



## *Halycaea* Cameron, 1903 (Hymenoptera: Braconidae, Doryctinae) from China with a key to world species

PU TANG<sup>1</sup>, SERGEY A. BELOKOBYSKIY<sup>2</sup>, CORNELIS VAN ACHTERBERG<sup>3</sup> & XUE-XIN CHEN<sup>1,4</sup>

<sup>1</sup>State Key Laboratory of Rice Biology and Ministry of Agriculture Key Laboratory of Agricultural Entomology, Institute of Insect Sciences, Zhejiang University, Hangzhou 310029, China

<sup>2</sup>Zoological Institute Russian Academy of Sciences, St. Petersburg, 199034, Russia; Museum and Institute of Zoology Polish Academy of Sciences, Wilcza 64, Warszawa 00–679, Poland

<sup>3</sup>Department of Terrestrial Zoology, NCB Naturalis, Postbus 9517, 2300 RA Leiden, The Netherlands

<sup>4</sup>Corresponding author. E-mail: xxchen@zju.edu.cn

### Abstract

The Chinese *Halycaea* Cameron, 1903 (Doryctinae: Doryctini) from the Parasitic Hymenoptera Collection of Zhejiang University were studied. The following taxa are described as new: subgenus *Sinohalycaea* **subgen. nov.** and four species, *H. (S.) longitergum* **sp. nov.**, *H. (H.) liui* **sp. nov.**, *H. (H.) nigricoxis* **sp. nov.**, and *H. (H.) wuzhiensis* **sp. nov.** *Megaproctus ruficeps* Smith, 1858 is considered as a senior synonym of *H. erythrocephala* Cameron, 1903 (**syn. nov.**). A key to all known species of *Halycaea* is provided.

**Key words:** *Halycaea*, Doryctinae, new subgenus, new species, China

### Introduction

*Halycaea* Cameron, 1903 is a small genus of the tribe Doryctini in the subfamily Doryctinae. Up to now only eight species of this genus have been described worldwide, and most part of them are from the Oriental region, except one species recorded in the Australasian region (Belokobylskij 2002, Belokobylskij et al. 2004, Yu et al. 2005). The biology of this genus is still unknown, but Belokobylskij (2002) suggested that its hosts may be larvae of the families Cerambycidae or Buprestidae.

Only one species of *Halycaea* was recorded from China until this study (Belokobylskij 1996, 2002, Chen and Shi 2004). Belokobylskij (1996) recorded *H. erythrocephala* from Taiwan, but later (2002) he considered that it was misidentification, and that the studied material belongs to *H. rubata*.

In this paper, a new subgenus *Sinohalycaea* **subgen. nov.** with the type species *Halycaea (Sinohalycaea) longitergum* **sp. nov.**, as well as three new species of the nominative subgenus *Halycaea* s. str., are described from the Oriental part of China (Hainan Islands). A key to subgenera and all known species of this genus is given. This paper is one of the series works on the subfamily Doryctinae from China.

### Material and methods

This study is based on the specimens preserved in the Parasitic Hymenoptera Collection of the Institute of Insect Sciences, Zhejiang University (ZJUH) and Oxford University Museum of Natural History (OUMNH).

The terminology and measurements used follow van Achterberg (1993). An additional source for the description of sculpture and setation is Belokobylskij (2002). All descriptions and measurements were made under a Leica MZ 12.5 microscope, and all figures were made by a digital camera (Q-Imaging, Micropublisher, 3.3 RTV) attached to a stereomicroscope (Leica MZ APO, Germany) and Auto-Montage Pro version 5.0 software.