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## Redescription and distribution of the rare flower chafer, *Periphanesthes aurora* (Motschulsky, 1858) (Coleoptera: Scarabaeidae: Cetoniinae)

JIAN-YUE QIU<sup>1</sup>, HAO XU<sup>2</sup> & LI CHEN<sup>1,3</sup>

<sup>1</sup> College of Plant Protection, Southwest University, Chongqing 400716, P. R. China. E-mail: qiuju@yahoo.com

<sup>2</sup> The Bureau of Forest Resource Management of Mt. Simianshan, Chongqing 402296, P. R. China. E-mail: xu\_titan@yahoo.com

<sup>3</sup> Corresponding author. E-mail: lichen57@swu.edu.cn

### Abstract

This paper includes a detailed redescription of the monotypic genus *Periphanesthes* Kraatz, 1880 (Coleoptera: Scarabaeidae: Cetoniinae) and its type species, *Periphanesthes aurora* (Motschulsky, 1858), based on the lectotype (designated within) and additional specimens. Illustrations of external features and parameres are also provided. The distribution of *P. aurora* is studied, and its new distribution records are mapped. *Bonsiella* Ruter, 1965 is confirmed as a junior synonym of *Periphanesthes* Kraatz, 1880.

**Key words:** Scarabaeidae, Cetoniinae, Goliathini, Coryphocerina, *Periphanesthes*, *Bonsiella*, flower beetle, Asia

### Introduction

*Periphanesthes aurora* (Motschulsky, 1858) (Coleoptera: Scarabaeidae: Cetoniinae) is a rare species of cetoniine known from a few localities in southern China (Fujian, Jiangxi, and Guangdong) and northern Vietnam (Paulian 1960; Mikšić 1977; Smetana 2006; Krajčik 2011). This species was originally described from “Amboina” under the genus *Macroma* Gory & Percheron, 1833 (a subgenus of *Campsiura* Hope, 1831). Kraatz (1880) moved it to his monotypic genus *Periphanesthes* Kraatz, 1880 based on Motschulsky’s original description. However, this species is also known under another name, *Bonsiella blanda* (Jordan, 1895). Fifteen years after Kraatz’s 1880 publication, Jordan (1895) described *Coryphocera blanda* from China, and later Ruter (1965) erected another monotypic genus *Bonsiella* Ruter, 1965 to accommodate it. These two synonymous genus-group names were placed in Cremastocheilini and Goliathini respectively and left there for over 80 years, until Krikken (1977) indicated that they appeared to be identical and proposed to treat *Bonsiella* as a junior synonym of *Periphanesthes*. But, this synonymization was rejected or overlooked by some authors (Mikšić 1977; Ma 1992, 1995; Krajčik 1998).

*Periphanesthes aurora* has no modern description, and its distribution was also poorly studied. In the course of identification work we have examined numerous cetoniine specimens from different collections that included a few of this remarkable species. We here confirm that *Bonsiella* Ruter, 1965 is a junior synonym of *Periphanesthes* Kraatz, 1880 based on examination of the type specimen of *Macroma aurora* Motschulsky, 1858. We also provide a detailed redescription of *P. aurora* with color photographs of external features and parameres. New distribution records of this species are presented on an updated distribution map, and some ambiguous geographical names in Chinese Romanization in Mikšić (1977) are interpreted. These records significantly expand the known distribution of the species to the northeast in Jiangsu and to the southeast in Hainan, China.

### Materials and methods

Morphological terminology mostly follows Krikken (1984) and Lawrence & Britton (1994). Habitus photos were

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