

Revision of the genus *Sinopalaeocossus* Hong (Hemiptera: Palaeontinidae), with description of a new species from the Middle Jurassic of China

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Abstract

The diagnostic characters for *Sinopalaeocossus* Hong, 1983, belonging to the Palaeontinidae Handlirsch, 1906, are revised. This genus is remarkably different from others in the fore wing, whose branches of Sc are obscure and antenodal region is square; and in the hind wing, whose M_{3+4} is unbranched and arises from stem M, whose M_{1+2} fork is more distal and A_1 is absent. A new species, *Sinopalaeocossus trinervus* sp. nov., is described based on two well preserved specimens from the Middle Jurassic of Daohugou, Inner Mongolia, China; this is the first palaeontinid specimen with complete fore and hind wings articulated.

Key words: *Sinopalaeocossus* Hong, 1983, *Sinopalaeocossus trinervus* sp. nov., Hemiptera, Palaeontinidae, Middle Jurassic, Daohugou, China, new species

Introduction

Sinopalaeocossus Hong, 1983 was erected based on a distal fragment of a hemipterous hind wing from the Middle Jurassic Jiulongshan Formation and assigned to the extinct family Palaeontinidae (Hong, 1983). Owing to its poor preservation, the relationships of the main veins in the basal part of the hind wing are unknown and veins CuA_2 , CuP , and A_1 , figured by Hong (1983), are obscured in the original photograph (Hong, 1983, pl. 14, fig. 2). Moreover, because of the deformation of the fragmented wing, the location of veins CuA_2 , CuP and A_1 and the wing shape are uncertain. The poor preservation and presence of a 3-branched M vein makes this genus questionable: unlisted in the treatise by Carpenter (1992) and excluded from the Palaeontinidae (Zhang, 1997). Carpenter (1992)