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A new species of *Blattisocius* (Acari: Mesostigmata: Blattisociidae), with a new characterisation of the genus

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Abstract

A new species of *Blattisocius* Keegan, *Blattisocius thaicocofloris* n. sp., is described from Thailand from adult females and males, raising to 18 the number of species known in this genus. This is the first species of this genus described from flowers (of *Cocos nucifera* L.; Arecaceae), although two species, *Blattisocius apis* Basha & Yousef and *Blattisocius apisassociae* Chinniah & Mohanasundaram, were reported in association with honeybees, which could suggest an association with flowers. The new species requires updates to the diagnostic characteristics of the genus and recently published keys for generic identification of blattisociid subfamilies, blattisociine genera and *Blattisocius* species.

Key words: *Blattisocius thaicocofloris*, Blattisociinae, *Cocos nucifera*, Phytoseioidea, taxonomy

Introduction

Surveys have been conducted in coconut plantations to identify promising predatory mites to control the coconut mite, *Aceria guerreronis* Keifer (Acari: Eriophyidae), and the red palm mite, *Raoiella indica* Hirst (Acari: Tenuipalpidae). In a recent study conducted in Thailand, specimens of an undescribed mite species of the family Blattisociidae were found in coconut flowers.

In the key provided by Lindquist *et al.* (2009), this new species is identified as Blattisociidae by the following characteristics: third pair of sternal lyrifissures (*iv3*) indistinguishable (an exception within the Blattisociidae shared with other genera), fixed cheliceral digit with slender *pilus dentilis* and sperm access system of the phytoseiid type.

Females of the new species are most similar to species of *Blattisocius* Keegan, although they seem to differ from all of them in relation to a few characteristics. These differences are considered to refer to intrageneric variations hitherto unknown in *Blattisocius*, and could be related to the different habitat occupied by this in relation to those occupied by other species. The aim of this study was to describe the new species, updating the diagnostic characteristics of the genus and the recently published keys for generic identification of blattisociid subfamilies, blattisociine genera and *Blattisocius* species.

Material and methods

Specimens collected were mounted on microscope slides in Hoyer's medium and observed under a phase contrast microscope (OLYMPUS®, BX41). Measurements were taken with a graded eye-piece, while illustrations were done with a drawing tube connected to the microscope.

The decision about the identity of the genus within Blattisociidae was mainly based on Lindquist & Moraza (2010, 2012) and Moraza & Lindquist (2011). Setal nomenclature follows that of Lindquist & Evans (1965) and Lindquist (1994); identification of pores and lyrifissures follows those of Athias-Henriot (1969) and Krantz & Redmond (1987); leg setal notation follows Evans (1963a).