

A new genus of burrowing and cave-dwelling millipedes (Diplopoda: Polydesmida: Dalodesmidae) from Tasmania, Australia

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Abstract

Atalopharetra johnsi n. gen., n. sp. and *A. bashfordi* n. sp. are forest-dwelling, burrowing millipedes with overlapping distributions in southern and southwestern Tasmania. *A. clarkei* n. sp. and *A. eberhardi* n. sp. are troglomorphic, cavernicolous species from limestone karst near Ida Bay and Precipitous Bluff, respectively, within the ranges of *A. bashfordi* and *A. johnsi*.

Key words: Diplopoda, Polydesmida, Dalodesmidae, Tasmania, Australia, cave, troglomorphy

Introduction

A number of millipede species have previously been reported as accidentals in caves in Australia (e.g., Mesibov 2002, 2004b; Shear 1992). To date, only *Speleostrophus nesiotus* Hoffman, 1994 (Spirobolida: Pachybolidae) from Barrow Island, Western Australia (Hoffman 1994) and four species of *Stygiochiropus* Humphreys & Shear, 1993 (Polydesmida: Paradoxosomatidae) from Cape Range, Western Australia (Humphreys & Shear 1993; Shear & Humphreys 1996) have been described as cave-adapted, i.e. as having troglomorphic features.

In this paper I describe two surface-dwelling and two troglomorphic cave-dwelling millipedes from Tasmania and place them in the new genus *Atalopharetra* (Polydesmida: Dalodesmidae). The four species are united by the structure of the gonopods, in which the solenomere is partly contained within a distal “hood” formed by curved laminar processes. A similar hood is found in *Bromodesmus* Mesibov, 2004, but the solenomere in *Bromodesmus* is long and needle-like, while in *Atalopharetra* it is stout and blunt. The surface-dwelling species are well-pigmented burrowers with greatly reduced paranota. The cave-dwellers have well-developed paranota, longer segments, thinner legs, fewer or no sphaerotrichomes and little or no pigmentation.