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**Revision of the genus *Elaphropeza* Macquart (Diptera: Hybotidae)
from the Oriental Region,
with a special attention to the fauna of Singapore**

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Table of contents

Abstract	3
Introduction	4
Material and methods	5
Diagnosis and morphology of <i>Elaphropeza</i>	6
Key to the Oriental species of <i>Elaphropeza</i>	7
Systematic account	13
Key to <i>Elaphropeza</i> species groups	14
<i>E. biuncinata</i> species group	14
<i>E. ephippiata</i> species group	59
General discussion	149
Phylogenetic relationships of <i>Elaphropeza</i>	149
Phylogenetic relationships within <i>Elaphropeza</i>	150
Notes about some morphological features in <i>Elaphropeza</i>	152
Bionomics	153
Oriental diversity	154
Acknowledgements	155
References	155
Check-list of <i>Elaphropeza</i> from the Oriental region	158
Species removed from <i>Elaphropeza</i>	162
Index	163

Abstract

The genus *Elaphropeza* Macquart from the Oriental region is revised. In addition to the 79 known species (including seven new combinations of species previously placed within *Drapetis* Meigen) 51 new species are described and illustrated. The study is mainly based on freshly collected material in Singapore (544 samples, year cycle in eight stations and numerous hand captures). Smaller samples were available from Malaysia, Thailand and Cambodia. Of the 51 new species only 43 have been given a name: *E. acantha* sp. nov., *E. asexuata* sp. nov., *E. asiophila* sp. nov., *E. belumut* sp. nov., *E. benitotani* sp. nov., *E. bezzii* sp. nov., *E. bulohensis* sp. nov., *E. chekjawa* sp. nov., *E. combinata* sp. nov., *E. crassicerus* sp. nov., *E. darrenyeoi* sp. nov., *E. demeijerei* sp. nov., *E. equalis* sp. nov., *E. feminata* sp. nov., *E. flavicaput* sp. nov., *E. furca* sp. nov., *E. limosa* sp. nov., *E. luananensis* sp. nov., *E. luteoides* sp. nov., *E. malayensis* sp. nov., *E. meieri* sp. nov., *E. melanderi* sp. nov., *E. modesta* sp. nov., *E. monacantha* sp. nov., *E. monospina* sp. nov., *E. murphyi* sp. nov., *E. neesoonensis* sp. nov., *E. ngi* sp. nov., *E. pauper* sp. nov., *E. pluriacantha* sp. nov., *E. riatanae* sp. nov., *E. sime* sp. nov.,

E. singaporensis sp. nov., *E. singulata* sp. nov., *E. sivasothii* sp. nov., *E. spicata* sp. nov., *E. spiralis* sp. nov., *E. sylvicola* sp. nov., *E. temasek* sp. nov., *E. tiomanensis* sp. nov., *E. ubinensis* sp. nov., *E. yangi* sp. nov., *E. yeoi* sp. nov. Eight species known only as females are briefly diagnosed but not named. Species (including type materials in most cases) described by C.R. Osten-Sacken, M. Bezzi, J.C.H. de Meijere, R. Senior-White, A.L. Melander and K.G.V. Smith were examined and re-described. **Neotypes** have been designated for *E. calcarifera* Bezzi, *E. melanura* Bezzi, *E. formosae* Bezzi and *E. scutellaris* Bezzi. *Elaphropeza exul* Osten-Sacken, 1882 is transferred as *Crossopalpus exul* (Osten-Sacken) **comb. nov.** *Elaphropeza formosae* Bezzi *sensu* Quate, 1960 re-described by L.W. Quate from Micronesia, is considered a new species and a new name is given: *E. quatei* sp. nov. All species of *Elaphropeza* are divided into two main species groups: *E. biuncinata* group and *E. ephippiata* group. Phylogenetic relationships within *Elaphropeza* are provisionally outlined. Some interesting morphological features and phenology of the species are discussed. Fourteen species have been found exclusively in mangroves. A key is given to the species of the Oriental Region (Indian subcontinent, South-east Asia, Philippines and Taiwan, but excluding certain species of the Chinese mainland that proved to be different from the rest of the Oriental Region). A check list of the Oriental species is provided.

Key words: Diptera, Hybotidae, *Elaphropeza*, revision Oriental realm, new species, terrestrial forest, mangrove

Introduction

The genus *Elaphropeza* Macquart, 1927 includes quite small, predacious, mostly yellow-coloured flies inhabiting different biotopes but usually occurring on leaves and in grass. *Elaphropeza* belongs to the subfamily Tachydromiinae. It is a member of an assemblage of genera classified as the tribe Drapetini that is diagnosed by the following apomorphies: eyes with ommatrichia, loss of vein CuA₂ and loss of tergite 10 in females (correlated with sternite 10 positioned below the cerci) (Cumming and Cooper 1992; Solórzano Kraemer *et al.* 2005; Sinclair and Cumming 2006).

Collin (1961) was the first who presented a detailed morphological analysis of *Elaphropeza*. He indicated the main distinguishing characters of the genus from other empidoids or more precisely from *Drapetis* Meigen and *Crossopalpus* Bigot. Kovalev (1968) applied principals of numeric taxonomy for a similar analysis and Rogers (1983) adopted Collin's conclusions for Neotropical species. Chvála (1975) briefly discussed the taxonomic history of *Elaphropeza*. The status of the group has been a subject of controversies as to consider it as a separate genus, or as a subgenus of *Drapetis*.

In the present paper we follow Collin's (1961) concept of *Elaphropeza* and, thus, accept this group as a separate genus. Collin distinguished *Elaphropeza* from *Drapetis* primarily by the presence of anterodorsal bristles along the shaft of hind tibiae, and the bare upper hind corner of mesopleura. Also, in species of *Elaphropeza* the occiput is more convex, antennae are not upturned, postpedicel is conical, with its lower margin as straight as the upper margin, the style is apical, and posterior ocellar bristles are minute. It should be noted that in the Oriental Region many species of *Elaphropeza* have no anterodorsal bristles on the hind tibiae, but clearly belong to *Elaphropeza*.

Elaphropeza is a circumtropical genus (Smith 1967, 1975, 1980, 1989). Few species have been recorded from the Palaearctic and Nearctic Regions (Melander 1965; Chvála & Kovalev 1989; Raffone 2003). In temperate regions, *Elaphropeza*, being adapted to tropical climates, comes into concurrence with the very diverse *Platypalpus* that occupies a similar niche. Currently, about 160 species of *Elaphropeza* are known worldwide. However, it is evident that this number is far from the real number of included species, because the genus has been only studied very locally.

Osten-Sacken (1882) described the first species of *Elaphropeza* from the Orient (Philippines). However, he misidentified the genus of his species (below we show that it is a *Crossopalpus*) and, actually, the first Oriental species described is *E. fulvithorax* van der Wulp recorded from Sri Lanka (van der Wulp 1897). Bezzi (1904, 1907, 1912, 1914) published a series of papers including descriptions of new species of *Elaphropeza* from Sri Lanka, India and, especially, from Taiwan. De Meijere (1911, 1914) presented the first records of