



***Palaeontinodes reshuitangensis*, a new species of Palaeontinidae (Hemiptera, Cicadomorpha) from the Middle Jurassic of Reshuitang and Daohugou of China**

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Abstract

Palaeontinodes reshuitangensis **sp. nov.**, a new species of the Mesozoic family Palaeontinidae, is described based on some well-preserved specimens from the Middle Jurassic of Reshuitang and Daohugou of China. *Palaeontinodes* cf. *angarensis* Becker-Migdisova & Wootton, 1965 (sensu Wang, Zhang & Fang, 2006) is transferred to *P. reshuitangensis*. This discovery indicates that fossil-bearing strata of Daohugou and Reshuitang are contemporaneous. A key to species of the genus *Palaeontinodes* is presented.

Key words: Mesozoic, insect, fossil, morphology, identification

Introduction

Reshuitang, newly discovered fossil site about 15 km north of Lingyuan City, Liaoning, China, yields some well-preserved fossils including macroplants and salamanders in its Mesozoic volcano-sedimentary deposits (Zhang & Wang, 2004; Wang & Evans, 2006). Zhang and Wang (2004) suggested that the Reshuitang plant fossil assemblage intervenes between the Middle Jurassic Haifanggou Flora and Early Cretaceous Jehol Flora. They further considered the fossil-bearing strata to be late Middle Jurassic in age and a little younger than the famous Daohugou deposits. Considering the similarity of salamander fossils from Reshuitang to those from Daohugou, Wang and Evans (2006) indicated that the Reshuitang deposits are contemporaneous with the Daohugou deposits and their ages are Late Jurassic–Early Cretaceous. Liu *et al.* (2006) thought the biotas respectively from Daohugou and Reshuitang to be same and gave the isotopic age of 168–152 Ma by U-Pb analysis of fossil-bearing strata. In contrast to Wang and Evans (2006), they attributed the biota to the Middle Jurassic–early Late Jurassic (Liu *et al.*, 2006). Zhang and Wang (2004) reported some Reshuitang insect fossils, which, however, are too poorly preserved to provide any stratigraphic evidence. Very recently the present authors have collected some insect specimens from Reshuitang, of which one is well-preserved and assigned to the genus *Palaeontinodes* Martynov, 1937.

Palaeontinodes within Palaeontinidae (Hemiptera: Cicadomorpha) was erected on the basis of an incomplete forewing from the Lower Jurassic of Tajikistan (Martynov, 1937). Its type species, *P. shabarovi* Martynov, 1937, was redescribed in detail by Becker-Migdisova and Wootton (1965). Seven species within this genus have been reported from the Lower–Middle Jurassic of Tajikistan, Russia and north China (Becker-Migdisova, 1949, 1950; Becker-Migdisova & Wootton, 1965; Hong, 1983; Shcherbakov, 1985; Wang *et al.*, 2006a, 2007). *Palaeontinodes* has been reported from Daohugou and regarded as an important indicator of the stratigraphic age (Tan & Ren, 2002; Ren *et al.*, 2002; Wang *et al.*, 2006a). Therefore, the present discovery of