



A new genus of fungus-inhabiting blattisociid mites (Acari: Mesostigmata: Phytoseioidea) from Middle America, with a key to genera and subgenera of the subfamily Blattisociinae

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Abstract

The genus *Fungiseius* **gen. nov.** is described, based on adults of two newly described species. These rather short-legged mites, with their second pair of legs markedly thickened, have been collected only from bracket fungi. The more generalized form, *F. clavulisetis* **gen. et sp. nov.**, is based on female specimens from Chiapas Province, southern Mexico. The more derivative form, *F. armatus* **gen. et sp. nov.**, is based on females and males from several samples of bracket fungi in lowland tropical rainforest of Costa Rica, where they coexist with a remarkable variety of other blattisociine mites. Notable morphological attributes peculiar to adults of this genus include the dorsal shield having a delineated lateral rim that bears a row of setae of the lateral or marginal series, legs II greatly thickened, with enlarged, claw-like setae on the dorsolateral face of the tarsus, and deep furrows postgenitally on females and postanally on males and females. Comparisons are made with fungus-inhabiting mites of the genus *Hoploseius*, whose adults also have the second pair of legs thickened. A revised key to the world genera and subgenera of the subfamily Blattisociinae is presented; the genus *Orthadenella* Athias-Henriot is excluded, and placed in the ascoid family Melicharidae. The subgenera *Borinquolaelaps* Fox, *Crinidens* Karg, and *Cuspiacus* Christian & Karg, sensu Christian & Karg 2006 are treated as **new synonyms** of the subgenus *Lasi-oseius* Berlese.

Key words: Blattisociidae, Phytoseioidea, fungus mites, *Fungiseius* **n. gen.**, *Hoploseius*, Costa Rica, Mexico

Introduction

This is the third of a series of papers centered on description of new taxa of mites of the superfamilies Ascoidea and Phytoseioidea found to exist in just one small area of lowland tropical rainforest in Costa Rica, and the second of that series to focus on the remarkable diversity of mesostigmatans that coexist in bracket fungi there (Lindquist & Moraza 2008, 2010). In contrast with our recent description of a new genus of unusually long-legged, gracile mites, here we describe one whose adults are short-legged and have legs II remarkably thickened and armed with curved, spine-like tarsal setae. This new genus is also a member of the family Blattisociidae Garman (1948), which was given a revised diagnosis, along with a key to its genera, in our previous paper (Lindquist & Moraza 2010). This paper also includes description of a second form of this genus, based on limited material from bracket fungi from southern Mexico, which is apomorphically so distinct from the Costa Rican form as to warrant future consideration as a separate subgenus.

Material and methods

Mites were collected from funnel extractions of field-collected fungi and preserved in 80% ethanol, with some specimens mounted from ethanol directly into Hoyer's medium on microslides and sealed with Glpt insulating varnish. Morphological observations, measurements, and illustrations were made using compound microscopes