



A new species of the genus *Gonioctena* (Coleoptera: Chrysomelidae: Chrysomelinae) from Shikoku, Japan, with description of its immature stages

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Abstract

The adult, pupa, and larva of *Gonioctena* (*Gonioctena*) *iyonis* n. sp. are described from Shikoku, Japan. This species is similar to *G. (G.) hiranoi* Takizawa, *G. (G.) simotuke* Takizawa, *G. (G.) hoki* Takizawa and *G. (G.) katsuyai* Takizawa, and is distinguished from them by the coloration of the femora and the shape of the aedeagus. The host plant of *G. (G.) iyonis* n. sp. is *Alnus firma* Siebold et Zucc.

Key words: Coleoptera, Chrysomelidae, Chrysomelinae, *Gonioctena iyonis* n. sp., new species, Japan, larva, taxonomy

Introduction

The genus *Gonioctena* Chevrolat, 1836 is widely distributed in the Holarctic and Oriental Regions. Kimoto (1964) was the first to revise the genus and to comprehensively study the 13 Japanese species. Takizawa and Daccordi (1998) described *G. (Brachyphytodecta) kidoi* and Takizawa (2007) revised the Japanese species of the genus again and added four new species. Up to the present 18 species are known from Japan. The immature stages of Japanese *Gonioctena* have been relatively well studied and larvae of nine species are described (Takizawa 1976; 1989a, b; Kimoto & Takizawa 1994; Takizawa & Daccordi 1998).

In the present paper, I describe the adult, pupa and larva of a new species of *Gonioctena* from Shikoku.

Material and methods

Adults and larvae were collected at Mt. Ishizuchi, Ehime Pref., Shikoku between May and June, 2009 and the last instar larvae were reared in an incubator at 24°C.

Larvae were preserved in 70% ethanol, and the adults were mounted on cards. Because only two pupae were obtained, all pupae were kept alive and reared, but not preserved as specimens. Adult reproductive systems were mounted in euparal or preserved in glycerin. The wings and the female reproductive systems were fixed permanently fixed on glass slides.

To prepare drawings of the adult reproductive system, the adult abdomen was separated from the body and boiled in 10% KOH solution at 60°C, cleared in distilled water, and mounted on a glass slide with K-Y lubricating jelly (Johnson & Johnson). K-Y lubricating jelly is used to keep the position and angle of the aedeagus, mouth parts, and the body of the larva (Grobbelaar, 2009). The slides were examined using a stereomicroscope (Leica S8 APO) and figures were drawn using a microscope (Olympus BH-2) with a camera lucida. Photographs were taken using a stereomicroscope with a CCD camera (Nikon DS-Fi1-L2).

The terminology for adults refers to Takizawa (2007) except for the hind wing venation, which follows Suzuki (1994). Terminology for the tubercle pattern of the immatures follows Takizawa (1976).