

## The Late Jurassic fossil from Asian ancestry to a recent genus, *Nothotrichocera* Alexander 1926 (Diptera: Trichoceridae)

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### Abstract

A new trichoceriid species of a fossil genus *Zherikhinina* Krzeminska, Krzeminski & Dahl 2009 is described from Shar Teg, a well known Upper Jurassic locality in Mongolia. Its plausible ancestry to a Recent genus *Nothotrichocera* Alexander 1926 supports the Laurasian origin of this latter genus, now of strictly circum-Antarctic distribution.

**Key words:** Fossil Diptera, Trichoceridae, new species, *Zherikhinina*, *Nothotrichocera*, Shar Teg, Upper Jurassic, Gondwana, Laurasia

### Introduction

The Upper Jurassic lacustrine deposits of Shar Teg Beds outcropped at Ulan Malgait Mt. 4-5 km west of Shar Teg Mt., 100 km ESE Altai Somon (former Baijan-Obo), Altai Gobi Aimag, SW Mongolia. The orictocenosis of Shar Teg includes a unique complex of flora and fauna: pelecypods, gastropods, ostracods, conchostracans, insects, fishes, labyrinthodont amphibians, turtles, crocodiles, dinosaurs and mammals (Gubin & Sinitsa 1996). A diverse Late Jurassic insect assemblage (some 3000 fossils of more than 200 families) was collected in mudstone of the Shar Teg Beds (Rasnitsyn & Quicke 2002) and almost six hundreds of them were Diptera (one of the leading insect orders together with Coleoptera).

Among the eleven specimens of adult Trichoceridae from Shar Teg, seven representatives of an unknown species were distinguished. By the proportions of two basalmost tarsomeres the new species is ascribed to a fossil genus *Zherikhinina* Krzeminska, Krzeminski & Dahl 2009. The life span of the genus stretches from the Middle Jurassic to early Cretaceous. Until present, *Zherikhinina* comprised six species, known from the following Asiatic localities: Novospasskoe (later Early or early Middle Jurassic), Daohugou in Inner Mongolia of China (Middle Jurassic; Ren 1995)—each locality with one species; Karatau in Kazakhstan (Upper Jurassic)—two species, Baissa, Bon Tsagan and Onokhoy (Early Cretaceous)—two species (for more details about these localities see Rasnitsyn & Quicke 2002).

The genus is presumably an ancestor to the Recent genus *Nothotrichocera* Alexander 1926. Further support for this hypothesis is provided by some intriguing characters of a new species described herein.

Genus *Nothotrichocera* comprises recently twelve species of circum-Antarctic distribution (Krzeminska 2001; 2006).