

## 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, Gobyriidae, Strongylophthalmyiidae, Psilidae, Ctenostylidae, Platystomatidae, Dryomyzidae, Sciomyzidae, Chamaemyiidae, Xenasteiidae, Milichiidae, Campichoetidae, Heleomyzidae, 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 Stenomicridae<sup>1</sup> (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 Stenomicridae 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.

## LIST OF SPECIES

## Cypselosomatidae

*Cypselosoma gephyrae* HENDEL, 1913 – “*Cypselosoma gephyrae* Hend.” det. KERTÉSZ: 2 males: Formosa Sauter – Chip Chip 909. I/III.; 1 female: Formosa Toyenmongai. An additional female with the following labels is also preserved in the HNHM: Formosa Sauter – Mt. Hoozan 1910. VIII. – “Keine Sepsid”. This last label is, in all probability, with O. DUDA’s handwriting, which would reflect to the situation, that it was erroneously sent him as a sepsid fly. In the HNHM there are specimens also from Thailand and Vietnam (see in a forthcoming paper).

*Lycosepsis hamata* ENDERLEIN, 1920 – 1 male: Taipei Hsien, Han-Lo-Dé, 450 m, forest undergrowth, March 29–30, 2003, No. 12, leg. L. PAPP; 3 males: Nantou Hsien, Shuili, forest undergrowth, September 30, 2000, No. 12, leg. L. PAPP. 1 female: Formosa Toyenmongai – “*Lycosepsis hamata* End.” det. H. ANDERSSON 1976. The latter specimen must be the one, which was studied by ANDERSSON (1976). The types must be in the DEI. I prefer to use *Lycosepsis* as a genus rather than as a subgenus of *Formicosepsis* DE MEIJERE, 1916.

## Pseudopomyzidae

**Macalpinella** gen. n.

(Figs 1–8)

Type species: *Macalpinella brevifacies* sp. n.

Gender: feminine.

Description – Prefrons (face) protruding medially and wholly and strongly sclerotized (Fig. 1). Clypeus short, small, -shaped, no sclerotized part between prefrons and clypeus but membrane only. Vibrissae just on the mouth edge. Scape small, without longer setae, pedicel broad with a digitiform process into 1<sup>st</sup> flagellomere, with a complete wreath of setae apically including some longer ones. One large, almost perpendicular anterior orbital pair (very slightly re- and inclinate), 1 short pair of latero-clinate orbital pair, *oc*, *vte*, *vti* large, *poc* small, cruciate (about half as long as *vti*).

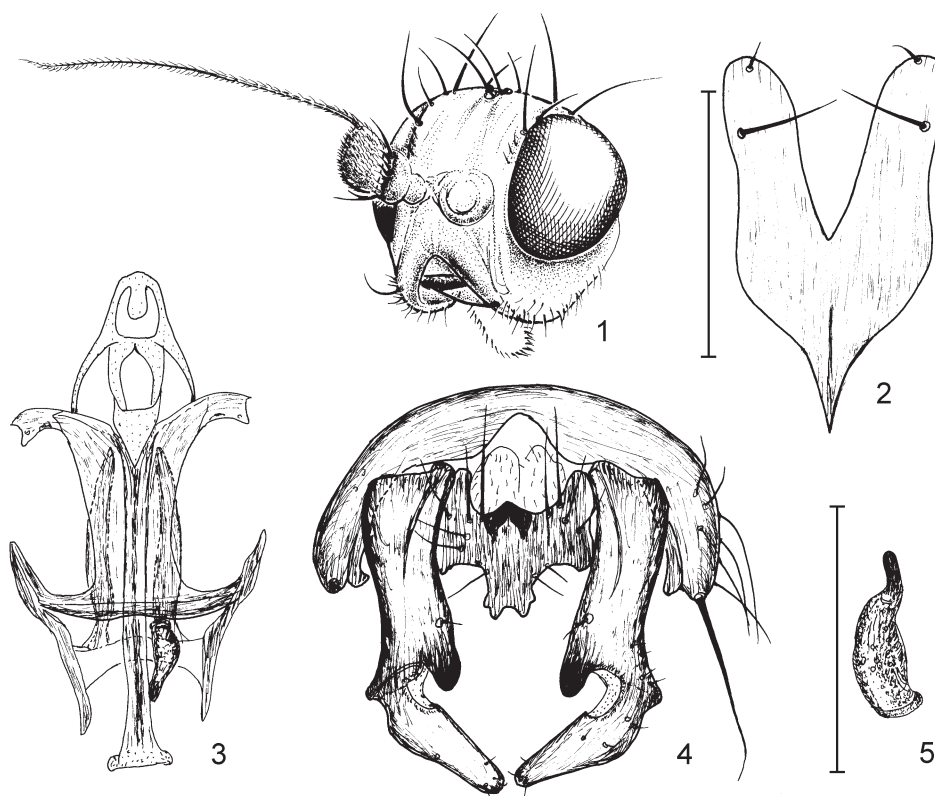
Thoracic chaetotaxy: 1 *pprn*, 2 *np*, 1 *prsut*, 1 shorter prealar, 1 shorter supra-alar, 1 large postalar pairs. 1+3 *dc* pairs, 2–3 enlarged setae in the sagittal acrostichal row, acrostichals otherwise sparse and short and not arranged into rows. That is, there are no enlarged, paired acrostichals. No scapular setae.

Costal vein not spinose. No basal crossvein (not even a trace of it). Actually there is no anal cell (no anal crossvein).

Setulae on tibiae and tarsi rather thin. No terminal process on male fore basitarsus. Mid basitarsus only slightly longer than fore basitarsus.

Male preabdomen of 6 segments. Sternite 6 small, normal, similar to sternite 5. Syntergo-sternite 7–8 complex with a large semiglobular dorsal part, which is longer than epandrium (Fig. 8). The complex is wholly symmetrical and includes stigmal pairs 7 and 8 (Fig. 6). Male cerci fused and strongly sclerotized (Fig. 4). Surstyli bi-segmented, at least apical part obviously movable medially (Fig. 4). Subepandrial sclerite (Figs 2, 7) Y-shaped with 2 pairs of setae. Ejaculatory apodeme (Fig. 5) of an irregular shape. Basiphallus (Figs 3, 7) is a tube, in which aedeagal apodeme is placed. If this is true, the transverse lath is a part of phallobase. Gonopods digitiform (Figs 7, 3). There is a pair of blunt (or rather slightly bifid) appendages, which originate from the level of distiphallus, which may be appendages of aedeagal apodeme or of the gonopods.

Female abdomen with short tergites 3 to 5, tergite 6 very long, longer than tergites 4 and 5 combined. Sternite 6 tends to be bipartite: lateral parts more strongly sclerotized and melanized than medial part. Female tergite 7 long convex, embracing edges of the flat, similarly large sternite 7. However, their edges not fused. Also sternite 7 less strongly sclerotized and melanized medially than laterally. Sternite 8 fused to sternites 7 in its medial half. Tergite 8 and sternite 8 short, cerci minute,



**Figs 1–5.** *Macalpinella brevifacies* sp. n. 1 = head in an oblique view (del. A. SZAPPANOS), 2 = subepandrial sclerite, ventral view, 3 = inner genitalia, dorsal view, 4 = epandrium, surstyli and cerci, caudal view, 5 = ejaculatory apodeme. Scale bars: 0.2 mm for Figs 2–4, 0.1 mm for Fig. 5

hidden under tergite 8, no sclerotized epiproct and hypoproct. Tergites 6 and 7 with much longer setae than preceding ones. No sclerotized spermathecae.

