



Revision of New Caledonian species of Eumolpinae described by K. M. Heller (Coleoptera: Chrysomelidae)

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Abstract

The Chrysomelidae of New Caledonia are rich and unique, but insufficiently characterized. New species are being rapidly described, sometimes without careful study of the earlier taxonomic research. Karl M. Heller (Dresden, Germany) described in 1916 seven species of Eumolpinae which are redescribed here to distinguish them from other known species and to provide new information about sexual dimorphism and genitalic structures. New material is used to redefine their distribution. The males of *Dematochroma lepros* (Heller, 1916) and *D. culminicola* (Heller, 1916), and the female of *D. difficilis* (Heller, 1916) are described for the first time. Male and female genitalia are first described for seven and five species, respectively. *D. difficilis* (Heller, 1916) **stat. rev.**, is revalidated from previous synonymy with *D. terastiomerus* (Heller, 1916). Lectotypes are designated for *D. humboldtiana* and *D. terastiomerus*.

Key words: Taxonomy, *Dematochroma*, *Taophila*, New Caledonia, morphology

Introduction

The terrestrial fauna of New Caledonia has been under active scrutiny in recent years (e.g., Sharma & Giribet 2009; Espeland & Johanson 2010; Jäch & Balke 2010; Pellens & Grandcolas 2011). The island offers boundless opportunities for discovery of new species even in groups relatively well studied, like reptiles and plants. But the knowledge of terrestrial invertebrates, extremely diverse in the archipelago, is understandably lagging behind, even though many new species have been described in recent years.

The beetle fauna of New Caledonia is very rich with numerous endemic species as well as many higher taxa. According to Chazeau (1993), well over 1500 species of New Caledonian beetles are known, and the actual beetle diversity in the island may be several times higher (Chazeau 1993; Gómez-Zurita *et al.* 2010). Beetle groups like the Chrysomelidae have been the focus of much recent attention, thanks to the work presently centred on the leaf beetle subfamily Eumolpinae by Pierre Jolivet and the staff at the Institut Agronomique néo-Calédonien in Poqueureux, as well as Alan Samuelson (Jolivet *et al.* 2005, 2007a,b,c, 2009; Samuelson 2010). This has resulted in the discovery of 43 new species in Eumolpinae since the early works of Xavier Montrouzier (Montrouzier 1861; Perroud & Montrouzier 1864), Albert Fauvel (Fauvel 1862) and Karl M. Heller (Heller 1916), with a current total of 59 species in this subfamily. However, the excitement of new discoveries has probably influenced the urge to name species, sometimes providing insufficient or erroneous information for reliable species recognition and identification (Gómez-Zurita 2011). In this and subsequent contributions, the already named species of New Caledonian Eumolpinae will be revised in order to refine their taxonomy and clarify their status, paying particular attention to the taxonomically valuable genitalic characters. Jolivet and co-authors' (2005, 2007a,b,c, 2009) papers already include information on the male genitalia, however, this is generally figured from the lateral view, which is of only limited value.

Here, the species of Eumolpinae described by Karl M. Heller (1916) are revised: six originally placed in *Thasycles* Chapuis, 1874, but currently considered in *Dematochroma* Baly, 1864, and one in *Taophila* Heller, 1916. Baly (1864) described the genus *Dematochroma* on a large eumolpine beetle, wrongly treated as a native of New