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Tydeid and triophtydeid mites (Acari: Tydeoidea) associated with grapevine (Vitaceae: *Vitis* spp.) in Brazil, with the descriptions of species of *Prelorryia* (André, 1980) and *Tydeus* Koch, 1835

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Abstract

We report on the Tydeidae and Triophtydeidae associated with grapevine (*Vitis labrusca* L. and *Vitis vinifera* L.) in Rio Grande do Sul State, Brazil, and describe a new species of *Prelorryia*, *Prelorryia labrusca* sp. nov., and two new species of *Tydeus*, *Tydeus manoi* sp. nov. and *Tydeus riopardensis* sp. nov. *Brachytydeus formosa* (Cooreman), *B. podocarpa* (Baker), *Neolorryia pandana* (Baker), *Tydeus californicus* (Banks), *Pretydeus henriandrei* Kazmierski and *Triophtydeus lebruni* (André) are recorded and illustrated. A key to species of Tydeidae and Triophtydeidae from Brazil is provided.

Key words: Agroecosystem, grapevine, *Tydeus californicus*, *Vitis labrusca*, Tydeinae

Introduction

The Tydeidae and Triophtydeidae are members of the Tydeoidea, a group of cosmopolitan, soft-bodied, striated or reticulated mites that have been recorded as predators, phytophages, mycophages and scavengers (Gerson *et al.* 2003; Kazmierski 1998a). Little is known about the ecological interactions between these mites and their habitats and few have been categorized as to a general lifestyle (Walter *et al.* 2009). The superfamily Tydeoidea was reorganized by André & Fain (2000) and comprises four families: Tydeidae, Triophtydeidae, Iolinidae and Ereyneidae.

The Triophtydeidae is a small family possessing three eye-spots and the only species studied fed on honeydew from scale insects and preyed on the eggs of spider mites (Brickhill 1958). The Tydeidae is a much larger family whose members possess two eye-spots, claws on the first pair of legs, and its members show the full gamut of feeding habits found in the superfamily, with the exception of parasitism.

André & Fain (2000) redefined Tydeidae, including only three subfamilies: Tydeinae, Pretydeinae, and Australotydeinae, with 30 genera and 340 described species (Walter *et al.* 2009). They also redefined the Triophtydeidae (then known as the Meyerellidae) with two subfamilies: Meyerellinae and Triophtydeinae, with seven genera and approximately 40 species. The family Meyerellidae was renamed twice, Edbakerellidae (André 2004) and later Triophtydeidae (Walter *et al.* 2009). The subfamily Meyerellinae also was renamed Edbakerellinae (André 2004).

Until now, seven tydeid species were reported from Brazil (Aranda & Flechtmann 1969; Eichelberger *et al.* 2011; Hernandez & Feres 2006; Johann *et al.* 2009; Klock *et al.* 2011; Silva *et al.* 2013). In Brazil, there are no specific studies done on the diversity of tydeid species and, so far, there are few studies about the bioecology of these species in the world (Hernandez *et al.* 2006). Tydeid mites show a surprisingly general feeding strategy, from

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