



Article

urn:lsid:zoobank.org:pub:D386E3DF-615F-4418-8BC1-B6A21A44C9EE

A new species of Progonocimicidae (Hemiptera: Coleorrhyncha) from northeastern China

QIUPING DONG¹, YUNZHI YAO^{1,2,3} & DONG REN¹

¹Key Lab of Insect Evolution and Environmental Changes, Capital Normal University, Beijing 100048, China

²State Key Laboratory of Palaeobiology and Stratigraphy (Nanjing Institute of Geology and Palaeontology, CAS), Nanjing 210008, China

³Corresponding author. E-mail address: yaoyz100@gmail.com

Abstract

A new fossil species, *Cicadocoris varians* sp. n., of the family Progonocimicidae is described from the Middle Jurassic Jiulongshan Formation of Daohugou Village, Inner Mongolia, China. This Progonocimicidae is a well-preserved unusual fossil showing different sizes and proportions of the left and right tegmen.

Key words: Progonocimicidae, fossil, Daohugou fauna

Introduction

The Progonocimicidae is an extinct fossil Coleorrhyncha family, which was established by Handlirsch (1906). It contains approximately 20 genera and 60 species. The family has been described from the Permian of Australia (Tillyard 1926), the Triassic of Kyrgyzstan (Becker-Migdisova 1958), Australia (Evans 1956, 1961, Wootton 1963), Argentina (Martins-Neto 2003); the Jurassic of Germany (Handlirsch 1939, Popov 1977), United Kingdom (Popov *et al.* 1994), Luxembourg (Szwedo 2011), China (Hong 1983, Wang *et al.* 2009, Dong *et al.* 2012), Kyrgystan (Popov 1982), Russia (Popov 1985, 1988); the Cretaceous of United Kingdom (Klimaszewski & Popov 1993), Russia (Popov 1988), Mongolia (Popov 1986), Brazil (Bechly & Szwedo 2007), and Lebanon (Szwedo *et al.* 2011).

So far, there are only 4 species from China in Progonocimicidae of Coleorrhyncha, including *Mesocimex sinensis* Hong, 1983 and *Mesocimex brunneus* Hong, 1983 from the Middle Jurassic of Haifanggou Formation, Liaoning, *Mesocimex lini* Wang *et al.*, 2009 and *Cicadocoris assimilis* Dong *et al.*, 2012 from the Middle Jurassic of Jiulongshan Formation, Inner Mongolia. Dong *et al.* (2012) questioned the separation of *Mesocimex* and *Cicadocoris* and synonymized them.

Recently, we discovered a well-preserved fossil specimen referable to Progonocimicidae from the Jiulongshan Formation at Daohugou Village, Ningcheng County, Inner Mongolia, China. Based on some unique characters of the specimen, we describe it as a new species of *Cicadocoris*.

This deposit is described from streams and lakes within a humid and warm-temperate climate (Ren *et al.* 2002). Ren *et al.* (2010) reported a high insect diversity, including Ephemeroptera, Odonata, Plecoptera, Blattaria, Grylloblattodea, Dermaptera, Orthoptera, Archaeorthoptera, Phasmatodea, and Hemiptera. The age of the Daohugou fossil-bearing beds is estimated to be Middle Jurassic (*ca* 165 Ma; Ren *et al.* 2010; Zhang *et al.* 2010; Shi *et al.* 2011; Yang *et al.* 2011).

Material and methods

This study is based on one fossil specimen (part and counterpart), housed in the fossil insect collection of the Key