



## A new species of *Archirhagio* Rohdendorf, 1938 from the Middle Jurassic of Inner Mongolia of China (Diptera: Archisargidae)

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### Abstract

The small genus *Archirhagio* Rohdendorf is an extinct Jurassic group of brachyceran flies. So far, only two known species have been found in the Middle/Upper Jurassic of Karatau (Kazakhstan) and the Middle Jurassic of Daohugou (Inner Mongolia, China) respectively. In this paper, a new species from the Middle Jurassic of Daohugou is described. A key to the species of the genus *Archirhagio* is given.

**Key words:** Diptera, Archisargidae, *Archirhagio*, new species, Middle Jurassic, Daohugou, China

### Introduction

*Archirhagio* Rohdendorf was erected as a monotypic genus in 1938. Originally, this genus was placed in the brachyceran family Rhagionidae under the subfamily Vermileoninae (Rohdendorf 1938, 1974). According to the adult morphological characters, Nagatomi (1977) first raised the vermilionid group as a family rank. He also indicated that the family Vermilionidae is somewhat archaic in origin. As a consequence, *A. obscurus* Rohdendorf, 1938 became the oldest member of the Vermilionidae. Mostovski (1997) transferred the genus *Archirhagio* to the family Archisargidae. Nagatomi and Yang (1998) also followed the concept that “*Archirhagio* would be more similar to Archisargidae rather than to Vermilionidae”. Before 2003, only one species *A. obscurus*, which came from the Middle/Upper Jurassic of Karatau (Kazakhstan), was described in this genus. Zhang and Zhang (2003) added a second species *A. striatus* Zhang *et* Zhang, 2003, which was collected from the Daohugou Village, Inner Mongolia of China. In this paper, we describe the third species of *Archirhagio* (*A. zhangii* sp. nov.). Both Chinese species come from the same Middle Jurassic locality – Daohugou – which seems to be somewhat older than Karatau deposit of *A. obscurus*.

During recent years, Daohugou village became a famous locality of fossil animals and plants. Many insects have been found in this biota, such as coleopterans (Tan *et al.* 2007), dipterans (Zhang *et al.* 2008), ephemeropterans (Huang *et al.* 2007), heteropterans (Yao *et al.* 2007), homopterans (Wang & Ren 2007), neuropterans (Ren 2002), odonatans (Zhang *et al.* 2006), and plecopterans (Liu *et al.* 2007). As for Diptera, the brachyceran family Archisargidae is an obviously common group in the taphocenosis. So far, five genera with 12 species have been found (Zhang & Zhang 2003; Zhang *et al.* 2007a, 2007b, 2008). They represented more than 1/3 of the family from around the world, and more to be discovered.