



New species of the snakefly genus *Inocellia* Schneider, 1843 (Raphidioptera: Inocelliidae) from Yunnan, China

XINGYUE LIU^{1,6}, HORST ASPÖCK², WEIWEI ZHANG³ & ULRIKE ASPÖCK^{4,5}

¹ Department of Entomology, China Agricultural University, Beijing 100193, China. Email: liu_xingyue@yahoo.com.cn

² Department of Medical Parasitology, Institute of Specific Prophylaxis and Tropical Medicine, Medical University of Vienna, Kinderspitalgasse 15, A-1095 Vienna, Austria. Email: horst.aspoeck@meduniwien.ac.at

³ P.O.Box 4680, Chongqing 400015, China. Email: racer@philfan.com

⁴ Naturhistorisches Museum Wien, Zweite Zoologische Abteilung, Burgring 7, A-1010 Vienna, Austria. Email: ulrike.aspoeck@nhm-wien.ac.at

⁵ Department of Evolutionary Biology, University of Vienna, Althanstraße 14, A-1090 Vienna, Austria. Email: ulrike.aspoeck@univie.ac.at

⁶ Corresponding author. E-mail: liu_xingyue@yahoo.com.cn

Abstract

Two new species of the snakefly genus *Inocellia* Schneider, 1843 from Yunnan Province of China are described: *Inocellia nigra* sp. nov. and *Inocellia yunnanica* sp. nov. A revised key is provided for the males of all *Inocellia* species. The biogeographical significance of the Yunnanian refugial centre is discussed.

Key words: snakefly, *Inocellia*, Yunnan, China

Introduction

Yunnan, an inland province at a low latitude and high elevation, lying between 21°09'–29°15'N and 97°32'–106°12'E in southwestern China, occupies a vast territory with a diversified and unique fauna and flora. At present, about 12,000 species of insects have been recorded from Yunnan, which represents about 23.5% of the total number of insect species presently known from China (Yang *et al.* 2004). Due to the presence of three geographic regions (the eastern Asia monsoon region, the Tibetan plateau region and the tropical monsoon region of southern Asia and Indo-China) and the great elevation differences, Yunnan province possesses an extraordinarily rich diversity of species and ecosystems. The fauna of Neuropterida in Yunnan is very abundant, with 15 families and more than 200 species recorded (Yang 1986; Yang & Liu 2010). However, there is only one described species of Raphidioptera in Yunnan, namely *Inocellia cheni* Liu, H. Aspöck, Yang & U. Aspöck, 2010. Considering the rich fauna of the family Inocelliidae in the Oriental realm (H. Aspöck *et al.* 1991; U. Aspöck *et al.* 2011; Liu *et al.* 2009a, 2009b, 2010a, 2010b), more species of Inocelliidae should be expected in Yunnan. In this paper, we describe two new species of the genus *Inocellia* Schneider, 1843 based on newly obtained or collected materials from Yunnan. An updated key to the males of all species of *Inocellia* Schneider, 1843 is given. The significance of the Yunnanian refugial centre for Raphidioptera is discussed in a biogeographical context.

Material and methods

Specimens for the present study are deposited in the Entomological Museum of China Agricultural University, Beijing (CAU) and the H. & U. Aspöck collection, Vienna (HUAC). Genitalic preparations were made by clearing the apex of the abdomen in a cold, saturated KOH solution for 6–8 h. After rinsing the KOH with acetic acid and water, the apex of the abdomen was transferred to glycerin for further dissection and examination. The terminology of the genitalia generally follows that of H. Aspöck *et al.* (1991) and U. Aspöck and H. Aspöck (2008).