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First new species of the *Phytoseius horridus* group (Acari: Phytoseiidae) described from Brazil, with a key to the Brazilian species of *Phytoseius*

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Abstract

Phytoseius litoralis n. sp., a member of the *horridus* species group, is described from the State of Rio Grande do Sul, in southern Brazil, based on specimens collected on *Psidium guajava*, *Solanum concinnum* and *Cecropia pachystachya*. This is the first species of the *horridus* group described from Brazil. A key to species of *Phytoseius* reported from Brazil is provided.

Key words: Natural environment, Phytoseiinae, predatory mite, State of Rio Grande do Sul, taxonomy

Introduction

Phytoseiidae is one of the most extensively studied mite families in the world. They are mostly predators of spider mites, other small mites, insects, and nematodes, while some species feed on 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, thrips in greenhouse crop production (Zhang 2003) and orchards (Moraes *et al.* 2004).

Twelve species of *Phytoseius* have been reported from Brazil (*P. averrhoae* De Leon 1965a, *P. guianensis* De Leon 1965a, *P. intermedius* Evans & MacFarlane 1962, *P. jatoba* Demite, Lofego & Feres 2008, *P. jurute* Demite, Lofego & Feres 2008, *P. kaapre* Demite, Lofego & Feres 2008, *P. latinus* El-Banhawy 1984, *P. marumbus* El-Banhawy 1984, *P. mumai* Ehara 1966, *P. nahuatlensis* De Leon 1959, *P. pernambucanus* Moraes & McMurtry 1983, and *P. woodburyi* De Leon 1965b). In the State of Rio Grande do Sul only *P. averrhoae* and *P. guianensis* have been reported (Ferla & Moraes 1998, 2002).

The aim of this paper is to describe a new species in the genus *Phytoseius horridus* group Denmark and to provide a key of *Phytoseius* species reported from Brazil.

Material and methods

Mites were collected from leaves of the plants *Psidium guajava* L. (Myrtaceae), *Solanum concinnum* Sendtn. (Solanaceae) and *Cecropia pachystachya* Trécul (Urticaceae), observed under a binocular microscope and mounted in Hoyer's medium on glass slides. They were dried on a slide warming plate, ringed with nail polish and their morphological details were studied under a phase contrast microscope. Drawings were made using a camera lucida apparatus and later the drawings were finalised using the computer program Corel Draw X5[®].

The classification system used is that of Chant & McMurtry (2007). The setal nomenclature is that of Rowell *et al.* (1978) and Chant & Yoshida-Shaul (1992a) for the dorsal and ventral surfaces of the idiosoma, respectively. The measurements of the holotype are shown in bold type followed by the mean and range in parentheses.