Remarks – *Macalpinella* gen. n. runs to *Rhinopomyzella* HENNIG, 1969 (Neotropical) in his key (pp. 590–591): both genera have 1+3 pairs of dorso-centrals, anal cell of wing reduced, etc. Now we leave the question open, whether *Rhinopomyzella* is a subgenus of *Pseudopomyza* STROBL, 1893 or not. However, it is not closely related. The most conspicuous differences are that *Macalpinella* has completely sclerotized face and only 2 pairs of orbital setae (3 pairs in *Rhinopomyzella*). Male genitalia are markedly different. (I made the comparison through a male specimen of *Rhinopomyzella* from Costa Rica, Suiza de Turrialba (HNHM) (probably a new species). Structure of face, prefrons being desclerotized, and less protruding than in *Macalpinella*, its 3 reclinate pairs of orbital setae well shorter and thicker than in *Macalpinella*, genae at vibrissae much less broad than first flagellomere, no additional scutellar setulae in *Rhinopomyzella*, 2 strong costagial plus 1 long seta just distally to humeral vein.

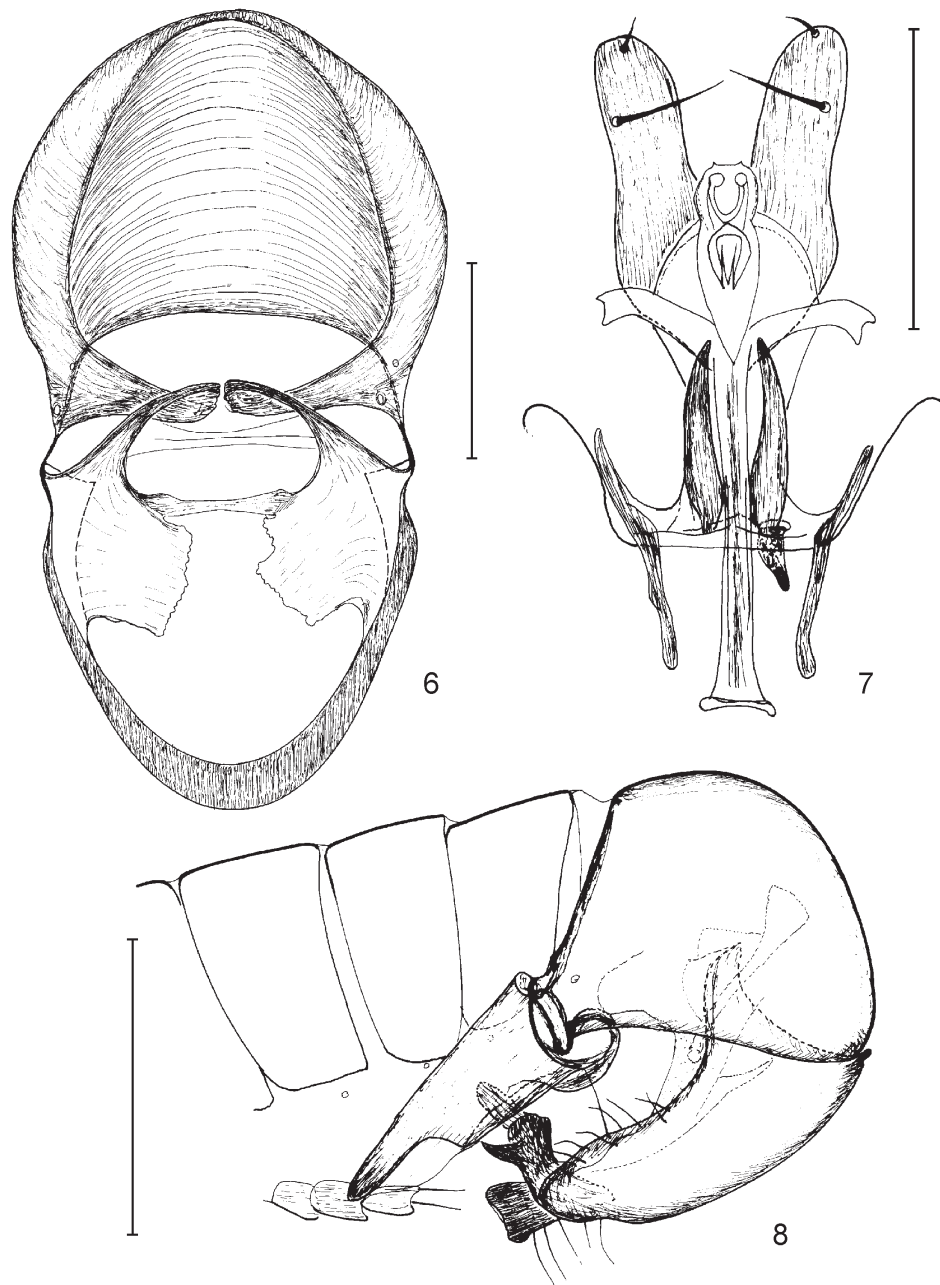
*Macalpinella* gen. n. was compared also with *Pseudopomyza* (*atrimana*). Differences other than in the structure of face, orbital setae etc., are mainly in genitalia. Sternite 6 of *Pseudopomyza* is H-shaped as given by MCALPINE & SHATALKIN (1998: fig. 9), it is simple here. Syntergosternite 7–8 complex of the same structure as in *Macalpinella*, but that is much shorter than epandrium (2/3 only), and vice versa in *Macalpinella*. Cerci small, weakly sclerotized but also fused sagittally. Subepandrial sclerite of the same structure, incl. 2 pairs of strong setae. Surstylus of *Pseudopomyza* not divided, phallus much different than in *Macalpinella* (fig. 1.5 of MCALPINE & SHATALKIN 1998).

*Etymology* – I name this genus after Dr. DAVID K. MCALPINE (Entomology Section, Australian Museum, Sydney) in order to express my gratitude for all his achievements in the taxonomy and systematics of the acalyptrate dipterous families.

### ***Macalpinella brevifacies* sp. n.**

(Figs 1–8)

*Type material* – Holotype male (HNHM): TAIWAN, Nantou Hsien, Shuili, forest undergrowth, Sep 30, 2000, leg. L. PAPP, No. 12. Paratypes: 1 female (TFRI, glued to a narrow card point label on a headless pin): Peipu, Hualien Co., TAIWAN, XI-3-1994, Y. B. Fan – Sheet light Trap: 1930. In a poor state of preservation: moth scales stick to it, wings glued together; 1 male (HNHM): Ilan Hsien, Fu-Shan LTER Site, along a forest path, March 27, 2003, No. 9, leg. L. PAPP & M. FÖLDVÁRI; 2 males 1 female (HNHM, abdomen and genitalia of one male in a plastic microvial with glycerol): Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, along a creek, April 3, 2003, No. 19, leg. L. PAPP & M. FÖLDVÁRI; 1 female (HNHM): *ibid.*, over/along a creek, April 2–3, leg. L. PAPP, No. 15.



