



A new species of Protopsyllidiidae (Hemiptera, Sternorrhyncha) from the Middle Jurassic of China

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Abstract

A new fossil species, *Poljanka hirsuta* sp.n., of the family Protopsyllidiidae is described from the Middle Jurassic Jiulongshan Formation of Daohugou Village, Inner Mongolia, China. A key to the species of the genus *Poljanka* Klimaszewski, 1995 is provided. The diagnosis of the genus is revised.

Key words: Hemiptera, Sternorrhyncha, Protopsyllidiidae, Middle Jurassic

Introduction

Protopsyllidiidae is an extinct family of insects in the Hemiptera suborder Sternorrhyncha. This family is known from the Late Permian (ca. 260 Ma) to the Late Cretaceous (90 Ma) (Grimaldi 2003). Recently we discovered two well-preserved fossil specimens that represent a species of this family. They were collected in China from the Middle Jurassic Jiulongshan Formation at Daohugou Villages, Ningcheng County, Inner Mongolia. This is the second report of the family Protopsyllidiidae in China, and based on these specimens, we describe a new species assigned to *Poljanka* Klimaszewski, 1995. The age of the Daohugou fossil-bearing beds is recognized as the Middle Jurassic (ca. 165 Ma) (Wang *et al.* 2009; Ren *et al.* 2010; Zhang *et al.* 2010; Shi *et al.* 2011; Yang *et al.* 2011).

Material and methods

This study is based on two fossil specimens (one includes part and counterpart), housed in the fossil insect collection of the Key Lab of Insect Evolution and Environmental Changes, College of Life Sciences, Capital Normal University, Beijing, China. The specimens were examined without alcohol and under alcohol using a Leica MZ 12.5 dissecting microscope. Photos were taken by a Nikon Digital Camera DXM1200C. Line drawings were prepared with Adobe Photoshop CS2 graphic software.

The wing venation nomenclature used in this paper is based on the interpretation of Bekker-Migdisova (1985): R, radius; R₁, first branch of anterior radial vein; R₂, second branch of anterior radial vein; Rs, posterior radial vein; M, media; M₁₊₂, anterior and second branch of media; M₃₊₄, third and fourth branch of media; CuA, cubitus anterior vein; CuA₁, anterior branch of cubitus anterior; CuA₂, second branch of cubitus anterior; CuP, cubitus posterior vein; A₁, anterior branch of anal vein; A₂, second branch of anal vein.

Protopsyllidiidae Carpenter, 1931

Until now, 31 genera and 57 species have been described in this family. There are 28 species known from the Permian (Tillyard 1926; Davis 1942; Evans 1943; Bekker-Migdisova 1959, 1960, 1985; Riek 1976; Klimaszewski