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# Discovery of *Amurinocellia* H. Aspöck & U. Aspöck (Raphidioptera: Inocelliidae) in China, with description of two new species

XINGYUE LIU[1,2], HORST ASPÖCK[3], DING YANG[1] & ULRIKE ASPÖCK[4]

[1]*Department of Entomology, China Agricultural University, Beijing 100193, China. E-mail: liu_xingyue@yahoo.com.cn*
[2]*Department of Biological Science, Tokyo Metropolitan University, Minamiohsawa 1-1, Hachioji, Tokyo 192-0397, Japan*
[3]*Department of Medical Parasitology, Medical University of Vienna, Kinderspitalgasse 15, A-1095 Vienna, Austria. E-mail: horst.aspoeck@meduniwien.ac.at*
[4]*Naturhistorisches Museum Wien, Zweite Zoologische Abteilung, Burgring 7, A-1010 Vienna, Austria. E-mail: ulrike.aspoeck@nhm-wien.ac.at*

## Abstract

The snakefly genus *Amurinocellia* (Raphidioptera: Inocelliidae) is recorded from China for the first time. Two species are described as new to science: *Amurinocellia sinica* **sp. nov.** and *Amurinocellia australis* **sp. nov.** A new combination, *Amurinocellia calida* (H. Aspöck & U. Aspöck) comb. nov. is proposed. A key is provided for the species of *Amurinocellia*. The generic status and the zoogeography of *Amurinocellia* are discussed.

**Key words:** Inocelliidae, *Amurinocellia*, new species, China

## Introduction

Inocelliidae represent a small family in the order Raphidioptera, but nevertheless are widely distributed in the Palaearctic and western Nearctic regions with a few records in the transgression zone with the Oriental region. Based on the contributions of H. Aspöck *et al*. (1991), U. Aspöck & H. Aspöck (2004), Yang (1999), Engel (2002), and Engel & Grimaldi (2008), 24 extant and six fossil species are known so far. Judging from the present fauna of Inocelliidae, 14 species in three genera, more than a half of the world fauna, are distributed in Asia, especially in eastern Asia, showing a rich diversity in this region. However, the regional study of Inocelliidae from Asia is at a young stage and a number of taxa still await description.

*Amurinocellia* H. Aspöck & U. Aspöck, 1973 is a monotypic subgenus, which was originally placed in the genus *Inocellia* Schneider and then transferred to *Parainocellia* H. Aspöck & U. Aspöck. It is characterized by the highly modified male ninth gonocoxites with distinct processes, the long hook-like projections from the inner surface of the ninth gonocoxite (pseudostyli in H. Aspöck *et al*. 1991, interpreted as gonapophyses of segment 9 in U. Aspöck & H. Aspöck 2008), and the female eighth tergite ventrally projected posteriorly. Up to now, *Parainocellia (Amurinocellia) calida* (H. Aspöck & U. Aspöck, 1973) is the only known species of *Amurinocellia*, which is distributed in the Russia Far East and Korean Peninsula.

During our recent study on the Chinese Raphidioptera, additional specimens were found from Central China and identified as species of *Amurinocellia*. In the present study, two new species, *Amurinocellia sinica* **sp. nov.** and *Amurinocellia australis* **sp. nov.** are described from China and additional material of *A. calida* is documented. A key to the adults of the *Amurinocellia* species is presented.

Based on the morphological characters of the genital sclerites, *Amurinocellia* is raised to generic status. The systematic position of *Parainocellia* and *Amurinocellia* is discussed. A distribution map of *Amurinocellia* is provided, and the identification of the species as faunal elements with respect to their Pleistocene refugia is discussed.

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