

The first discovery of fossil rhopalids (Heteroptera: Coreoidea) from Middle Jurassic of Inner Mongolia, China

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Abstract

Two new genera and two new species of fossil rhopalid, *Miracorizus punctatus* **gen. & sp. nov.** and *Longiclavula calvata* **gen. & sp. nov.**, are described and illustrated. They were collected from the Middle Jurassic Jiulongshan Formation of Inner Mongolia, China. This is the earliest fossil record of the family Rhopalidae in the world.

Key words: Heteroptera, Coreoidea, Rhopalidae, fossil, Middle Jurassic, Jiulongshan Formation

Introduction

Rhopalids are found in all major faunal regions and 22 extant genera and about 200 species are recognized (Göllner-Scheiding 1983). This family has often been considered to be a subfamily of an inclusive Coreidae (Kiritshenko 1951; Xiao 1977; Zhang 1985), but modern workers treated it as a distinct family (Schaefer 1965, and discussion therein; Carver *et al.* 1991; Li & Zheng 1994; Vinokurov & Kanyukova 1995; Zheng 1999).

Fossil representatives of the superfamily Coreoidea are known since the Late Triassic (Lin 1992). So far, all fossil species of this group have been placed within Coreidae and Alydidae (Carpenter 1992). Nearly 50 genera have been described, mostly from China (22 genera and 27 species) (Hong 1983, 1984, 1987; Hong & Wang 1987; Lin 1977, 1986, 1992; Yao *et al.* 2004; Zhang 1989; Zhang & Zhang 1990; Zhang *et al.* 1994) and USA (ca. 15 genera) (Cockerell 1909; Scudder 1890), a few species from Kazakhstan (Becker-Migdisova 1962; Becker-Migdisova & Popov 1963; Popov 1968), Germany (Heer 1853; Statz & Wangner 1950; Štys & Říha 1975, 1977), France (Theobald 1937), and Spain (Martínez-Delclòs *et al.* 1991). No fossil species of the family Rhopalidae have been