



## Three new species of *Phytoseius* Ribaga (Acari: Phytoseiidae), and a new record from Brazil

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### Abstract

Three new species of phytoseiid mites (Acari: Mesostigmata), *Phytoseius jurute* **sp. nov.**, *Phytoseius jatoba* **sp. nov.** and *Phytoseius kaapre* **sp. nov.**, are described from native plants in northwestern São Paulo State, Brazil. In addition, *Phytoseius intermedius* Evans & MacFarlane, previously known only from Asia and Africa, is recorded for the first time in Brazil. All four species were found only on plant foliage with leaf trichomes.

**Key words:** Predatory mites, Phytoseiinae, *plumifer* species group, *horridus* species group, Brazil

### Introduction

The genus *Phytoseius* Ribaga includes 185 species (Chant & McMurtry 2007), characterized within the Phytoseiinae Berlese by the retention of both setae z3 and s6 (Chant & McMurtry 1994, 2007). Chant & McMurtry (1994) divided the genus into three species groups distinguished by the presence/absence of setae J2 and R1: the *horridus* species group (without R1 and J2), the *plumifer* species group (with R1 and J2) and the *purseglovei* species group (with R1 only). Only ten species of the genus *Phytoseius* have been recorded from Brazil, nine in the *plumifer* group, and one in the *horridus* group (Moraes *et al.* 2004; Rosa *et al.* 2005). Most of those species, except for *P. woodburyi* De Leon, are known only from the Neotropical Region. In this paper, three new species of the *plumifer* group, *P. jatoba* **sp. nov.**, *P. jurute* **sp. nov.** and *P. kaapre* **sp. nov.**, are described, and one species of the *horridus* group, *P. intermedius* Evans & MacFarlane, is recorded for the first time in Brazil. All the species were collected from semi-deciduous forest fragments as part of a project to survey the fauna and flora of 18 remnant forest fragments in northwestern São Paulo State, as a basis for biodiversity conservation studies.

### Materials and methods

Mites were collected by examination of the leaves of host plants under a dissecting microscope. They were slide mounted in Hoyer's medium, ringed with fingernail polish, dried on a hot plate and examined under a phase-contrast microscope. Illustrations were made using a drawing tube. All measurements are given in micrometres (µm); each measurement corresponds to the mean for the stated number of individuals, followed (in parentheses) by the respective range, if the measurement is variable. The holotype measurements are