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Two new species of the genus *Gonioctena* Chevrolat (Coleoptera, Chrysomelidae, Chrysomelinae) from Sichuan, China

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Abstract

Two new species of *Gonioctena* Chevrolat, *G. sichuana* sp. n. and *G. metallica* sp. n., are described from Sichuan Province, China. Diagnostic characters and illustrations are provided. Oviviviparity is recorded in *G. metallica* sp. n.

Key words: Chrysomelidae, *Gonioctena*, new species, ovoviviparity, Sichuan, China

Introduction

The genus *Gonioctena* Chevrolat, 1836 is widely distributed in the Holarctic and Oriental regions. Members of the genus are characterized by mandibles generally with a large excavation at outer side, elytral epipleura slanted downward, procoxal cavities opened posteriorly, tibiae generally with a preapical tooth, third tarsomere not bilobed and tarsal claws appendiculate. Adults of the genus are greatly diverse in colouration even within a species and similar in external morphology. Therefore, several available keys and regional reviews of the group depend heavily on the male genitalia, for example, Europe (Warchałowski 2003), Russia (Medvedev 1992), China and Korea (Gressitt & Kimoto 1963) and Japan (Takizawa 2007). To date, 84 species have been reported in the Palearctic region (Cho & Lee 2010; Kippenberg 2010; Suenaga 2012), of which 29 species occur in China (Ge *et al.* 2007). During our study on the Chinese *Gonioctena* species, we found two new species from Sichuan Province, which are described below. Photographs, illustrations and diagnostic characters are provided.

Material and methods

The type specimens are deposited in the Museum für Naturkunde der Humboldt-Universität, Berlin, Germany (MNHUB), the Naturhistorisches Museum Basel, Basel, Switzerland (NHMB) and the Tiroler Landesmuseum Ferdinandeum, Innsbruck, Austria (TLMF). Specimens were examined with a Nikon SMZ800 microscope. Male genitalia were dissected from adult specimens softened in plastic containers with wet tissue paper for 12–24 hours, cleared in 10% sodium hydroxide solution, and rinsed in distilled water. Photographs were taken by a Nikon Coolpix 4500 digital camera attached to a Nikon SMZ1500 microscope, and were edited by Helicon Focus 5.3.12 and Adobe Photoshop CS5.

Taxonomy

Gonioctena (*Gonioctena*) *sichuana* Cho & Borowiec, sp. n.

(Figs 1, 3, 5–6)

Type material. Holotype: male (MNHUB), China: Sichuan, Umg. Zhangla, 3200m, 27.6.1996, D. Erber.

Elytra. Lateral sides slightly widened posteriorly and widest at posterior 1/3, thence rounded at apex. Humeral calli well developed. Disc with 11 regular rows of large punctures, including a short scutellar row; several additional punctures between rows; interspaces with sparse and fine punctures. Epipleura impunctate, wholly visible in lateral view. Hind wing well developed.

Venter. Hypomera rugose with dense and coarse punctures on anterior 1/2. Prosternum with dense and coarse punctures bearing long setae; prosternal process weakly rugose, enlarged apically, bordered laterally, with sparse punctures. Metasternum with sparse and small punctures medially, moderately dense and large punctures laterally. Abdominal sternites with sparse to moderately dense punctures bearing short setae.

Legs. Moderately robust. Tibiae widened apically with a weakly developed preapical tooth. Fore legs with tarsomere 1 enlarged, very slightly narrower than 3 in male, weakly enlarged, slightly narrower than 3 in female. Tarsal claws appendiculate.

Genitalia. Aedeagus (Fig. 9) very long and thin, with apical process swollen apically in dorsal view; straight, gradually narrowed, curved at apex in lateral view. Spermatheca absent.

Remarks. Four larvae were found in the abdomen of one female (Fig. 11). Larvae have a well-developed head, many long setae on small tubercles, egg bursters and sclerotized tarsi. Ovoviviparity is rather common in *Gonioctena* and females tend to lose spermatheca (Bontems 1988). This new species is also ovoviviparous and lacks a spermatheca.

Etymology. The specific name is derived from the Latin adjective *metallica*, referring to the metallic colour of head and pronotum.

Distribution. China (Sichuan).

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