

SOME ACALYPTRATE FLIES (DIPTERA) FROM TAIWAN

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The first records of the families Pseudopomyzidae, Opomyzidae, Xenasteiidae, and Campichoetidae are given from Taiwan. A new genus of Pseudopomyzidae, *Macalpinella* gen. n. (type species *M. brevifacies* sp. n.), as well as *Acrometopia conspicua* sp. n., *Chamaemyia taiwanensis* sp. n., *Xenasteia chinensis* sp. n. and *Campichoeta spinicauda* sp. n. are described. Locality data for species of other twelve acalyptrate families are given. With 26 figures.

Key words: Cypselosomatidae, Pseudopomyzidae, *Macalpinella*, Neriidae, Opomyzidae, Gobryidae, Strongylophthalmyiidae, Psilidae, Ctenostylidae, Platystomatidae, Dryomyzidae, Sciomyzidae, Chamaemyiidae, Xenasteiidae, Milichiidae, Campichoetidae, Helcomyzidae, new taxa, new records, Taiwan, Oriental region

INTRODUCTION

In the course of our collection trips to Taiwan in 2000 and 2003, we found representatives of 15 dipterous families, which have not been found formerly on that island (*cf.* LIN & CHEN 1999).

In addition to the families below and those four families, which were listed in PAPP (2005), PAPP (2002*b*) reported Lygistorrhinidae, ŠEVČÍK and PAPP (2004) reported Bolitophilidae, PAPP and ŠEVČÍK (2005) published the first Diadocidiidae from Taiwan. Representatives of Mythicomyiidae were also found in the collection of the NMNS, Taichung. MERZ and SUEYOSHI (2002) published a paper with the first record of the Pallopteridae from Taiwan. In the meantime, KORNEYEV (2001) published the first species of Ctenostylidae, *Nepaliseta ashleyi* (BAR-RACLOUGH, 1998), from the island; now I report on the second specimen of that species and I include a record of a ctenostylid fly from Vietnam in this paper. And finally, I would like to note that ROHÁČEK (*pers. comm.*) is working on a paper with the first records of Anthomyzidae from Taiwan (HNHM and NMNS materials).

This paper is with the first records of the families Pseudopomyzidae (*Macalpinella brevifacies* gen. et sp. n.), Campichoetidae (*Campichoeta spinicauda* sp. n.) and Xenasteiidae (*Xenasteia chinensis* sp. n.) for Taiwan. A female of the genus

Geomyza FALLÉN, 1810 was found in the unsorted materials of the NMNS, Taichung: this is the first record of this family from Taiwan (see below).

The materials of Micropezidae (12 specimens collected in 2000, 13 specimens in 2003), Diopsidae (60+73), Conopidae (1), Pallopteridae (1), Lonchaeidae (5+27), Piophilidae (62), Celyphidae (11+7), Anthomyzidae (1+4), Asteiidae (1+25), Clusiidae (7+10), Teratomyzidae (2+35) and Stenomericidae¹ (22+6) will be published elsewhere. The two latter families have not formerly been reported from Taiwan. However, their material is very rich in the HNHM, both as regards the material available from South Eastern Asia (including Taiwan), as well as the number of the new species to be described. It would not be reasonable to include them in the present paper. We want to call attention to the existence of those materials only.

Before the World War I, K. KERTÉSZ, the famous curator of the Diptera Collection of the Hungarian National Museum, bought the smaller half of H. SAUTER's collection of Diptera collected on Formosa (Taiwan) for the HNHM. One can easily understand even now, that most of the Diptera specialists of that era made their publications based on the material in the Deutsches Entomologisches Institut, which bought the larger half of the SAUTER's collections. Of course, there were new species described from the Budapest material, too. In addition, KERTÉSZ identified hundreds and hundreds of specimens, largely based on the contemporary descriptions from the German "half", which however, he never published. This latter fact has been little known until now (see e.g. PAPP 2001). Below I publish also numerous specimens identified by K. KERTÉSZ.

Morphological terminology follows that of the morphology chapters in the Manual of Palaearctic Diptera in all possible cases.

If not otherwise stated, specimens are deposited in the Hungarian Natural History Museum (HNHM). Other collections of depositions are: National Museum of Natural Science, Taichung (NMNS); Taiwan Forestry Research Institute, Taipei (TFRI); Deutsches Entomologisches Institute Eberswalde (DEI).

Hand-written texts on labels are given in quotation marks; relevant data not given on labels as text are in square brackets.

¹ Stenomericidae are treated a number of authors, incl. MATHIS & PAPP (1998) as a subfamily of Periscolididae. By now I think, it is better to give them a family rank.

Legs all yellow. No characteristic setae on legs (except for the mid ventroapical, 0.09 mm), but with long dense microchaetae. Claws long, evenly curved.

Abdomen short and comparatively broad. Epandrium's dorsal "bridge" linear (Fig. 19), hypandrium robust with a pair of large caudally directed processes, each bearing 2 medium-long thick setae (Figs 19–20). Cerci large with dorsally curved long strong setae. Surstylus (Fig. 19) perpendicularly curved, caudally directed part broadest at apical 2/5, apex blunt. Ejaculatory apodeme distinct though bacilliform. Aedeagal apodeme medium long.

