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Redescription of *Trogoderma fasciolata* Fairmaire, 1897, **comb. rev.** from Madagascar (Coleoptera: Dermestidae, Megatomini)

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Abstract

Trogoderma fasciolata Fairmaire, 1897, **comb. rev.** is redescribed, illustrated and restored to the genus *Trogoderma* Dejean, 1821 from *Aethriostoma* Motschulsky, 1858. A key to the known *Trogoderma* species from Madagascar is presented.

Key words: taxonomy, *Aethriostoma*, *Trogoderma*, morphology, redescription, Madagascar

Introduction

The species *Trogoderma fasciolata* Fairmaire, 1897, **comb. rev.**, has been historically included in *Aethriostoma* Motschulsky, 1858, one of the two subgenera within the genus *Attagenus* Latreille, 1802 (subfamily Attageninae Casey, 1900).

Morphological analysis revealed that the placement of *T. fasciolata* within *Aethriostoma* was incorrect. The results of our study demonstrated that this species exhibits a suite of characters exclusive to the subfamily Megatominae Leach, 1815, and more specifically to *Trogoderma* Dejean, 1821. The genus *Trogoderma* currently includes 147 valid taxa, most of which are found in the Afrotropical, Neotropical, Nearctic, Oriental and Australian biogeographic regions (Peacock 1993; Háva 2013a). Some of these species are recognized as serious pests of stored goods with potential economic impacts (Kadej 2012).

A formal diagnosis of *Trogoderma* was first provided by Dejean (1821) and later refined by Beal (1954). Morphological characteristics that distinguish *Trogoderma* from related genera were given by Beal (1954) and Peacock (1993). Phylogenetically, the genus is considered polyphyletic with respect to other genera within Megatominae (Kiselyova & McHugh 2006). The current paper provides a detailed morphological redescription of *Trogoderma fasciolata* Fairmaire, 1897 and restores it to its original combination. This species represents one of eight of the known *Trogoderma* which have been recognized from Madagascar thus far (Háva 2009, 2013b).

Material and methods

For the morphological studies, specimens were boiled for 3–10 minutes in 10% KOH, and placed in distilled water for about 1 hour to clean and soften the cuticle. All structures were placed on glycerin mounts. Specimens were examined with a Nikon Eclipse E 600[®] (Tokyo, Japan) phase contrast microscope, and a Nikon SMZ–800[®] (Tokyo, Japan) binocular microscope. Photographs were taken with a Canon 500D[®] (Taiwan) under a Nikon Eclipse 80i[®] (Tokyo, Japan) and a Nikon D5100[®] (Tokyo, Japan) camera under a Nikon SMZ–800[®] (Tokyo, Japan). Image stacks were processed using Combine ZM[®] (Hadley 2010). The terminology used in this paper follows Háva & Kadej (2006, 2009). Locality labels are cited verbatim with additional remarks by the authors given in square brackets [].

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