Phytoseiidae (Acari: Mesostigmata) from rubber tree crops in the State of Bahia, Brazil, with description of two new species

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Abstract

The current study describes the results of a survey of Phytoseiidae mites conducted on a rubber tree plantation in the State of Bahia, Brazil. We present 22 species, two of which are new to science, Amblydromalus insolitus n. sp. Nuvoloni & Lofego, and Typhlodromips paramilus n. sp. Nuvoloni & Lofego, and three new records for this host are presented. The species composition was more related with the records of the northern Brazilian Region, than with that of Southeastern and Midwestern.

Key words: Amblydromalus insolitus, Amblyseiinae, Typhlodrominae, Hevea brasiliensis, predators, taxonomy, Typhlodromips paramilus

Introduction

Mites in the family Phytoseiidae are commonly reported from rubber trees (Hevea brasiliensis Muell. Arg, Euphorbiaceae) throughout Brazil (Ferla & Moraes, 2002a; Hernandes & Feres, 2006a; Demite & Feres, 2007; Deus et al., 2012; Daud & Feres, 2014; Nuvoloni et al., 2015). They may play an important role in the biological control of phytophagous pests (Gerson et al., 2003). The state of Bahia is the third largest latex producer in Brazil, with more than 20% of national production (IBGE, 2008). Despite its importance, no study on diversity of mites on rubber trees has been conducted in that state.

According to the Phytoseiidae Database (Demite et al., 2014) more than 190 valid phytoseiid species have been reported from Brazil, and 53 have been recorded from Bahia State. More than 50 species have been recorded from rubber trees in Brazil although the state of Bahia still remains unstudied (Demite et al., 2014). In a recent paper, Nuvoloni et al. (2015) described seven new species, and highlighted the importance of rubber trees supporting a diverse fauna of phytoseiid species on Amazon forest and rubber plantations on the northern of Brazil.

In the present study we list the phytoseiid species recorded in a one-year survey carried out on rubber tree plantations in the State of Bahia, including the description of new species of Amblydromalus and Typhlodromips.

Material and methods

Collecting was carried out monthly on a rubber tree plantation (“Plantações Michelin da Bahia Ltda”), on the clones PMB 01 (clone Plantações Michelin da Bahia number 01), FDR 5788 (clone Firestone Dothidella Resistant number 5788), CDC 312 (Clones Dothidella Clavellinas number 312), FX 3864 (clone Ford Cross number 3864) and MDF 180 (clone Madre de Dios Firestone number 180), during April 2008 to April 2009. The study area consists of a 5,000 hectare rubber crop surrounded by fragments of native vegetation of coastal Atlantic Rainforest (13°48'S,