



Redescription of *Lasioseius floridensis* Berlese, 1916 (Acari: Mesostigmata: Blattisociidae), with notes on closely related species

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Abstract

A redescription of *Lasioseius floridensis* Berlese, 1916 is presented based on examination with descriptive notes of primary type material in the Berlese Collection and on a study of specimens collected from gerbera leaves in Mogi das Cruzes, State of Sao Paulo, Brazil representing all postembryonic stages. This species was originally described from Lake City, Florida, USA, where it was collected from moss; it is considered a senior synonym of *Lasioseius arboreus* Chant, 1963 (**new synonymy**) and *Lasioseius fimetorum* Karg, 1971 (**new synonymy**), based on examination of primary type material of the latter two species. Examination of other primary type material also indicated that *Lasioseius sugawarai* Ehara, 1964 is a senior synonym of *Lasioseius tridentatus* Baker, Delfinado & Abbatiello, 1976 (**new synonymy**). Placement of *L. floridensis* among other of the ca 150 species of *Lasioseius*, based on available keys, and the need for more detailed descriptions of species of genera such as *Lasioseius*, confirmed by examination of their primary type material, are discussed.

Key words: Phytoseioidea, Blattisociidae, *Lasioseius*, description, predator, taxonomy

Introduction

Efforts have been dedicated to the search for prospective predatory mites for the control of arthropod pest species in Brazil. Leaves of gerbera (*Gerbera* sp.) infested by the broad mite [*Polyphagotarsonemus latus* (Banks) (Tarsonemidae)] were recently observed in Mogi das Cruzes, State of Sao Paulo, Brazil. A mite species of the genus *Lasioseius* Berlese was found in association with that pest, leading to the initiation of a study to evaluate the possible role of the latter as a predator of the broad mite. *Lasioseius* species have been reported as predators of nematodes (Imbriani & Mankau, 1983) and mites (Tseng, 1984; Zhang & Lin, 1991; Enkegaard & Brodsgaard, 2000; Zhang & Fan, 2010), and as fungivores (Walter & Lindquist, 1989).

Lasioseius is the most speciose genus of Blattisociidae (Christian & Karg, 2006), a family which was formerly treated as a subfamily of Ascidae (Lindquist & Evans, 1965) but is now regarded as a family of the Phytoseioidea (Lindquist *et al.*, 2009). Many species of this genus have been described from the Neotropics (Mexico, Central and South America and the Caribbean region).

The species collected in this study was identified as *Lasioseius floridensis* Berlese, 1916 based mostly on an examination of the primary type material of that species by one of us (EEL). The only published information about the taxonomy of this species refers to the original description, which is too brief, and to details mentioned by Mineiro *et al.* (2009). The objectives of this work are to redescribe *L. floridensis* based on specimens of all postembryonic stages collected in this study, given the scanty morphological information about it in the literature, to facilitate its identification among the many species of *Lasioseius*, and to assimilate any other biological information about it that may be available under other named species.