

## A new genus and four new species of millipedes from Tasmania, Australia (Diplopoda: Polydesmida: Dalodesmidae), with notes on male leg setae in some Tasmanian dalodesmids

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### Abstract

*Bromodesmus catrionae* n. gen., n. sp. (type species), *B. militaris* n. sp., *B. riparius* n. sp. and *B. rufus* n. sp. are described. The new genus is characterized by greatly reduced paranota and a gonopod telopodite expanded at the distal end into a posteriorly concave ‘hood’ fringed with teeth; the ‘hood’ partly protects a long, curved, acutely pointed solenomerite. Male leg setation in the type species of six Tasmanian dalodesmid genera is briefly discussed and illustrated with scanning electron micrographs. The sphaerotrichome shaft is sharply pointed in *Atrophotergum*; gently tapered in *Dasystigma*, *Lissodesmus* and *Tasmanodesmus*; expanded at the tip in *Bromodesmus*; and entirely absent in *Gasterogramma*. Tips of the setae forming the dense ventral ‘brush’ on male podomeres are gently tapered in *Dasystigma* and *Lissodesmus*, truncated in *Gasterogramma*, expanded in *Bromodesmus* and forked in *Tasmanodesmus*.

**Key words:** Diplopoda, Polydesmida, Dalodesmidae, *Bromodesmus*, Tasmania, Australia, biogeography, setae

### Introduction

The four species grouped here in *Bromodesmus* n. gen. share an unusual gonopod structure but vary in size (Fig. 2), habits and paranotal development. *B. catrionae* n. sp., *B. militaris* n. sp. and *B. riparius* n. sp. are soil-burrowing forms only occasionally seen above the ground surface, while *B. rufus* n. sp. can be found in leaf and woody litter. In all four species the paranota are reduced to lateral swellings, but the degree of reduction varies: *B. rufus* n. sp. has small but noticeable paranota, *B. riparius* n. sp. is nearly cylindrical and the remaining two species show intermediate paranotal development.

*Bromodesmus* n. gen. is so named (from the Greek *bromos*, ‘stench’) for the acrid and unpleasant odor of a highly volatile component or components in the defensive secretion