

Phytoseiid mites on grasses in Brazil (Acari: Phytoseiidae)

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Abstract

Surveys were conducted in 16 sites in the State of São Paulo to evaluate the phytoseid mite fauna on some of the most common grass species in that State: *Brachiaria decumbens* Stapf., *Brachiaria brizantha* (Hochst. ex A. Rich.) Stapf, *Brachiaria ruziziensis* R. Germ & C.V. Evrard, *Melinis minutiflora* Beauv., *Panicum maximum* Jacq. and *Pennisetum purpureum* Schumach. Twenty known species and one new species (*Proprioseiopsis biologicus* Lofego, Demite & Moraes sp. nov.) were found. Two species are reported for the first time in the American continent: *Neoseiulus benjamini* Schicha and *Typhlodromus (Anthoseius) neobakeri* Prasad. Seven of the species collected have been reported in Brazil from different crops. The largest number of specimens and of species of phytoseiids was found on *M. minutiflora*. The results of this study indicate that grasses may play a role in agroecosystems and pasture lands, serving as reservoirs of phytoseiids that prey upon mite pests.

Key words: Predatory mites; biological control; taxonomy

Introduction

Grasses are cultivated over extensive areas in the State of São Paulo, Brazil. Because of the importance of livestock, about 9.6 million hectares of that State (ca. 40% of its total area) are pasture land (Scott Consultoria 2007), almost totally covered by grasses. Very little is known about the possible role of those plants as refuge to predaceous species of Phytoseiidae, and only two predaceous species have been reported from grasses in the State of São Paulo (Lofego & Moraes 2003). This paper reports on a survey of Phytoseiidae mites on grasses in that state.

Materials and methods

Samples were taken from the most common grass species at 16 sites. They consisted mainly of leaves and stems, and, when present, flowers and seeds of the following species: *Brachiaria decumbens* Stapf., *Brachiaria brizantha* (Hochst. ex A. Rich.) Stapf, *Brachiaria ruziziensis* R. Germ & C.V. Evrard, *Melinis minutiflora* Beauv., *Panicum maximum* Jacq. and *Pennisetum purpureum* Schumach. The samples were transported to the laboratory where the mites were collected and mounted on slides for identification.

Notations of dorsal and ventral setae follow Rowell *et al.* (1978) and Chant & Yoshida-Shaul (1991), respectively. All measurements are given in micrometres (μm), with first the mean for all individuals measured, followed (in parentheses) by the respective range, if the measurement is variable.

Information concerning the specimens examined is presented in the following order, name of the locality,