

Three new species of the genus *Notophthiracarus* from New Zealand (Acari: Oribatida: Phthiracaridae)

DONG LIU¹ & ZHI-QIANG ZHANG^{2, 3*}

¹ Key Laboratory of Wetland Ecology and Environment, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun 130102, P. R. China. E-mail: liudong@iga.ac.cn

² Landcare Research, 231 Morrin Road, Auckland, New Zealand.

³ Centre for Biodiversity & Biosecurity, School of Biological Sciences, University of Auckland, Auckland, New Zealand

* Corresponding author. E-mail: zhangz@landcareresearch.co.nz

Abstract

Three New Zealand species of *Notophthiracarus* (Oribatida: Phthiracaridae) are described as new to science: *Notophthiracarus motumuka* **sp. nov.** from the Lady Alice Island, Hen & Chickens Islands, *Notophthiracarus tamaki* **sp. nov.** from the Tamaki Estuary Tohuna Torea, Auckland, and *Notophthiracarus rimi* **sp. nov.** from the Red Island, Mercury Islands. All holotype specimens are deposited at New Zealand Arthropod Collection, Landcare Research and some paratypes are also deposited in Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences.

Key words: Soil mites, Oribatida, Phthiracaridae, *Notophthiracarus*, new species, New Zealand

Introduction

The genus *Notophthiracarus* Ramsay, 1966 is one of the largest genera within the family Phthiracaridae and is widespread in the regions of the world except Nearctic Region (Subías 2014, Niedbała 2002). It is mainly distinguished from others by genital setae arranged in a single row (distance between g_6 and g_5 longer than that between g_5 and g_4 or g_3 and g_4), two setae (an_1 and an_2) near the paraxial margin of ano-adanal plate, and seta d on tibiae IV short and coupled with solenidions (Niedbała 1994). According to Niedbała (2012) and data summarized by various authors, 43% known phthiracarid mites (83 species) belong to the genus *Notophthiracarus* in Australian Region. *Notophthiracarus* is also the most diverse group of phthiracarid species in New Zealand, representing 24 species (Liu & Zhang, 2013). In this paper we report three additional new species of *Notophthiracarus* from New Zealand.

Material and 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 Niedbała (1992, 2000). The unit of measurement is micrometre (μm).

All holotype specimens are deposited in the New Zealand Arthropod Collection, Landcare Research, Auckland (NZAC). Paratype specimens are split between NZAC and Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences, Changchun (NIGA).