Description of a new species of Typhlodromus Scheuten (Acari: Phytoseiidae) from house dust from Rio Grande do Sul, Brazil

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Abstract

Typhlodromus (Anthoseius) sabelisi n. sp., a member of the rhenanus species group, is described from the State of Rio Grande do Sul, in southern Brazil, based on specimens collected from house dust removed from a curtain using a vacuum cleaner. So far, only Typhlodromus (Anthoseius) ornatus (Denmark & Muma, 1973) and T. (A.) transvaalensis (Nesbitt, 1951) have been reported from the State of Rio Grande do Sul. A key to the species of Typhlodromus (Anthoseius) De Leon reported in Brazil is provided.

Key words: dust mite; predatory mite; taxonomy; Typhlodrominae

Introduction

Phytoseiidae is one of the most extensively studied mite families in the world. Phytoseiids are predators of spider mites and other small mites and insects on plants. Some species also feed on nematodes, fungal spores, pollen and exudates from plants (McMurtry & Croft, 1997), but rarely plant tissue (Magalhães & Bakker, 2002; Sengonca et al., 2004). Several species are of great importance in applied biological control of spider mites and thrips in greenhouse crop production (Zhang, 2003) and orchards (Moraes et al., 2004).

Little information is available about this group from the state of Rio Grande do Sul, in southern Brazil. Until now, only Typhlodromus (Anthoseius) ornatus (Denmark & Muma, 1973) and Typhlodromus (Anthoseius) transvaalensis (Nesbitt, 1951) have been reported in from that state (Ferla & Moraes, 2002; Ferla et al., 2007, 2011). Given the importance of this state in agricultural production in Brazil, an effort has recently been dedicated to determining the phytoseiid species on the main crops and on wild plants growing around agricultural areas of the state. Four species have been recently described from that state (Ferla & Silva, 2008, 2009, 2011; Ferla et al., 2010). The aim of this paper is to present the description of a new phytoseiid species of the Typhlodromus (Anthoseius) rhenanus species group of Chant & McMurtry (1994) and to provide a key for the separation of the species of Typhlodromus (Anthoseius) reported from Brazil.

Material and methods

Dust samples were taken from curtains of a home surrounded by natural vegetation at Encantado, State of Rio Grande do Sul, using a commercial vacuum cleaner. The dust was examined under a stereomicroscope and mites were collected and mounted in Hoyer's medium for identification under a phase contrast microscope. Illustrations of the specimens collected were done with a Camera Lucida and the software Corel Draw X5.

Setal nomenclature is that of Lindquist & Evans (1965) as applied to the Phytoseiidae by Rowell et al. (1978) and Chant & Yoshida-Shaul (1992), for the dorsal and ventral surfaces of the idiosoma, respectively. Average measurements and the corresponding ranges are given in micrometres.