**Figs 6–8.** *Macalpinella brevifacies* sp. n., paratype male, genitalia. 6 = syntergosternite 7–8 complex, subventral view, 7 = inner genitalia with subepandrial sclerite, ventral view, 8 = postabdomen with genitalia, lateral view. Scale bars: 0.2 mm for Figs 6–7, 0.4 mm for Fig. 8

*Description* – Measurements in mm: body length 1.91 (holotype), 1.85–2.00 (paratypes), wing length 2.17 (holotype), 1.72–2.20 (paratypes), wing breadth 0.86, 0.715–0.86. Body shiny black with thin dark microtomentum, pleurae even more shiny.

First flagellomere black, scape and pedicel greyish yellow, translucent. Arista (holotype)  $0.01 + 0.055 + 0.836$  mm (!) long.

Wing transparent, veins pale yellow. Wing membrane microcilia rather long and evenly distributed. Costa continued to vein M. Anal vein strong. Intra-crossvein section of M 0.24 mm; terminal section of Cu not reaching wing margin, 0.20 mm. Alula large. Halteres wax-yellow.

Coxae, femora, fore tibia and tarsi black, thochanters, mid and hind tibiae and tarsi yellow (former ones may be light brown). No preapical setae on tibiae. Ventroapical seta of mid tibia only 0.065–0.07 mm long. Claws large, semicircularly curved.

Preabdominal segments short, tergites with a pair of longer setae on lateral edges, otherwise setosity sparse.

Male hypandrium an intricate structure: in addition to the more ventral H-shaped part, it has a more dorsal transverse sclerite (lath), which joins to the main part at conjointment with epandrium. Aedeagal apodeme placed between that dorsal part and the ventral H-shaped part (Fig. 3, 7). Ejaculatory apodeme close with the phallic complex (Fig. 3), placed less cranial than apex of aedeagal apodeme.

Female tergite 6 (free part) 0.24 mm long, that of tergite 7 0.30 mm.

### Neriidae

Fifteen specimens of three species were collected in the recent years but a higher number of specimens of two species from SAUTER's material are preserved here. The latter specimens were identified by the late ÁRPÁD SOÓS, but those data have not been published formerly.

*Gymnonerius fuscus hendeli* HENNIG, 1937 – 2 males, 5 females: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, creek valley, March 31–April 1, 2003, No. 13, leg. L. PAPP & M. FÖLDVÁRI; 2 females: *ibid.*, over/along a creek, April 2–3, No. 15, leg. L. PAPP; 1 female: *ibid.*, along a creek (same as No. 18), April 3, No. 19, leg. L. PAPP & M. FÖLDVÁRI. Eighty nine males and 16 females identified as this species by Á. SOÓS from Chip Chip, Fuhosho, Kankau, Kosempo, Koshun, Mt. Hoozan, Pilam, Taihorin, Tainan.

*Chaetonerius bimaculatus* (EDWARDS, 1919) – 1 male: Taipei, Nanshih Chiao, Han-Lo-Da, S of Taipei, 450 m, along a small canal, October 13, 8 a.m., 2000, No. 24, leg. L. PAPP; 1 male: *ibid.*, on fruit baits, October 13, No. 25, leg. L. RONKAY. I identified them as this species with some doubt: a comparison with types would be needed. In any case, this genus is not new to Taiwan, since *Ch. inermis* (SCHINER, 1868) was formerly reported.

*Telostylus decemnotatus* HENDEL, 1913 – 2 females: Pingtung Hsien, Kenting, Heng-Chun Tropical Botanical Garden, light traps, October 4–6, 2000,

leg. L. PEREGOVITS & L. PAPP. 20 males and 14 females identified as such by ÁRPÁD SOÓS from Koshun (16 ♂ 12 ♀), Kankau (1 ♂) and Fuhosho (3 ♂ 2 ♀).

### Opomyzidae

Representatives of this family have not been formerly collected or reported from Taiwan.

*Geomyza silvatica* YANG, 1995 (or new species) – 1 female (NMNS): Taiwan Taichung, Nan Hu Shi (2500 m), 10–11/VI/1988, K. N. HUANG, sweeping net – 275–351 [NMNS id. label on a “0” pin]. This is the first record of this family from Taiwan. Opomyzidae was not involved at all in the Oriental Catalog, and not even in OOSTERBROEK’s (1998) book as a family expected to occur in the Malay Archipelago. *Geomyza silvatica* YANG, 1995 was described from Zhejiang, which province was regarded as Oriental in the BioSystematic Database of World Diptera, otherwise there are no more record of the Opomyzidae from the Oriental region.

### Gobryidae

*Gobrya syrphoides* (HENDEL, 1913) – 2 males: Nantou Hsien, Shuili, forest undergrowth, September 30, 2000, leg. L. PAPP, No. 12. 8 males 9 females: (1st label, printed): Formosa Sauter, (3rd label, with K. KERTÉSZ’s handwriting) “syrphoides Hend.” det. KERTÉSZ, (2nd label): 1 male: Kosempo 908. VI.; 1 male 3 females: Fuhosho 909. VII.; 1 male: Mt. Hoozan, 1910. V.; 1 male 1 female: Taihorin 1910. V./1911. VII.; 2 males: Koshun 909. III.; 2 males 2 females: Suisharyo 1911. X.; (1st label) 1 female (without head): Formosa Toyenmongai; 1 female: Kankau 1912. IV. The last two specimens are without the name of SAUTER but obviously from his collecting.

In the collection of the HNHM there are 4 males and 2 females of *Gobrya cyanea* ENDERLEIN, 1920, which were kept above a label “spec.nov.”: N.-Guinea Biró 1910. – Stephansort Astrolabe Bai [reverse side] “IV. 7.” Indeed, they belong to a species, which was described after the time, when K. KERTÉSZ identified the acalyprates from H. SAUTER’s collection.



## Strongylophthalmyiidae

A significant material of the *Strongylophthalmyia* specimens from Taiwan has been accumulated in the HNHM. A number of specimens from SAUTER's collection were identified but not published by K. KERTÉSZ and I also identified some old material formerly. As for the new collections, I captured 4 specimens in 2000, we captured 8 specimens in 2003. Our colleagues collected another specimen from Taiwan, and I found 2 specimens of *Strongylophthalmyia* in the unsorted materials of the NMNS. The Oriental Strongylophthalmyiidae are comparatively well studied. HENNIG (1940), FREY (1955), STEYSKAL (1971) and SHATALKIN (1996) published significant papers. Six species of *Strongylophthalmyia* were published from Taiwan (LIN & CHEN 1999). Representatives of four of them were captured during our recent collection trips, a fifth one was present among SAUTER's specimens. Probably a high number of undescribed species still exist in the Oriental region and in Australia. As for the latter, at least three species are represented in the collection of the HNHM (leg. M. FÖLDVÁRI in 2002).

