



Article

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Two new species of the genus *Papillacarus* (Acari: Oribatida: Lohmanniidae) from caves of Southern Vietnam

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Abstract

An annotated checklist of oribatid mite taxa from three caves of Dong Nai Biosphere Reserve (Southern Vietnam) is provided. We recorded 33 species, 29 genera and 16 families, of which 10 species, five genera and two families were found in Vietnam for the first time. Three species, *Malaconothrus variosetosus*, *Discoppia cylindrica* and *Machuella lineata*, are for the first time recorded from the Oriental region. Two new cave species of the genus *Papillacarus* are described. *Papillacarus indistinctus* **sp. nov.** is morphologically most similar to *Papillacarus polygonatus* Ermilov & Anichkin, however, it differs from the latter by the types of neutrichal setae, length of notogastral setae, morphology of some genital setae, epimeral setal formula, number of subcapitular setae *m* and palptarsal setae. *P. polysetosus* **sp. nov.** is morphologically most similar to *Papillacarus jinggangshanensis* Chen, Yang & Liang and *P. konglinensis* Chen & Yang, but differs from both by body size, body surface, length of certain notogastral setae, number of subcapitular setae *m*, and epimeral setal formula. An identification key to the Vietnamese species of *Papillacarus* is presented.

Key words: oribatid mites, fauna, checklist, Lohmanniidae, *Papillacarus*, new species, new record, key, Dong Nai Biosphere Reserve, cave, Vietnam

Introduction

This paper is part of our continuing studies on South Vietnamese oribatid mite fauna (Ermilov & Anichkin 2010, 2011a–j, 2012a–c; Ermilov 2011; Ermilov *et al.* 2011, 2012). It includes data on oribatids found in caves.

The oribatid mites of caves are poorly known worldwide (for example: Krivolutsky & Karppinen 2004; Wauthy & Ducarme 2006; Vasiliu & Ivan 2011), and they have not been studied in Vietnam until now. The first goal of our paper is to present an annotated checklist of oribatid mites collected in three caves of Southern Vietnam. In the course of our studies of oribatid material from caves, we found two new species of the genus *Papillacarus* Kunst, 1959. The second goal of our paper is to describe these species as *Papillacarus indistinctus* **sp. nov.** and *P. polysetosus* **sp. nov.** The genus *Papillacarus* of the family Lohmanniidae was proposed by Kunst (1959) with *Lohmannia murcioides aciculata* Berlese, 1904 as type species. It comprises 30 species with a pantropical and subtropical distribution (Subías 2004, online version 2012). The main morphological characters of *Papillacarus* were summarized by Balogh (1961) and Balogh & Balogh (1992).

So far, six species of the genus *Papillacarus* have been recorded in Vietnam (Golosova 1983; Krivolutsky *et al.* 1997; Vu & Nguyen 2000; Ermilov & Anichkin 2011f; Ermilov *et al.* 2011, 2012). These are: *Papillacarus aciculatus* (Berlese, 1904) (Central and southern Palearctic region, and Vietnam), *P. cornutus* Sarkar & Subías, 1984 (India and Vietnam), *P. hirsutus* (Aoki, 1961) (Tropical region and south eastern Palearctic region), *P. polygonatus* Ermilov & Anichkin, 2011(f) (Vietnam), *P. ramosus* Balogh, 1961 (Oriental region), and *P. undirostratus* Aoki, 1965 (Oriental region). The third goal of our paper is to propose an identification key to all known Vietnamese species of *Papillacarus*.