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Water mite species of the genus *Hydrodroma* Koch (Acari: Hydrachnidia, Hydrodromidae) from Australasia. Part I

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Abstract

Three new water mite species of the genus *Hydrodroma* Koch (Acari: Hydrachnidia, Hydrodromidae), characterized by more than one swimming setae on II-L-5, are reported from Australia and New Caledonia: *Hydrodroma kununurra* **sp. nov.**, *H. australis* **sp. nov.** and *H. kakadu* **sp. nov.**

Key words: Acari, water mites, *Hydrodroma*, new species, Australia, New Caledonia

Introduction

Hydrodromidae (K.Viets) is a cosmopolitic family of water mites. However, the taxonomy and systematics of the Hydrodromidae is difficult (Wiles 1985). According to Wiles (1985, 1986), adult and nymphal stages are characterized primarily by the number and distribution of swimming setae, body colour and morphology and chaetotaxy of the genital field.

At present, two species of the genus *Hydrodroma* Koch have been reported from Australia (Lundblad 1947, Szalay 1953, Harvey 1998): *H. despiciens* (Müller) and *H. monticola* (Piersig). In the past, *Hydrodroma despiciens*, the most widespread member of the genus, was considered to be cosmopolitan. However, Cook (1986) discussed the identity of *H. despiciens* and suggested that it was more likely that morphologically similar but distinct species were present. Cook (1986) left his *Hydrodroma* specimens from Australia unidentified. He separated them in two groups (A and B), based on the number of genital acetabula, the number of swimming setae on IV-L-4 and the length of the first leg segment. Unfortunately, he didn't include the number of swimming setae on the second leg in his analysis. Cook (1986) suggested that the larval stage will best indicate species differences within the genus.

During recent surveys of the water mite fauna of Australia, many specimens of the water mite genus *Hydrodroma* Koch were collected. This paper deals with the species that are characterized with more than two swimming setae on II-L-5. The Australian material of this group contained three species new to science, which will be described in this paper.

Material and methods

Water mites were collected by hand netting, sorted in the field from living material, preserved in Koenike's fluid and dissected as described by Gerecke (1991). Holotypes and a part of the paratypes will be deposited in

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