



The genus *Heterothrips* (Thysanoptera) in Brazil, with an identification key and seven new species

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Abstract

Seven new species of *Heterothrips* are described from Brazil, and a key presented to the 20 species now known from this country. *Heterothrips semiflavus* De Santis is synonymized with *H. bicolor* Hood. The new species are illustrated and notes on their biology included.

Key words: Systematics, Heterothripidae, host specificity, Terebrantia

Introduction

Heterothrips Hood is the largest genus in the family Heterothripidae, currently comprising about 70 species. Although restricted to the Americas, these thrips are found widely between north-eastern U.S.A. and Argentina (Mound 2011). With the exception of species in the genus *Aulacothrips* that are ectoparasitic on Hemiptera, all members of Heterothripidae feed exclusively on flowers (Mound & Marullo 1996; Cavalleri *et al.* 2010).

The species in this genus are relatively conservative in morphology, but little is known about their life history, which limits the knowledge of their intraspecific variation. As a result, some of the described species are likely to be recognised as synonyms in the future (Del-Claro *et al.* 1997). Moulton (1932) recognized two informal groups within the genus and provided a key to the known South American species. The abdominal tergites of species in his “group I” bear a posteromarginal fringe of independent microtrichia (Fig. 1), whereas the species of “group II” feature microtrichia that arise on the posterior margin of the abdominal tergites from a well-developed craspedum (Fig. 2). More recently, Mound & Marullo (1996) provided a key to 57 species in the genus and described two new species together with three new species synonyms. These authors also treated the subgenus *Lenkothrips* as a full genus to include the Brazilian species *sensitivus* De Santis.

The geographical distribution among *Heterothrips* species is quite particular and, aside from *watsoni*, the species composition of North and South America is completely different (Bailey & Cott 1954). From Brazil, 13 species were listed by Monteiro (2002), almost all described by Moulton (1932) or Hood (1954), although most species were based on few specimens with little biological information. For example, almost half of Brazilian species were described without any indication of the plant from which they were collected. In addition, recent studies from the Neotropics suggest a highly diverse and unexplored *Heterothrips* fauna (Cavalleri *et al.* 2006; Retana-Salazar 2009; De Borbón 2010).

Host-plant relationships. *Heterothrips* species are considered as showing a high degree of host specificity, but there are few studies on their life histories (Mound & Marullo 1996). Some species are found frequently living in sympatry, and on numerous plant species that are usually closely related (Figs 3, 5–10). As a result, recognition of true host-plant associations can be achieved only by repetitive collecting and identification of larval stages. In the Neotropics, many plant families such as Fabaceae, Myrtaceae, Malpighiaceae, Rubiaceae and Solanaceae seem to support a high diversity of species (Figs 5–10). Personal observations in Brazilian savannah indicate that *Heterothrips* adults are highly mobile, visiting flowers of many species, particularly of Malpighiaceae. The floral structure