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Five new species of *Notosacantha* Chevrolat (Coleoptera: Chrysomelidae: Cassidinae) from Borneo, with a key to the Bornean species and new faunistic data

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Abstract

Five new species of *Notosacantha* are described from Borneo (Sabah): *N. flaviventris* Borowiec and Takizawa sp. nov. (also described from Sumatra), *N. flavosuturata* Świętojańska and Takizawa sp. nov., *N. minuta* Świętojańska and Takizawa sp. nov., *N. obscuricornis* Borowiec and Takizawa sp. nov. and *N. ovoidea* Borowiec and Świętojańska sp. nov. New records for nine other species, a check list and key to Bornean *Notosacantha* are given. Myrsinaceae and Myristicaceae are new host plant families for tortoise beetles and *Ardisia elliptica* Thunb., *Ardisia* sp., *Embelia* sp., *Gironiema* sp. (all Myrsinaceae) and *Knema* sp. (Myristicaceae) are new host plants for *Notosacantha*.

Key words: taxonomy, new species, new data, new host plants, Myrsinaceae, Myristicaceae, check list

Introduction

The genus *Notosacantha*, established by Chevrolat (1836) to accommodate *Cassida echinata* Fabricius, is one of the most speciose cassidine genera with 264 described species (Borowiec and Świętojańska 2012). This exclusively Old World genus has several centres of diversity, especially on islands such as Madagascar, the Philippines and the Sunda Islands. New Guinea too is rich in species although most of them remain undescribed (J. Świętojańska and L. Sekerka unpubl. data).

The genus, especially the Oriental species, is under active study (Borowiec and Świętojańska 1999, Świętojańska and Borowiec 1999, Świętojańska 2000 a, b, 2001 a, b, 2002 a, b, 2003, 2004, 2006 a, b, Świętojańska and Sekerka 2007, Borowiec et al. 2008, Sekerka 2008, 2009, Świętojańska and Stach 2011). Many species await naming and description as they are scarcely collected. Biology is poorly known as many species are known merely based on the types and host plant associations are known only for ten of the 264 described species (Borowiec and Świętojańska 2012).

Oriental species of *Notosacantha* were keyed by Spaeth (1933) but many new species were described after this publication and the key is less useful now. Among the Sunda Islands, the largest number of species were described from Borneo (20 - see checklist below). We found several specimens of *Notosacantha* from Borneo, representing 14 species, five of them being new to Science, among the recent material collected mostly by Haruo Takizawa, and in the collections of the Institute for Tropical Biology and Conservation, University of Malaysia Sabah. Descriptions of the new species, new records of nine other species, including new host data, key to Bornean species and checklist of all taxa recorded from Borneo are given below.

Material and methods

All holotypes are deposited in the BORNEENSIS collection of Institute for Tropical Biology and Conservation, University of Malaysia Sabah (ITPC).