

## A Revision of the Oriental and Australasian *Medetera* (Diptera: Dolichopodidae)

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**ABSTRACT.** The Oriental and Australasian *Medetera* (Diptera: Dolichopodidae) are revised and 61 species are recognized, 43 of them new, with 27 Oriental, 29 Australasian, and 5 species occurring in both zoogeographical regions. All species are described and figured except *M. adsumpta* Becker, *M. nudicoxa* Becker and *M. longa* Becker, which were not seen. A key is provided for the separation of males.

The following species are newly placed in synonymy: *M. atrata* Van Duzee, *M. cilifemorata* Van Duzee, *M. hawaiiensis* Van Duzee and *M. palmae* Hardy (= *M. grisescens* de Meijere); and *Elongomedetera thoracica* Hollis (= *M. gracilis* Parent). Lectotypes are designated for *M. apicipes* de Meijere, *M. grisescens* de Meijere, *M. longitarsis* de Meijere, *M. minima* de Meijere, *M. olivacea* de Meijere, *M. opaca* de Meijere, *M. platychira* de Meijere, *M. pumila* de Meijere and *M. vivida* Becker. A neotype is designated for *M. femoralis* Becker. *Medetera comes* Hardy and *M. extranea* Becker are regarded as *nomina dubia*. *Micromorphus vegandris* (Frey) is a new combination for *Medetera vegandris* Frey.

Of particular interest is the secondary segmentation and articulation of the male cercus in the *salomonis* group, unique among Brachycera. Here the cercus has been divided into discrete basal and distal sections, with the distal section freely articulated on basal section.

Three high altitude species from Nepal have relatively long and broad wings. Several species have orientated silvery pruinosity.

A phylogenetic analysis of the major *Medetera* species groups is presented.

The Australasian *Medetera* fauna, although with distinctive elements, is derived from the Oriental fauna. The Pacific Ocean has progressively fewer species moving eastwards from the Oriental-Australasian source area. *Medetera grisescens* is a widespread tramp species, from the western Indian Ocean to Hawaii, while the Australasian *M. salomonis* ranges from French Polynesia to the Philippines. Elements from the predominantly holarctic *apicalis* and *diadema-veles* groups are present in the Orient and Australasia. *Medetera kinabaluensis*, from high elevation in Sabah, belongs to the circumboreal, primarily conifer-associated scolytid predator *signaticornis-pinicola* group. The disjunct distribution of the *aberrans* group in the Orient and the New World is regarded as a vicariant distribution resulting from progressive cooling and southward retreat of early Tertiary circumboreal warm mesophytic forests.

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