



## SCIENTIFIC NOTE

### New Records of Thrips (Thysanoptera) Species in Brazil

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#### Keywords

Insect, Neotropics, Terebrantia, Tubulifera

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Edited by Roberto A Zucchi – ESALQ/USP

Received 21 March 2011 and accepted 6 April 2011

#### Abstract

This study reports four thrips species from Brazil for the first time: the terebrantians *Aptinothrips rufus* (Haliday) and *Echinothrips caribbeanus* Hood; and the tubuliferans *Androthrips ramachandrai* Karny and *Gynaikothrips uzeli* (Zimmermann). New data about biological aspects of some of these new records are presented.

The Thysanoptera, or thrips, comprise one of the most poorly known insect Orders. The species are known to be opportunistic in their way of life, but the majority of thrips species are either phytophagous or fungivorous, while a few are predators or ectoparasites on other arthropods (Mound & Marullo 1996, Cavalleri *et al* 2010). Some species are important agricultural pests and disease vectors, attacking a wide range of plant crops and ornamentals. However, many others contribute positively to the world economy providing ecosystem services and benefits, as pollinators, decomposers and predators (Mound & Kibby 1998).

Thrips are particularly diverse in the Neotropics, with more than 2,000 species recorded for this Region (Mound 2002). About 520 Thysanoptera species in 139 genera and six families are known from Brazil, representing nearly 10% of the worldwide described species (Monteiro 2002). However, recent studies and observations indicate a large number of unrecorded and undescribed species in Brazilian territory (Pinent *et al* 2006, Cavalleri & Kaminski 2007).

Unfortunately, there is an increasing lack of Thysanoptera specialists and this limits the amount of biological questions that can be answered (Mound 2002).

Additionally, almost all species described in Brazil are not deposited in entomological collections in this country, and there is no reference collection of thrips in Brazil wide enough to be used to develop local knowledge (Monteiro *et al* 1996). As a result, Thysanoptera surveys, and information concerning the biology of species, are urgently needed in our country (Cavalleri *et al* 2006).

The material examined is deposited in the Zoological collection, UFRGS (Porto Alegre, Brazil). Specimens will be available in the Entomological Museum collection, ESALQ/USP (Piracicaba, Brazil). These new records are separated by family and are listed below:

#### Family Thripidae

##### *Aptinothrips rufus* (Haliday)

Body largely yellow except antennomere VI and abdominal segment X, which are brownish yellow. Antenna 6-segmented, with simple sense cones on segments III and IV. Apterous, with no long setae on head and thorax. Breeds on leaves of several Poaceae species, and apparently causes damage to grass and grains (Stannard

1968). Presumably originated in Europe, this thrips is widespread around the world in temperate countries. According to Mound & Marullo (1996), it is likely to be found in the Neotropics only in high mountains. **Material examined:** 4♀ on grass flowers in São Francisco de Paula, Rio Grande do Sul; 900 m, 06.vii.2009, A Cavalleri col.

#### *Echinothrips caribbeanus* Hood

Body dark-brown with the exception of the tibiae apices, which are yellow. Head and thorax with well defined reticulation and, in contrast to *Echinothrips americanus* (Morgan, 1913), there are no lines of sculpture internal to each reticle. Antenna 8-segmented and abdominal tergites IV-VI with a well developed group of microtrichia laterally. This species is well distributed in Central America and it has been found on leaves of several unrelated plant species (Mound & Marullo 1996). **Material examined:** 3♀ on *Phyllanthus niruri* in Porto Alegre, Rio Grande do Sul; 300 m, 06.viii.2003, A Cavalleri col.; 1♀ on *Asclepias curassavica* in Campinas, São Paulo; 700 m, 17.vi.2009, D Rodrigues col.

### Family Phlaeothripidae

#### *Androthrips ramachandrai* Karny

Body largely dark-brown, with tarsi and fore tibiae yellow and head and pronotum weakly reticulated. Fore femur enlarged in both sexes, with a large and rounded tubercle on inner margin near base, followed by a row of small tubercles. Although no observations on its behaviour were conducted, this thrips is assumed to be predatory on *Gynaikothrips uzeli* (Zimmermann, 1900) in *Ficus benjamina* galls (Boyd & Held, 2006). In experiments carried out in laboratory, *A. ramachandrai* adults and larvae were observed feeding actively on immature stages of *G. uzeli* and *Gynaikothrips ficorum* (Marchal, 1908) (A Cavalleri, unpublished data). Further studies on *A. ramachandrai* biology and feeding preferences have been conducted and its potential as a biological control agent will be tested. **Material examined:** 1♀ on *Ficus benjamina* in Belém, Pará; 21.xi.2007, A Cavalleri col.; 1♀ on *Momordica charantia* in Mossoró, Rio Grande do Norte; 100 m, 05.xi.2010, M Lima col.; 1♀ and 2♂ on *Ficus benjamina* in Porto Alegre, Rio Grande do Sul; 100 m, 26.iii.2008, A Cavalleri col.; 4♀ on same host and place, 26.viii.2010, A Cavalleri col.

#### *Gynaikothrips uzeli* (Zimmermann)

Dark-bodied thrips with conspicuous reticulation on head and thorax. Mouth cone broadly rounded, vertex with two pairs of postocular setae. Pronotal posteroangular and epimeral setae long and expanded. Very similar to

*G. ficorum*, but that species has much shorter pronotal posteroangular setae (Mound *et al* 1995). *Gynaikothrips uzeli* is a widespread gall-inducing species, almost exclusively associated with *Ficus benjamina*. Described from Southeastern Asia, it has been recently recorded in North and Central America (Held *et al* 2005, Cambrero-Campos *et al* 2010). According to our data on *G. uzeli* populations, collected in abundance in several *F. benjamina* trees, this thrips is certainly well established in our country. **Material examined:** 1♀ and 1♂ on *Ficus benjamina* galls in Porto Alegre, Rio Grande do Sul; 100 m, 26.iii.2008, A Cavalleri col.; 14♀ and 4♂ on same host and place, 26.viii.2010, A Cavalleri col.

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