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Two new species of *Austrophthiracarus* (Acari: Oribatida: Phthiracaridae) from New Zealand

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Abstract

The genus *Austrophthiracarus* (Acari: Oribatida: Phthiracaridae) was represented in New Zealand by four species prior to this work. In this paper, two new species of *Austrophthiracarus* are described from the South Island, New Zealand: *Austrophthiracarus cronadun* **sp. nov.** collected near Cronadun, Buller and *Austrophthiracarus tawhai* **sp. nov.** from Catlins State Forest, Otago. A key to all known species of *Austrophthiracarus* in New Zealand is provided.

Key words: Ptyctimous mites, Oribatida, Phthiracaridae, *Austrophthiracarus*, new species, New Zealand

Introduction

Ptyctimous mites, which have the ability to fold the aspidosoma under the opisthosoma, are one of the primitive groups of oribatid mites. They are typical and important representatives of soil mites, including four groups: protoplophorids, mesoplophorids, euphthiracarids and phthiracarids. Before 1989, the fauna of ptyctimous mites in New Zealand was poorly studied, with only four recorded species (Ramsay 1966, Wallwork 1966, Luxton 1985). The total was later increased to 45 species—or over 10-fold increase—by Niedbala (1989, 1993, 1994, 2000, 2006) and Niedbala & Colloff (1997).

This paper concerns the phthiracarid genus *Austrophthiracarus*, which was erected by Balogh and Mahunka (1978) with *A. radiatus* from Queensland as type species. Till the end of 2012, more than 60 species were described or included in this genus (Niedbala 2000, 2011; Subías 2012). Most species of this genus have been found in the Southern Hemisphere, except some individual species with distribution in the Palaearctic Region (Niedbala 2000, 2008, 2011; Kaczmarek & Niedbala 2002). According to Niedbala (2000), the genus *Austrophthiracarus* is characterised as having genital setae arranged in two rows, setae g_6 close to or even above g_4 , at least setae g_6 and g_7 far away from paraxial region, adanal setae far away from paraxial margin, setae d on tibiae IV short, coupled with solenidia. During the first author's visit to Landcare Research in Auckland in April 2012, we identified two new species from New Zealand Arthropod Collection, with both species having character states matching those defined for the genus *Austrophthiracarus* by Niedbala (2000). The purpose of this paper is to give detailed descriptions of the two new species and to provide a key to facilitate identification of all known species of *Austrophthiracarus* in New Zealand.

Methods

Measurements and descriptions are based on specimens mounted in temporary cavity slides that were studied using a light microscope equipped with a drawing attachment.

Terminology generally follows Niedbala (1992, 2000). The unit of measurement is micrometre (μm).