

## A new cnemidolestodean stem-orthopteran insect from the Late Carboniferous of China

Jun-Jie Gu, Olivier Béthoux, and Dong Ren Acta Palaeontologica Polonica 59 (3), 2014: 689-696 doi: http://dx.doi.org/10.4202/app.2011.0204

A new Late Carboniferous cnemidolestodean insect *Xixia huban* gen. et sp. nov., is described from the Xiaheyan locality (Zhongwei City, Ningxia, China; Tupo Formation). Its combination of character states and observed variants on the wing venations are indicative of homologies shared with more derived members of the order. In particular it is ascertained that MP runs fused with CuA and CuA + CuPa, but is not usually visible as a distinct vein. The new genus exhibits previously unknown coloration pattern composed of dark patches distributed over the whole forewing (as opposed to regular stripes or rows of spots, previously documented in the group). The comparatively abundant sample makes it one of the best documented cnemidolestodeans to date.

**Key words:** Insecta, Archaeorthoptera, Cnemidolestodea, *Aetophlebia singularis*, Pennsylvanian, Xiaheyan locality, Ningxia, China.

Jun-Jie Gu [orthoptera\_gu@aliyun.com], College of Biological Science and Engineering, North University of Nationalities, 204 Wenchangbeijie, Xixia District, Yinchuan 750021, China and State Key Laboratory of Palaeobiology and Stratigraphy (Nanjing Institute of Geology and Palaeontology, CAS), Nanjing, China; Olivier Béthoux [obethoux@mnhn.fr], UMR7207 CNRS (CR2P), Muséum National d'Histoire Naturelle, CP38, 8 rue Buffon 75231 Paris Cedex 05, France; Dong Ren [rendong@mail.cnu.edu.cn] (corresponding author), Key Laboratory of Insect Evolution and Environmental Changes, Capital Normal University, Beijing, China.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see <u>creativecommons.org</u>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

