



**On the identity of *Trichogramma demoraesi* Nagaraja
(Hymenoptera: Trichogrammatidae), with a checklist and a key to
Trichogramma species associated with *Erinnyis ello* (L.)
(Lepidoptera, Sphingidae) in Brazil**

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Abstract

Specimens collected from eggs of the cassava hornworm *Erinnyis ello*, originally identified as *T. demoraesi*, were compared with the paratype of this species. Based on morphological analysis, the specimens from *E. ello* actually belong to *Trichogramma marandobai* Brun, Moraes and Soares, 1986. Therefore, *T. demoraesi* is not a parasitoid of the eggs of *E. ello*, a major pest of cassava. The main features separating the two species, and a checklist and key to the species of *Trichogramma* associated with *E. ello* are presented.

Key words: taxonomy, *Trichogramma marandobai*, checklist, identification, key

Introduction

Species of *Trichogramma* are egg parasitoids that have been used worldwide for biological control, mainly of lepidopteran pests. *Trichogramma* are micro-hymenopterans (usually ~0.7 mm in length), whose species identification is based mostly on characters of the male genitalia.

Our understanding of the taxonomy of *Trichogramma* in Brazil has improved significantly in recent decades (Querino & Zucchi 2003, 2005, 2011; Zucchi *et al.* 2010). However, some species of *Trichogramma* were inadequately described and illustrated. In addition, the male genitalia structures vary in some *Trichogramma* species, which may impede their identification. Among these species is *Trichogramma demoraesi*, whose identification is problematic, especially in specimens reared in the eggs of *Erinnyis ello*, a major pest of cassava in Brazil.

Trichogramma demoraesi was originally described based on specimens from eggs of *Glena bipennaria* Guenée on *Eucalyptus grandis* in Minas Gerais, Brazil (Nagaraja 1983). Later, several authors recorded this species in eggs of *E. ello* in cassava (see Querino & Zucchi 2008). However, parasitoids from *E. ello* eggs identified as *T. demoraesi* show features of the male genitalia that do not conform to the original species description.

In this study, these specimens were studied morphologically and compared with the paratype of *T. demoraesi*, in order to allow accurate recognition of the egg parasitoid of *E. ello* identified as *T. demoraesi*.

Material and methods

A comparative morphological analysis was performed among specimens previously identified as *T. demoraesi* in

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