*Strongylophthalmyia coarctata* HENDEL, 1913 – 1 male (a very small specimen): Pingtung Hsien, Kenting, Heng-Chun Tropical Botanical Garden, forest undergrowth, October 4, 2000, No. 14, leg. L. PAPP. 6 males, 21 females: Formosa Sauter – “coarctata ♂/♀ Hend.” det. KERTÉSZ: the 2<sup>nd</sup> label with localities Kankau (type locality), Suisharyo.

*Strongylophthalmyia crinita* HENNIG, 1940 – 3 females: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, creek valley, March 31–April 1, 2003, No. 13, leg. L. PAPP & M. FÖLDVÁRI; 1 female: Nantou Hsien, Shuili, forest undergrowth, September 30, 2000, No. 12, leg. L. PAPP. 1 female: Kaohsiung County, Shaping Forest Recreation Area, near Liukuei, 22°58'16"N, 120°41'15"E, 700–800m, 19–21.XI.2002, leg. L. RONKAY & O. MERKL. 4 males, 44 females: Formosa Sauter – “coarctata ♂/♀ Hend.” det. KERTÉSZ – “Strongylophthalmyia ♂/♀ crinita Hendel” det. L. PAPP 2002: the 2<sup>nd</sup> label with localities: Chip Chip, Kosempo, Koshun, Mt. Hoozan, Pilam, Suisharyo, Taihorin, Toyenmongai.

*Strongylophthalmyia immaculata* HENNIG, 1940 – 1 male: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, creek valley, March 31–April 1, 2003, No. 13, leg. L. PAPP & M. FÖLDVÁRI; 1 male: 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 female: Ilan Hsien, Fu-Shan, 2 km downstream of the Botanical Garden, along a small river, September 27, 2000, No. 10, leg. L. PAPP; 1 female: Nantou Hsien, Shuili, forest undergrowth, September 30, 2000, No. 12, leg. L. PAPP. 1 male, 8 females: Formosa Sauter – Kosempo 908. VI. – “Strongylophthalmyia immaculata Henn. ♂/♀” det. L. PAPP 1993.

*Strongylophthalmyia maculipennis* HENDEL, 1913 – 1 male, 2 females: Formosa Sauter – “maculipennis Hend. ♂/♀” det. KERTÉSZ: 1 male: Kosempo 908. VI.; 1 female: Sokotsu [type locality] 1912. V. – “Labropsila de Meij. i.litt.” det. DE MEIJERE; 1 female: Kankau 1912. VIII.

*Strongylophthalmyia trifasciata* HENNIG, 1940 – 1 male, 1 female: Taichung Hsien, Sinshe, 585 m, N24°09'25.2" E120°52'9.6" E, over/along Ma-Chu-Ken river and in river valley, April 6, 2003, No. 24, leg. L. PAPP & M. FÖLDVÁRI; 1 female: Taipei Hsien, Han-Lo-Dé, 450 m, forest undergrowth, March 29–30, 2003, No. 12, leg. L. PAPP; 1 male (NMNS): Taiwan Chiaï, Alishan, Tapan, 15/II/1989, K. W. HUANG, sweeping net – 427–600; 1 male (NMNS): Taiwan Taichung, Chiapaotai, 18/X/1987, I.C. HSU, Sweeping Net. 8 males, 3 females: Formosa Sauter – “Strongylophthalmyia trifasciata Henn. ♂/♀” det. L. PAPP 1993 [on one of the males, ? KERTÉSZ’s handwriting: “?Genus? Arista beim ♂ nicht dick, lang u. dicht behaart.”]: 7 males 1 female: Chip Chip, 09.II./09.I./909.III.; 1 male: Formosa Toyenmongai; 2 females: Taihorin, 1911. VII.

#### Psilidae

Altogether 25 psilid specimens were captured during our recent collection trips. SAUTER’s specimens (30) were found among the “indet.” material of the Psilidae in the HNHM and it was not easy to clear some specimen’s identification, as KERTÉSZ made originally.

*Chyliza elegans* HENDEL, 1913 – 1 male: Formosa Toyenmongai – [KERTÉSZ’s handwriting] “Chyliza n.sp. 1”; 3 females: Formosa Sauter – Tainan 1912. V./Tapani 1911 III./Chip Chip 909. III. found for the first time in our material.

*Chyliza fumipennis* HENDEL, 1913 – 1 male: Taipei, Nanshih Chiao, Han-Lo-Da, S of Taipei, 450 m, rocky forest undergrowth, October 10, 2000, leg. L. PAPP & L. RONKAY, No. 21.

*Chyliza selecta* OSTEN SACKEN, 1913 – 4 males 3 female: Formosa Toyenmongai (on 1 male: “Chyliza n. sp. 2 (? selecta O.S.)” [KERTÉSZ’s handwriting], on 1 female: “Chyliza n. sp. 2”); 1 male: Formosa Sauter – Kosempo 1912. V. This species is new to Taiwan (cf. LIN & CHEN 1999).

*Chyliza selectoides* HENNIG, 1940 – 1 male: Formosa Sauter – Kankau 1912. VIII. – “Chyliza elegans Hend. det Kert.”; 1 male: Takao 300 m. 1907. VI. 21.; 1 male: Formosa Toyenmongai – “Chyliza amaranthi Meij. Hinterkopf des [illegible] Exemplares unten ganz hell” [KERTÉSZ’s handwriting]. Of course, KERTÉSZ

could not correctly identify this species, which was described by W. HENNIG three decades later.

*Chyliza* sp. – 3 males, 1 female: Formosa Sauter: 1 male, 1 female: Mt Hoozan 1910. V./VIII.; 1 male: Taihorin, 1911. VII.; 1 male: Toyenmongai. This species with its peculiar wing pattern is obviously an undescribed one. However, it will be better to describe any new species of the Oriental *Chyliza* in a revision only.

*Chamaepsila* sp. aff. *rosae* (FABRICIUS, 1794) – 1 male, 1 female: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, along a creek, April 3, 2003, No. 19, leg. L. PAPP & M. FÖLDVÁRI; 2 females: Taichung Hsien, Anmashan Mts, 1800 m, N24°14'28.9" E120°56'45.8", in a dry creek bed, April 5, 2003, No. 20, leg. L. PAPP & M. FÖLDVÁRI; 1 male, 2 females: ibid., UV light traps, 2090–2550 m, April 5–6, No. 23, leg. M. FÖLDVÁRI, L. PAPP, CH.-M. FU & H.-R. TZUOO. 2 females: County Taipei, Pi Hu, 450 m, 24°54'02"N 121°45'27" E, 30.III.2000, leg. L. PEREGOVITS & A. KUN. This species keys out readily and quickly to *Ch. rosae* in SHATALKIN's (1986) large key. However, a comparison of the male genitalia has revealed that they are not closely related. This must be a species new to science.

*Chamaepsila* sp. aff. *mixta* (SOÓS, 1974) – 1 male: Hualien county, Taroko National Park, at sacred Pilu tree – 24°14.7'N, 121°24.14'E, 2000 m, 10.IV.2002, leg. GY. FÁBIÁN. This specimen keys out easily to *Ch. mixta* (SOÓS) in SHATALKIN's (1986) key. Also this is in all probability a new, undescribed species.

*Loxocera formosana* HENNIG, 1940 – 1 male: Ilan Hsien, Fu-Shan LTER Site, along/over a small river, March 27, 2003, leg. L. PAPP, No. 8.

