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A new species of *Hydrogamasellus* (Acari: Mesostigmata: Ologamasidae) from Brazil, with a key to the world species of the genus

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Abstract

Hydrogamasellus alagoensis n. sp. is described based on the morphology of adult females and males collected from litter in the State of Alagoas, Brazil. Six new combinations are proposed, namely *Acugamasus avium* (Karg, 1976) n. comb., *Ologamasus lanceolatus* (Karg, 1976) n. comb., *Ologamasus microcrinis* (Karg, 1979) n. comb., *Ologamasus testudinis* (Karg, 1976) n. comb., *Rykellus longopilus* (Karg, 1976) n. comb. and *Rykellus ubatubaensis* (Hirschmann, 1966) n. comb., and a key for the separation of females of the eighteen recognizable world *Hydrogamasellus* species is provided.

Key words: Rhodacaroidea, soil mites, taxonomy

Introduction

The family Ologamasidae Ryke (Rhodacaroidea) is a large and widely-distributed group of mites, with about 452 species that are found in soil, humus and compost world-wide (Lindquist *et al.*, 2009; Beaulieu *et al.*, 2011). The Ologamasidae are also among the most common edaphic Mesostigmata in southeastern Brazil. Thirteen species were described in the last five years from this country, all from the southeastern state of São Paulo (Silva *et al.*, 2007; Karg & Schorlemmer, 2009, 2011; Castilho *et al.* 2010; Castilho *et al.* 2012). However, nothing has been published about these mites from other parts of Brazil.

Hydrogamasellus Hirschmann is an ologamasid genus containing 20 species, about 85% of which described from South America. This genus is morphologically very similar to *Athiasella* Lee, *Ologamasus* Berlese and *Rykellus* Lee, making it difficult to place some species in the correct genera. The objective of this paper is to describe a new species of *Hydrogamasellus* from the northeastern state of Alagoas, Brazil, as well as to provide complementary information about this genus and a key to the world species of *Hydrogamasellus*.

Material and methods

Soil and litter samples were collected in different parts of Alagoas state, and taken to the laboratory of the Federal University of Alagoas (Campus Arapiraca) where mites were extracted using a Berlese funnel, mounted in Hoyer's medium and sorted into families. Ologamasids were separated into morphospecies and examined under a phase contrast microscope. Taxonomically relevant structures of these mites were illustrated with the use of a camera lucida and measured with the use of a graded ocular. In the following description, setal nomenclature is based on Lindquist & Evans (1965), as adapted by Silva *et al.* (2007) and Castilho *et al.* (2010) for the ologamasids, and leg chaetotaxy is based on Evans (1963). For each structure, the measurement of each structure and the respective range (for variable measurements) is given in micrometres.