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New species of *Medetera* (Diptera: Dolichopodidae, Medeterinae) from Tibet

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Abstract

Only one species of *Medetera* Fischer von Waldheim was known to occur previously in Tibet. Here the following three species of *Medetera* are described as new to science: *Medetera exornata* sp. nov., *Medetera furva* sp. nov. and *Medetera sinuosa* sp. nov. The first two species belong to the *apicalis* group, and the last one belongs to the *diadema-veles* group. A key to the species of *Medetera* from the Himalayas is provided.

Key words: Diptera, Dolichopodidae, Medeterinae, *Medetera*, Tibet, new species

Introduction

Medetera Fischer von Waldheim is a cosmopolitan genus with more than 350 described species after the alterations made by the establishment of the genera *Medeterella* and *Demedetera* (Grichanov 2011; Naglis & Bickel 2012), of which 17 Oriental species have been recorded since the revision of Oriental and Australasian faunas by Bickel (1987) (Negrobov *et al.* 1991; Yang & Yang 1995; Masunaga & Saigusa 1998; Yang & Saigusa 2000, 2001; Zhu *et al.* 2005; Naglis & Bickel 2012). Adults usually stay on tree trunks or in the crown, sometimes on stones and vertical surface of walls, as predators of small arthropods. Most of them are small, dark metallic green or even black, with thin pollinosity. Larvae are found as predators of larvae of other insects like beetles. *Medetera* can be separated from other dolichopodid genera by the following features: first flagellomere rounded with apical or subapical arista, occiput concaved, proboscis heavily sclerotized, posterior mesoscutum strongly flattened, vein M_{1+2} strongly convergent to vein R_{4+5} beyond discal crossvein, large and pedunculate male genitalia tightly flexed to ventral surface of abdomen (Bickel 1985, 1987; Masunaga & Saigusa 1998).

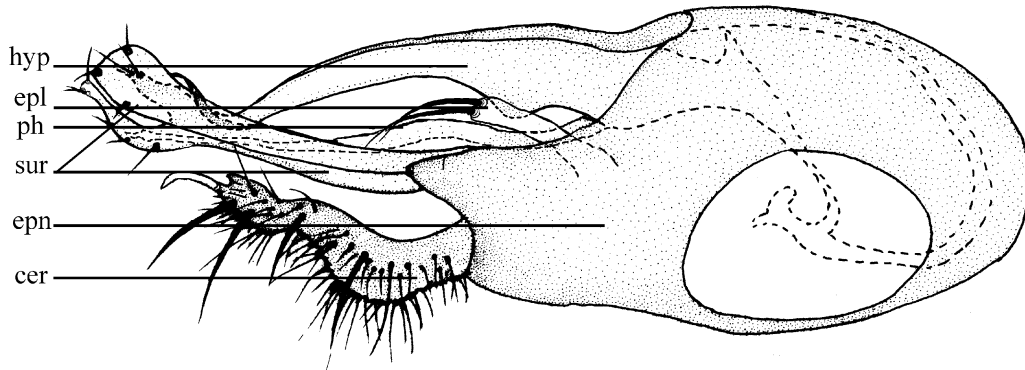
Tibet is a plateau region in Asia, located in the north-east of the Himalayas at the boulder of China, close to India, Nepal, Bhutan and Sikkim. The peculiar climate and environment of the region has influenced the special biodiversity in Tibet and other countries of the Himalayas, which is different from the other parts of China. Previously there was only one species of *Medetera* recorded from Tibet, six from Nepal and four from India, of which *M. austroapicalis* Bickel and *M. grisescens* De Meijere occur in both places (Yang *et al.* 2006). Here three new species of *Medetera* are added to the fauna of Tibet. A key to the all 12 species of the genus from the Himalayas is provided.

Material and methods

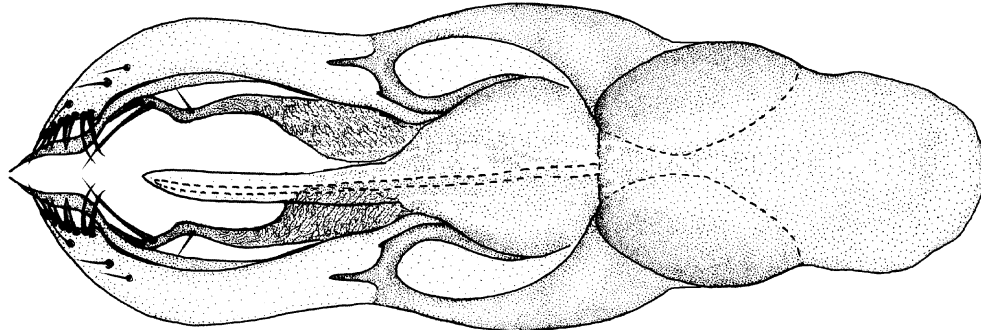
The specimens on which this study is based were collected from Tibet in 2012 by Malaise trap at an altitude of about 3500 m. All specimens are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing. Morphological terminology for adult structures mainly follows McAlpine (1981). Terms for the structures of the male genitalia follow Cumming & Wood (2009). The following abbreviations are used: acr = acrostichal bristle (s), ad = anterodorsal bristle (s), av = anteroventral bristle (s), dc = dorsocentral bristle (s), pd =



11



12



13

FIGURES 11–13. *Medetera sinuosa* sp. nov., male. 11. Antenna; 12. genitalia, lateral view; 13. genitalia, ventral view. Abbreviations: epl = epandrial lobe, epn = epandrium, hyp = hypandrium, ph = phallus, sur = surstylus, cer = cercus. Scale bar = 0.2 mm.

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