*Loxocera maculipennis* HENDEL, 1913 – 1 female: Nantou Hsien, Shuili, forest undergrowth, September 30, 2000, No. 12, leg. L. PAPP; 2 males: No. 7: Taipei Hsien, Fu-Shan LTER Site, lake shore, UV light, March 25–28, 2003, No. 7, leg. M. FÖLDVÁRI & L. PAPP; 1 female: Ilan Hsien, Fu-Shan LTER Site, along/over a small river, March 27, 2003, No. 8, leg. L. PAPP; 3 males, 2 females: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, creek valley, March 31–April 1, 2003, No. 13, leg. L. PAPP & M. FÖLDVÁRI; 1 female: ibid., UV light traps, March 31–April 4, No. 14, leg. M. FÖLDVÁRI & L. PAPP; 1 female: ibid., over/along a creek, April 2–3, No. 15, leg. L. PAPP; 1 female: Taichung Hsien, Anmashan Mts, 1800 m, N24°14'28.9" E120°56'45.8", in a dry creek bed, April 5, 2003, No. 20, leg. L. PAPP & M. FÖLDVÁRI; 1 male: Taipei Hsien, Pinling, over/along Jinggualiao river, 319m, April 17, 2003, No. 27, leg. L. PAPP. 5 males 7 females: Formosa Sauter – “maculipennis Hend.” det. KERTÉSZ: the 2<sup>nd</sup> label with localities: Chip Chip [type locality], Kosempo, Mt. Hoozan [type locality], Taihorin.

### Ctenostylidae

KORNEYEV (2001) published a paper not only with a summary of the known Oriental species, but he discussed also the position of the family (for further literature, see his paper).

*Nepaliseta ashleyi* (BARRACLOUGH, 1998) – 1 male, 1 female (HNHM): TAIWAN: Liukuei, Kaohsiung Hsien, San-Ping Forest Research Station – 700 m, Dec 30, 2001, leg. L. RÓNKAY & A. KUN; 1 male (HNHM): *ibid.*, Shan-Ping LTER Site, UV light traps, No. 14, 31.03.–04.04. 2003, M. FÖLDVÁRI & L. PAPP. KORNEYEV (2001) most recently reported it from Taiwan (Fu-Shan Botanical Garden, 650 m). That was the first record of the family from the island. The species was originally described from Sulawesi.

*Ramuliseta thaica* KORNEYEV, 2001 – 1 female (HNHM): Vietnam: Lao Cai Prov., Fan-si-pan Mts. 1800 m – 16 km of Sa Pa, 17.03.1998., at light, No. 23, PEREGOVIĆ, VÁSÁRHELYI. It was recently described from Thailand. This is a slightly damaged specimen. Its right wing (broken sub-basally) has been prepared between pieces of cover glass, and pinned under the specimen. This is the second known specimen and the first female of this species. Its wing pattern is rather similar to that of the holotype male (fig.1 of KORNEYEV 2001). Its other features differ from the male in those respects, as in the other known species of *Ramuliseta* and *Nepaliseta*.

### Platystomatidae

This is a speciose family in the Oriental region, including Taiwan. LIN & CHEN (1999) listed 28 species from Taiwan, but *Rivellia basilaris* (WIEDEMANN) was erroneously left out from their list.

Our Platystomatidae material is numerous from Taiwan indeed, but I am not a specialist for this family. So below I give only a list of the species (altogether 19) represented in the HNHM. I mention only the number of the type specimens, number of the specimens identified by KÁLMÁN KERTÉSZ, and that of the recently collected material (we captured 29 specimens in 2000, and three specimens in 2003, i.e. the latter material is not significant.).

Much to my regret, I have to note that there are labels written in Hungarian with the *Rivellia* specimens (with all species), which were on loan to a Japanese dipterist, saying “Az anyagot összetörve küldte vissza Hara” [The material was sent back by HARA broken into pieces]. That was not a result of shipping or postal disaster, but that of a particular way of handling museum specimens. First he broke

down the head, legs, wings and abdomen of the specimens (indeed, we can find only the thorax on the pin), then he prepared the parts, and finally he put everything into a plastic microvial with a special glue, which has already been petrified by now. In cases when any parts were left out of vial by chance, he simply glued them to the outer surface of the microvial.

*Elassogaster aerea* HENDEL, 1914 – 4 syntypes, recently collected material: 1 male, 1 female: County Kaohsiung, 700 m, Liu-Kuei, Shan Ping Forest Res. Stat., 22°58'16" N, 120°41'15" E, 14–15. IV. 1997, leg. L. PEREGOVITS & A. KUN.

*Elassogaster quadrimaculata* HENDEL, 1914: 2 syntypes, recently collected material: 1 male, 1 female: Taipei, Nansih Chiao, Han-Lo-Da, S of Taipei, 450 m, rocky forest undergrowth, October 10, 2000, leg. L. PAPP & L. RONKAY, No. 21.

*Elassogaster linearis* (WALKER, 1849): det. KERTÉSZ as *E. sepsoides* Walk.: 15 specimens, most of them with another label “unimaculatus” det. F. HENDEL.

*Euprosopia longifacies* HENDEL, 1914: det. KERTÉSZ: 2 ex.

*Ethyplatystoma sauteri* HENDEL, 1914: 20 syntypes; det. KERTÉSZ: 15 specimens; recently collected material: 26 specimens, which seem to be more than a single species.

*Loxonevra formosae* (KERTÉSZ, 1909): 21 syntypes; det. KERTÉSZ: 43 specimens; 1 female: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, creek valley, No.13, Mar 31–Apr 1, 2003, L. PAPP & M. FÖLDVÁRI.

*Naupoda contracta* HENDEL, 1914: 2 syntypes; det. KERTÉSZ: 5 specimens; 1 male: Kaohsiung county, Shanping Forest Recreation Area, near Liukuei, 22°58'16" N, 120°41'15" E, 700–800m, 19–21. XI. 2002, leg L. RONKAY & O. MERKL.

*Plagiosternopterina aenea* (WIEDEMANN, 1819): det. KERTÉSZ: 18 specimens, some of them also with label “aenea W.” det F. HENDEL.

*Plagiosternopterina enderleini* HENDEL, 1914: 24 specimens, without identification labels, ? identified by Á. SOÓS.

*Plagiosternopterina formosana* HENDEL, 1913: 7 syntypes; det. KERTÉSZ: 42 specimens.

*Pterogenia eurysterna* HENDEL, 1914: 12 syntypes; det. KERTÉSZ: 83 specimens.

*Pterogenia hologaster* HENDEL, 1914: 5 syntypes; det. KERTÉSZ: 36 specimens.

*Rhytidortalis cribrata* HENDEL, 1914: 5 syntypes [smashed; with the “Az anyagot összetörve...” label]; det. KERTÉSZ: 42 specimens.

*Rivellia basilaris* (WIEDEMANN, 1830): det. KERTÉSZ: 66 specimens; det. F. HENDEL: 2 specimens.

*Rivellia confusa* HARA, 1993: holotype male, 1 paratype, both smashed as usual for HARA's specimens.

*Rivellia fusca* (THOMSON, 1869): det. KERTÉSZ: 3 specimens.

