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Austrodontella monticola sp. nov., a new species of Collembola from montane New Zealand

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Abstract

Collembola were collected from soil in the alpine belt (1600–1900 m a.s.l.) of the Southern Alps of New Zealand. A list of species found is provided. *Austrodontella monticola* **sp. nov**., the third species of a Odontellidae genus with a southern distribution is described. The other two species in the genus occur in southern Australia and in the Indian Ocean sector of the Subantarctic respectively. Notes on *A. trispina* (Womersley, 1935), the type species of the genus, are provided.

Key words: high alpine zone, Central Otago, South Island, springtail, biodiversity

Introduction

Our recent study of soil microarthropod communities in the high alpine zone of several mountain ranges in New Zealand (Central Otago, South Island) revealed at least 50 collembolan species (see the Appendix), many of which have not been previously recorded in the country (Macfarlane *et al.* 2011). We describe here one of these species belonging to the genus *Austrodontella* Ellis et Bellinger, 1973, a genus of Odontellidae known only from two described species occurring in the Southern Hemisphere. The type species of the genus, *A. trispina* (Womersley, 1935) was found in the southern part of Australia (Myponga, Fleurieu Peninsula, South Australia) and originally described as a member of the genus *Odontella* Schäffer, 1897. Stach (1949) erected a new monotypic genus *Triodontella* for this Australian species which was replaced by *Austrodontella* because of homonymy (Ellis & Bellinger 1973). The description of the second known species of this *abundantly distinct*[1] genus (*A. cassagnaui* Deharveng, 1981) was based on material from Crozet Archipelago in the south-western Indian Ocean. The new congener in New Zealand provides evidence of faunistic connections between New Zealand, southern Australia, and the Indian Ocean sector of the Subantarctic.

Methods

Microarthropods were sampled from 160 soil cores collected in February 2014 in the high alpine zone (1600–1900 m a.s.l.) of the Old Man's Range, Pisa Range and The Remarkables in the Southern Alps in New Zealand (Central Otago, South Island). At each locality, samples were collected from *Dracophyllum* sp. and *Raoulia* sp. cushion fields (22-24 cores), snowbanks (15 cores) and alpine bogs (15 cores) using a 5 x 5 cm stainless steel corer. Samples included the vegetation layer and soil to a depth of five cm. Microarthropods were extracted into 75% ethanol in modified Tullgren/Berlese extractors for a week.

1. A Womersley's original characteristic of the type species of the genus

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