Remarks – *Xenasteia chinensis* sp. n. runs to *X. palauensis* HARDY, 1980 in HARDY's key but knob of halteres black (yellow in *palauensis*). Male genitalia are massively different (cf. figs 4a, b of HARDY 1980).

Milichiidae

We managed to collect a rich material of eight genera (183 individuals) during our collection trips in 2000 and in 2003 (*Neophyllomyza* MELANDER, 1913 48 individuals, *Phyllomyza* FALLÉN, 1823 108 individuals, *Desmometopa* LOEW, 1865 2 individuals, *Leptometopa* BECKER, 1903 5 individuals, *Paramyia* WILLISTON, 1897 6 individuals, *Paramyioides* L.PAPP, 2002a 4 individuals, *Stomosis* MELANDER, 1913 3 individuals, *Aldrichiomyza* HENDEL, 1914 7 individuals). The specimens of *Neophyllomyza* will be published in the near future in a revision of the Oriental species. I would like to make another separate paper on *Phyllomyza* species, too. *Stomosis* is new for the Oriental region, and it is represented by new species in our material (which will be described elsewhere).

Aldrichiomyza elephas (HENDEL, 1913) – 3 males, 1 female: Taichung Hsien, Sinshe, 585 m, N24°09'25.2" E120°52'9.6", over/along Ma-Chu-Ken river and in river valley, April 6, 2003, No. 24, leg. L. PAPP & M. FÖLDVÁRI; 1 male, 1 female: Taipei Hsien, Han-Lo-Dé, 450 m, grassy hilltop & hilltop forest, April 13, 2003, No. 25, leg. L. PAPP. 1 female: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, over/along a creek, April 2, 2003, No. 18, leg. M. FÖLDVÁRI. PAPP (2001) revised the Oriental species of this genus; the above specimens fit completely to the description of *A. elephas*.

Paramyioides perlucida L. PAPP, 2002 – 2 males 1 female paratypes (HNHM, abdomen and genitalia of the males in plastic microvials with glycerol): Taiwan: Taipei, Nanshih Chiao, Han-Lo-Da, S of Taipei, 450 m, rocky forest undergrowth, September 23, leg. L. PAPP (see PAPP 2002a). As I mentioned in a footnote of the original paper, I found these specimens in our material, when proof reading that paper. Now abdomen with genitalia of both the males were prepared in order to describe the genitalia.

Abdomen may be extremely swollen (to be higher than the breadth of tergites), almost ball-shaped, when specimens suck much nectar. Sternites small and weakly sclerotized.

No trace of sclerotized sternite 6, consequently S7-S8 complex and thus the whole abdomen is symmetrical (evolutionarily secondarily).

Male genitalia: Epandrium comparatively large with quadrate ventral part and with 3 apical-subapical setae, as given in the original description. Cerci minute, dorsal in position, with only 2 (3) pairs of long setae. Subepandrial sclerite extremely large, forming a second small arch over genitalia (below the epandrium), connecting bases of surstyli. Surstylus as in the original description: large, with characteristic medium-long setae on medial (inner) surface. Distiphallus well sclerotized, rather compact, it does not look sacculiform ventrally (as in *Paramyia*), contrarily to the original description. Ejaculatory apodeme small, comparatively well sclerotized.

In addition to the original description, I must emphasize the presence of extremely strong black thorn-like seta on hind trochanter.

I expressed some doubt about the ranking of *Paramyioides* in the original description (PAPP 2002a). Now this study of the postabdomen and genitalia corroborated its distinctness as a genus. The genus *Paramyioides* will be redescribed with description of a new subgenus in a forthcoming paper on the Diptera of Thailand.

Campichoetidae

Campichoeta (Campichoeta) spinicauda sp. n.

(Figs 23–25)

Holotype male (HNHM): TAIWAN: Taipei Hsien, Fu-Shan LTER Site, lake shore, March 25, 2003, No. 3 – a meadow & dry bed of a creek, leg. M. FÖLDVARI.

Paratypes: 1 female (HNHM): *ibid.*, Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, over/along a creek, April 2, 2003, No. 18, leg. M. FÖLDVARI; 1 male (NMNS, glued on tip of a point label, damaged, head and wings broken down and glued to label below minuten, gen. prep. in a plastic microvial with glycerol): Taiwan Nantou, Hsini Tungpu I/II/1989, K. W. HUANG, Sweeping net – 431–482 [NMNS id. label].

Description – Measurements in mm: body length 2.86 (holotype), 2.65, 3.30 (paratypes), wing length 2.62 (holotype), 2.45, 2.86 (paratypes), wing breadth 0.90, 0.88, 0.98. Dark graphite grey with thick brownish grey microtomentum (head, thorax, abdomen).

Cephalic setae as in *C. obscuripennis*: a more laterally placed proclinate pair of fronto-orbitals, a large reclinate *ors* just behind and medially to the proclinate one and a third short thin reclinate *ors* anteriorly and medially to the proclinate *ors*. Ocellars, inner and outer verticals very long, postocellars long (0.22 mm), cruciate. Frons with some small setae behind lunule. Vibrissae