*Rivellia sauteri* HENDEL, 1914: The only type female: Takao 1907. XI. 18. – "Sauteri H." [red] "typus", det. F. HENDEL.

*Trigonosoma tropida* (HENDEL, 1914): 3 syntypes; det. KERTÉSZ: 150 specimens.

*Xenaspis formosae* HENDEL, 1914: 4 syntypes; det. KERTÉSZ: 143 specimens.

### Dryomyzidae

Four specimens of two genera and species were collected during the recent collection trips of the HNHM.

*Neuroctena formosa* (WIEDEMANN, 1830) – 1 female: Taichung Hsien, Anmashan Mts, Tashueshan Forest Recreation Area, 2650 m, on light, October 21, 2000, leg. L. RONKAY & L. PEREGOVIĆS, No. 26. In the HNHM there are a number of specimens of this widespread species from the Russian Far East, Japan, North and South Korea and Vietnam.

Other dryomyzid species represented in the HNHM collection from N Korea are: *Neuroctena analis* (FALLÉN, 1820), *N. badia* KURAHASHI, 1981, *Pseudoneuroctena senilis* (ZETTERSTEDT, 1838) and *Paradryomyza spinigera* OZEROV, 1987 (cf. OZEROV 1987).

*Paradryomyza orientalis* OZEROV & SUEYOSHI, 2002 – 1 male: TAIWAN: Taichung Hsien, Piluchi, TFRI site, 2200 m, Dec 26–28, 2001, leg. L. RONKAY & A. KUN; 1 male: County Tai Pei, Pi Hu, 24° 54' 02" N, 120° 45' 27" E, 30. III. 2000, leg. L. PEREGOVIĆS & A. KUN; 1 female: *ibid.*, Nantou county, Hohuachi, Lishan-Tayuling road No. 8, 1950 m, 24° 13' N 121° 16' E, 31. III. Described most recently from Taiwan.

### Sciomyzidae

Only three sciomyzid specimens were captured in 2000. All of them belong to a species of the genus *Pherbellia* ROBINEAU-DESVOIDY, 1830. However, five species of the eight sciomyzid species hitherto reported from Taiwan are represented in the HNHM. Data of all this old material are given below.

*Pherbellia causta* (HENDEL, 1913) – 2 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: Formosa Sauter – Chip Chip 909. III. – “causta Hend.” det. KERTÉSZ. The last specimen is from the same locality and with the same data as the type. However, this specimen was sold to the HNHM, thus HENDEL could not see it.

*Pteromicra leucodactyla* (HENDEL, 1913) – 10 males, 2 females: Formosa Sauter – Tainan 909. II. – “leucodactyla Hend.” det. KERTÉSZ. Again, these specimens are with the same data as the type specimens. In the HNHM there is an additional specimen without head, another one without abdomen, plus a pin without specimen, all these are with the above data.

*Sepedon lobifera* HENDEL, 1911 – 4 syntypes with red [?HENDEL's] TYPUS label and with labels Formosa Sauter and “lobiferus H.” [red] “typus”, det. F. HENDEL: 1 female: Kosempo 908. III. 21.; 1 male: Ins. Lambeh 1908. I.; 2 males: Takao 1907. VII. 19./IV. 2. Also the following female is to be regarded as a syntype: Takao 1907. XI. 8. – “Sepedon lobiferus H.” det. HENDEL. The following specimens were identified by K. KERTÉSZ: Formosa Sauter – “lobiferus H.” det. KERTÉSZ: 4 males 1 female: Takao 1907. XII. 20./V./XII. 23.; 8 males 7 females: D/T/aihorinsho, 1909. VIII./VII.; 8 males 2 female: Taihorin 1911. VII.; 4 females: Tainan 1912. IV.; 1 male 1 female: Ins. Lambeh 1908. I.; 1 male: Polisha 908. III.; 1 male: Koshun 908. IX.; 5 males: Kosempo 1912. V./908. I. 20. Two additional specimens (Taihorinsho 1909. VIII.) are half-eaten by *Anthrenus* larvae; some of the above specimens are also damaged.

*Sepedon plumbella* WIEDEMANN, 1830 – Formosa Sauter: 6 males, 4 females: Takao 1907. XII. 20./XII. 23./VI. 28./XI. 9. (one of them det. F. HENDEL.); 2 males, 5 females: Tainan 909. I./II. In the HNHM there are specimens also from Java and Sumatra.

*Sepedon sauteri* HENDEL, 1911 – 1 male syntype: Formosa Sauter – Takao, 1907. XII. 2. – “Sauteri Hend.” [red] “typus” det. F. HENDEL; 1 male 1 female syntypes: *ibid.*, Takao, 1907. XII. 7. /1907. VI. 23. – “Sauteri H.”. Specimens, which are possibly also syntypes: 1 male: Formosa Sauter – Takao, 1907. VII. 19. – “Sauteri Hend.” [red] “typus” det. F. HENDEL [I prepared its abdomen with genitalia, which are now kept in a plastic microvial with glycerol]; 1 male: Formosa Sauter – Takao 1907. VII. 10. – “violaceus H.” [red] “typus” [!] det. F. HENDEL. All the following specimens are with the first label of Formosa Sauter: 1 female: Daitorinsho 1909. VII. – “Sepedon Sauteri H. det. HENDEL; 1 female: Tainan 909.II. – “Sepedon violaceus H.” det. HENDEL. 6 males 6 females: Tainan 909. II. – “violaceus H.” det. KERTÉSZ; 14 males 16 females: “Sauteri H.” det. KERTÉSZ: 1 male 1 female: Tainan 909. II.; 2 males 2 females: Takao 1907. VI. 23./ XII. 20./

908. V. 4./ XI. 18.; 3 males 4 females: D[T]aihorinsho 1909.VIII./VII.; 8 males 9 females: Taihorin 1911. VII. *Sepedon sauteri* HENDEL, 1911 was regarded as a junior synonym of *S. spehegea* (FABRICIUS, 1775), a widespread Palaearctic species. Now I think I can deny that belief. Indeed, these two species are closely related, but one can make distinction between them even without preparing the male genitalia. Not only the cross-veins but also apical 1/3 to 2/5 of wing are brown darkened in *S. sauteri*. Scape and pedicel of *S. sauteri* are yellowish also on lateral surface, while scape and pedicel black in the European specimens (at least on lateral surface). Anterior half of katepisternum is also with light microtomentum in *S. sauteri*. Ventral lobe of male cerci are short (in contrast to *S. spehegea*) and without macrochaetae on apical half (wholly setose in *S. spehegea*); this character is discernible in many specimens even without preparation. Surstylus and other male genital characters are also different.

At present I do not know the valid name of this biological species, since there are three other names published before 1911 for the South-eastern Asian *Sepedon* (e.g. *Sepedon violaceus* HENDEL, 1909 was described from Hong Kong), which may refer to conspecific entities. However, since *Sepedon sauteri* HENDEL is obviously an available name, it is the only correct way to publish the above specimens from Taiwan under this name. A publication under the name *S. spehegea* would have been another misidentification. It is worth mentioning, that while the specimens from Europe (Polonia, Berlin, Krefeld, Corfu, etc.) and from Asia minor (Poros, Turkey) are with Á. SOÓS's identification label "*S. spehegea*", those from Taiwan are without it.

