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Abstract

Until now, the genus Orolaelaps De Leon was known only from the USA. Two new species of this genus, namely Orolaelaps piracicabensis n. sp. and Orolaelaps tupiniquim n. sp., are described from specimens collected in the State of São Paulo, Brazil. Orolaelaps quisqualis De Leon, the type species of the genus, is redescribed and an updated diagnosis of Orolaelaps is provided.

Key words: Ascoidea, taxonomy, fruits, soil

Introduction

The family Melicharidae (Ascoidea) comprises 11 genera, many of which are represented by species collected from sugary substrates and insects (Moraes et al. 2015). The type species of the type genus of this family, Melichares agilis Hering, was described from specimens found on dates, figs. and plums.

The melicharid genus Orolaelaps De Leon was described from specimens of Orolaelaps quisqualis De Leon, also collected from a sugary substrate, decaying pineapple on the ground (De Leon 1963). This is the only species placed in this genus until now. Lindquist & Evans (1965) and Farrier & Hennessey (1993) considered Melichares Hering to be a senior synonymy of Orolaelaps. In this publication we adopted the interpretation of Halliday et al. (1998), considering them to be distinct genera.

Recent examination of decaying fruits of carambola (Averrhoa carambola, Oxalidaceae), a common fruit tree in Brazil, as well as of decaying corn grains and corn cobs (Zea mays, Poaceae) on the ground, led to the discovery of two new species of Orolaelaps. The objectives of this paper are to describe those new species, and to provide a redescription of O. quisqualis and an updated diagnosis of the genus.

Material and methods

Samples of decaying carambola fruits as well as of corn grains and corn cobs were collected and processed in Berlese funnels for mite extraction, in search of mesostigmatid mites in an effort to determine their diversity in southeastern Brazil. These were mounted in Hoyer’s medium and observed under phase and interference contrast microscopes. The melicharid species were identified to genera. The Orolaelaps specimens collected and the holotype of O. quisqualis were morphologically characterised providing the level of details presently considered in the identification of mesostigmatic mites.

Taxonomically relevant structures were illustrated with the help of photos taken with a digital camera connected to the interference contrast microscope and later processed with a digital tablet, using the Adobe Illustrator® program. Measurements were done with the use of a graded ocular. Setal nomenclature for the idiosoma follows that of Lindquist & Evans (1965) and Lindquist (1994). Identification of pores and lyrifissures