



## Three new species of the genus *Macgregoromyia* Alexander, with a key to world species (Diptera, Tipulidae)

QIFEI LIU & DING YANG<sup>1</sup>

Department of Entomology, China Agricultural University, Beijing 100193, China. E-mail: lqflying@yahoo.cn

<sup>1</sup>Correspondence author. E-mail: dyangcau@126.com

### Abstract

The following three new species of the genus *Macgregoromyia* Alexander from China are described: *Macgregoromyia ternifoliusa* sp. nov., *M. flatusa* sp. nov. and *M. rectangularis* sp. nov. A key to the world species of the genus *Macgregoromyia* is presented.

**Key words:** Diptera, Tipulidae, *Macgregoromyia*, new species, China

### Introduction

*Macgregoromyia* was proposed by Alexander (1929) as a genus of the family Tipulidae. It is characterized by the following features: rostrum short, with distinguish nasus; without vertical tubercle; wing with Sc<sub>2</sub> usually entering R<sub>1</sub> long beyond fork of Rs (but in *M. ternifoliusa*, at fork of Rs), R<sub>1+2</sub> preserved or spur-like or absent entirely, Rs arcuated, usually greatly bent, r-m entering Rs or entering R<sub>4+5</sub> slightly beyond fork of Rs, outer half of R<sub>4+5</sub> curved backwards, discal cell small, medial cells relatively deep, in some species with macrotrichia (Alexander 1929). It is distributed in the Eastpalearctic and Oriental Regions with twelve known species (Oosterbroek 2011). Four species are known to occur in China (Oosterbroek 2011). Nothing is known about the immature stages or biology of *Macgregoromyia* except for resting position of *M. perpendicularis*; likewise very little is known about the known species. After their description they have been mentioned in the literature only five times (catalogues excepted): Savchenko 1983 included a short descriptive note on four species: *M. brevicula* Alexander, 1933, *M. celestia* Alexander, 1932, *M. shikokuana* Alexander, 1954 and *M. szechwanensis* Alexander, 1932. Yang 2003 included *M. fohkienensis* Alexander, 1949 in his key of the Tipulidae of the Chinese province Fujian. In the present paper, three new species of the genus *Macgregoromyia* are described from China. A key to the world species of the genus *Macgregoromyia* is presented.

### Material and methods

The specimens were studied and illustrated with ZEISS Stemi 2000-c. Genitalic preparations were made by macerating the apical portion of the abdomen in cold 10% NaOH for 12–15 h. After examination it was transferred to fresh glycerine and stored in a microvial pinned below the specimen. Type specimens examined were deposited in the Entomological Museum of China Agricultural University (CAU), Beijing.

Morphological terminology follows McAlpine (1981) for most characters. Terminology of male terminalia is according to Ribeiro (2006). Wing cells are named after the above lying vein. The following abbreviations in figures are used: 9t—ninth tergite, 9s—ninth sternite, gx—gonocoxite, lg—lobe of gonostylus, cg—clasper of gonostylus, b bk—basal beak, bk—beak, d ct—dorsal crest, p ct—posterior crest.