River in Ohio and Illinois.

The genus ranges from outlying northerly stations in northeastern West Virginia, southern Ohio, southern Indiana and Illinois, through southwestern Virginia, far western North Carolina, eastern Kentucky and Tennessee, to northwestern Georgia and northern Alabama (see map in Shear, Lewis & Farfan 2007). The core of the range, where the greatest number of species are to be found, lies in southwestern Virginia and eastern Tennessee. The most southern record is near Birmingham, Alabama, and the most western an isolated occurrence northwest of the Ohio River in southern Illinois. The farthest northern and eastern records are in Pendleton and Randolph Counties, West Virginia. That the genus once ranged farther north is attested to by the discovery of fossil specimens in a cave in Maryland (Shear, Lewis & Farfan 2007). Just north of Pendleton Co., Tucker and Grant Counties, West Virginia, are rich in caves but so far no *Pseudotremia* have been collected, though the trichopetalid troglobiotic milliped genus *Zygonopus* is well-represented. Further north, in Berkeley Co., no trogliphilic or troglobiotic millipeds have as yet been reported (Fong *et al.* 2007)