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A new species of *Messoracarus* (Acari: Mesostigmata: Aenictequoidea: Messoracaridae) from Laos

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Abstract

A new species of the ant-associated family Messoracaridae, *Messoracarus schwendingeri* sp. nov., is described on the basis of one female and two males from Laos. A short review of the family is also presented, and a key for identification of its our species.

Key words: Antennophorina, Trigynaspida, new species, taxonomy, Southeast Asia

Introduction

More than a century of studies on myrmecophilous mites has resulted in the discovery of several interesting and extreme species (Berlese 1903; Lindquist *et al.* 2009). One such group of myrmecophilous mites is the Aenictequoidea, a superfamily comprising four small but highly unusual families of mites, namely the Aenictequidae (1 species), Euphysalozzerconidae (1 species), Messoracaridae (3 species) and Ptochacaridae (3 species) (Kethley 1977; Kim 2004, 2008).

Messoracarid mites are immediately recognisable by the female's extraordinarily large rectangular latigynal shields that extend from between coxae II–III to the middle of the opisthosoma. Similarly, the male's large horseshoe-shaped genital shield is unique. The genus *Messoracarus* was established by Silvestri (1912) for an unusual species (*Messoracarus mirandus* Silvestri, 1912) collected from Sicily, in a nest of *Messor barbarus* L. v. *nigrae* Andr. Later, Berlese (1916) described the second species of this genus, *Messoracarus pendulipes* Berlese, 1916, from East Africa, with the description of the subgenus *Leptantennus* Berlese, 1916. The host for this species is unknown. In the same year, Banks (1916) presented a new species from the genus *Antennophorus* (*A. emarginatus* Banks, 1916) collected from *Pachycondyla lutea* (Mayr) in Australia. *Antennophorus emarginatus* was later transferred to the genus *Messoracarus* by Kethley (1977). Kethley (1977) also elevated the subgenus *Leptantennus* to generic level, and established the family Messoracaridae for these two genera. Previously, these mites had been considered members of the Antennophoridae, another myrmecophilous family of trigynaspid mites that is placed in its own superfamily (Kethley 1977; Kim 2004).

During the study of unsorted Southeast Asian samples at the Natural History Museum Geneva, Switzerland, the senior author found three specimens of an unusual mite, belonging to the genus *Messoracarus*, representing the fourth species of the family Messoracaridae.

Materials and Methods

One female specimen and one male specimen were cleared in lactic acid and mounted in glycerin for observation; these were later transferred to 75% ethanol for storage. One male was dissected and mounted in Hoyer's medium. Preparations were examined with a light microscope (ODS: Nikon Eclipse 80i with DIC); drawings were made with the aid of a drawing tube. Nomenclature for leg setae follows Evans (1963). Our interpretation of the sternal shield follows that of Kim (2004). The types are deposited in the Natural History Museum, Geneva, Switzerland (NHMG) and Queensland Museum, South Brisbane, Australia (QM).