### Chamaemyiidae

Our collection trips were not successful in capturing chamaemyiids, which otherwise look rare and not species rich in the Oriental region; only two specimens were collected. There are specimens of two *Leucopis* MEIGEN, 1830 species from SAUTER's collections in the HNHM. It was a good surprise to find specimens of two species (an *Acrometopia* SCHINER, 1862 and a *Chamaemyia* MEIGEN, 1803) in the unsorted material of the Taichung Museum, which are described below as new.

*Leucopomyia* sp. – 1 female: Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, along a creek, April 3, 2003, No. 19, L. PAPP & M. FÖLDVÁRI. This is a dark bodied species with strong prescutellar pair of setae, its palpi are black. We cannot describe it as new, since it is a female, but in any case, the genus *Leucopomyia* MALLOCH, 1921 is new for the Taiwanese fauna.



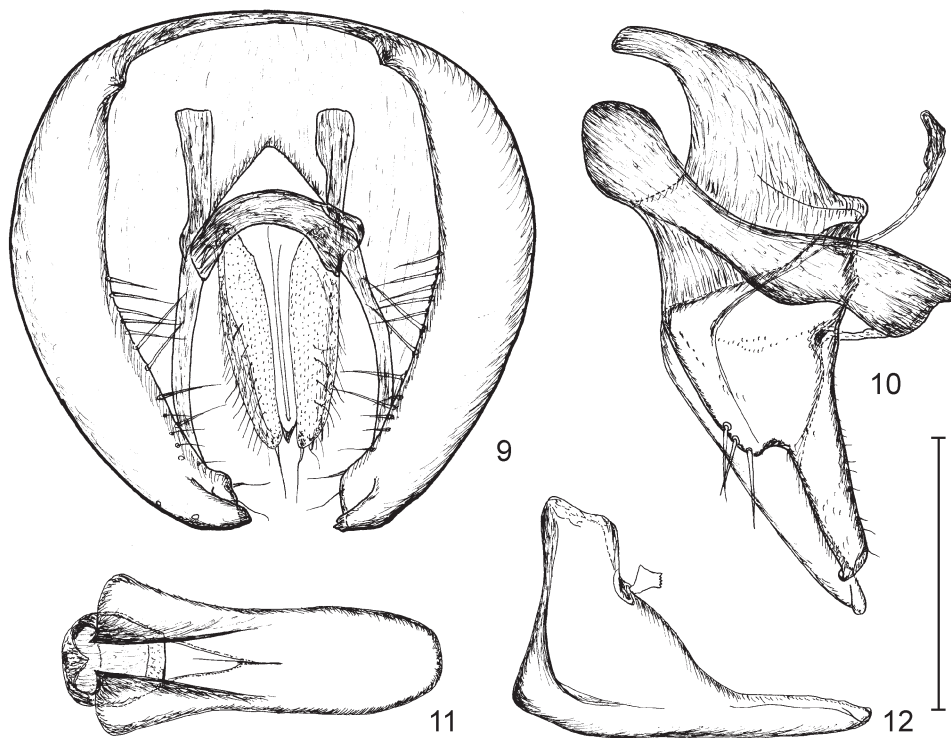
*Leucopis apicalis* MALLOCH, 1914 – Holotype male: Formosa Sauter – Tainan 909. II. – “*Leucopis apicalis* MALLOCH (type)”. 1 male 1 female paratypes: *ibid.*, without MALLOCH’s label. In addition, there are 19 males and 16 females (Tainan) in the HNHM, which were identified by S. D. GAIMARI in 2002.

*Leucopis formosana* HENNIG, 1938 – In the HNHM there are four specimens from Tainan and Anping, which were identified by S. D. GAIMARI in 2002.

***Acrometopia conspicua* sp. n.**

(Figs 9–12)

Holotype male (NMNS, glued on a paper point): Taiwan Nantou, Ho Huan Shan, 26/VII/1990, W. C. CHUANG, Sweeping net – NMNS-ENT 639–119.



**Figs 9–12.** *Acrometopia conspicua* sp. n., paratype male, genitalia. 9 = epandrium, cerci and subepandrial sclerite in anterior (inner) view (most of the epandrial setae omitted), 10 = genital complex, lateral view, 11 = phallus, ventral view, 12 = phallus, lateral view. Scale bar: 0.2 mm for all

Paratypes: 5 males, 4 females (NMNS, 1 male and 1 female in the HNHM): same locality and data as for the holotype, except for the NMNS id. labels, as follow: male: –98 (left wing lost); male: –70 (minuten-pinned, flagellomeres lost); male: –79 (damaged, wings broken, flagellomeres lost); male (HNHM) – 61 (right flagellomeres lost, mesonotal setae broken off); female: –126 (left flagellomeres lost, thorax deformed); female: –16 (flagellomeres lost, mesonotal setae broken off); female (HNHM): –97 (mesonotal setae broken, tip of left wing lost); female: –105 (in a good state of preservation).

Description – Measurements in mm: body length 3.30 (holotype), 2.80–3.30 (paratypes), wing length 2.71 (holotype, downcurved, not precisely measurable), 2.65–2.85 (paratypes), wing breadth 1.05, 0.98–1.07. Silvery greyish (except head), abdominal setae originate from large round black spots.

Head 0.63 mm long, 0.55 mm high. Frons orange with some greyish microtomentum caudally. Orbitalia broad, silvery grey. Lunule protruding. Face short, orange dorsally (like cheeks beside), grey ventrally. Facial keel short, 1/2 of face, thin and not sharp. Pedicel silvery greyish dorsally and medially, yellowish basally. Cephalic setae as usual, ocellars particularly long, 0.40 mm on holotype. First flagellomere 0.30 mm long (measured dorsally); ventral base and ventral edge to apical L broadly reddish, first flagellomere otherwise dark grey, almost black apically. Second segment of arista very thick (0.033 mm), third segment long, white, covered with microcilia.

Thoracic chaetotaxy as in congeners, prescutellars strong.

Subcostal cell brown in basal (narrow) part, almost black in apical (broad) part (in cases also narrow part blackish). Wing otherwise light greyish, veins brown. Costa continued to M but very thin between R4+5 and M. Sections of vein M (holotype) 0.47 and 1.14 mm, ratio 2.42. Anal vein ( $A_1$ ) very short, shorter than dM-Cu crossvein, axial vein ( $A_2$ ) much longer and continued to 2/3 length towards wing margin. Squamal fringe black.

Femora grey with yellowish basal and apical parts, tibia mainly yellow, fore tarsi all dark.

Abdominal pattern not uniform: female tergites 3 to 5 with a pair of small grey spots; in cases also tergite 2 with grey spots. I found a male with similar faint grey spots. There is a female (NMNS-ENT 639–126) with black tibiae and 2 pairs of larger square spots on tergites 3–5, and 1 pair on tergite 2 (that may belong to another species and so it was not designated as paratype).

Epyandrium comparatively long dorsally (Fig. 9). Male cerci long with fine setae only, subepandrial sclerite distinct though not strongly sclerotized (Fig. 9). Surstylar lobe slightly bilobed apically. Phallus (Figs 11–12) is very similar to uppers of a short boot (without its sole). Ejaculatory apodeme (Fig. 10) fine, gonopod robust with reclinate blunt apex. Both hypandrium and aedeagal apodeme robust (Fig. 10).

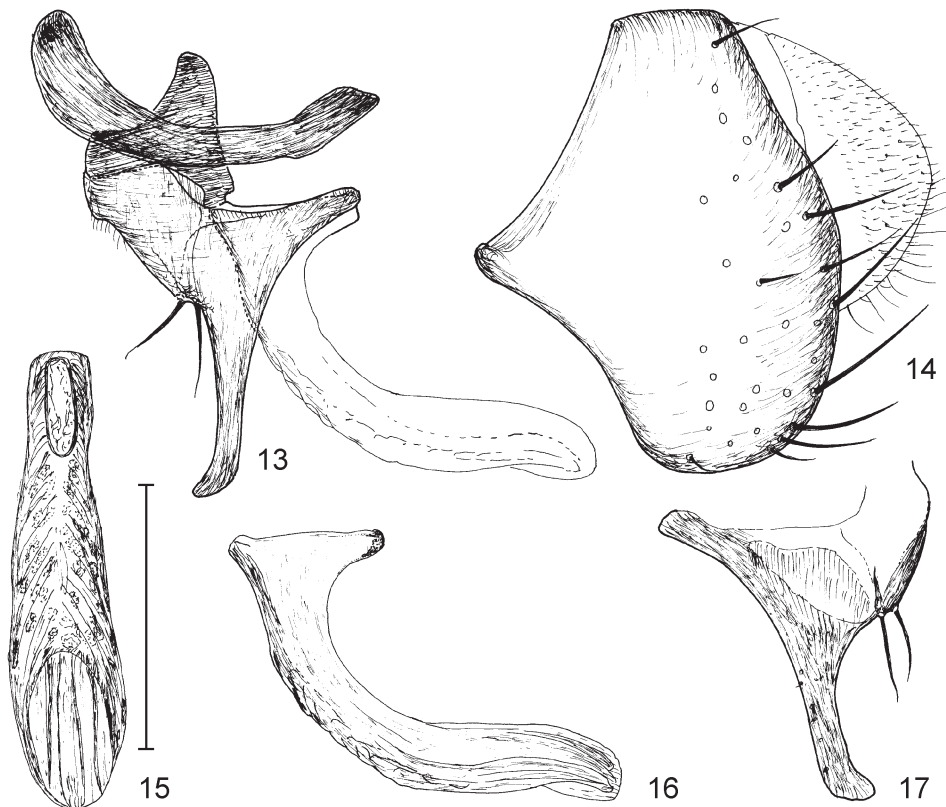
Female cerci long (0.15 mm), shiny, comparatively thin (max. 0.045 mm broad), with thin short setulae.

Remarks – *A. conspicua* sp. n. is a conspicuous species indeed. Hitherto only *A. reicherti* (ENDERLEIN, 1929) was known from the Oriental (and Australian) region, but that is not a related species. The colour of its frons makes it easily recognisable. Its male genitalia are not similar to any of the known species of *Acrometopia* or *Melametopia* TANASIJTSHUK, 1992. However, postabdominal sclerites are as asymmetric as TANASIJTSHUK (1992) gave in his figures 1, 9, 13.

***Chamaemyia taiwanensis* sp. n.**  
(Figs 13–17)

Holotype male (NMNS, glued on a point label, left flagellomeres, hind right tarsomeres 2–5 lost): Taiwan Nantou, Ho Huan Shan, 26/VII/1990, W. C. CHUANG, Sweeping net – NMNS-ENT 639–52.

Paratypes: 7 males 1 female (NMNS, 2 males in the HNHM): same locality and data as for the holotype, except for the NMNS id. labels, as follows: male: –72 (minuten-pinned, left flagellomeres and right arista lost, HNHM); male: –71 (cephalic and mesonotal setae broken); male: –29 (minuten-pinned, right arista and some of the macrosetae broken off); male: –11 (damaged, apical half of right wing broken, as well as cephalic and mesonotal setae broken off); male: –62 (minuten-pinned, antennae and apical half of left wing lost); male: –78 (damaged, right flagellomeres lost, tip of right wing lost, etc.); male: –20 (severely damaged, 2/3 of wings lost, etc.); female: –13



**Figs 13–17.** *Chamaemyia taiwanensis* sp. n., paratype male, genitalia. 13 = genital complex, lateral view, 14 = epandrium and cercus, lateral view, 15 = phallus, ventral, longest view, 16 = phallus, lateral view, 16 = left ventral process of gonopod, in its broadest extension (sublateral view). Scale bar: 0.2 mm for all

(flagellomeres lost, left bring broken). 1 female (HNHM): Taiwan Nantou Prov., Hohuanshan Exp. Stat., 24° 09' N, 121° 17' E, 3100 m, No: 94, 27 September 1999, leg. G. CSORBA.

Description – Measurements in mm: body length 2.75 (holotype), 2.55–2.80 (paratypes), wing length 2.66 (holotype), 2.50–2.70 (paratypes), wing breadth 1.10, 1.05–1.17. A typical *Chamaemyia* species with black antennae (at most very narrow lighter base of 1<sup>st</sup> flagellomere), black tibiae and with large black spots on abdomen (and with evenly curved phallus).

Gena 0.16 mm broad below eye (holotype). Clypeus narrow, black, proboscis yellow. Antenna and arista all black, seldom 1<sup>st</sup> flagellomere very narrowly dirty yellow basally.

Thoracic setae as in its congeners, prescutellars comparatively weak, only 0.14 mm long on holotype.

Wing clear, veins brown. Medial vein ratio 1.68. Halteres whitish yellow. Squamal fringe white.

Coxae, femora (except apices), tibiae (but bases) and apical parts of tarsi black; apices of femora, basal parts of tibiae as well as metatarsi (except apically) dirty yellow.

Abdominal tergites 3–5 with 2 pairs of black spots (lateral spots faint in cases), tergite 2 with a pair of darker or lighter grey spots. Female tergite 6 with black fore margin.

Male genitalia generally as in other *Chamaemyia* species. Epandrium robust with round apex (Fig. 14), its dorsal part comparatively long. Cerci large with fine hairs. Gonopods fused to hypandrium basally as in other species of *Chamaemyia*. Phallus (Figs 15–16) rather thick, gently curved (Fig. 15 is drawn in the longest view, i.e. when base and tip of phallus is in the plane of the figure), without any edge sub-basally. Consequently, it belongs to the *C. elegans* group. Ventral process of gonopod rather long with caudally directed apex (Figs 13, 17). The two sub-basal setae do not emerge from a sharp process.

Female cerci 0.12 mm long, 0.06 mm broad, shiny black, its longest hairs 0.05 mm long.

Remarks – *Chamaemyia taiwanensis* sp. n. runs to couplet 3 (*C. elegans* group) in TANASIJTSHUK's (1986) key, which is still the most comprehensive key for this genus (more specifically to *C. hypsophila* TANASIJTSHUK, 1986: Pamir, Hindukush). However, it has paired spots on abdominal tergites and also details of male genitalia are different (*cf.* figs 183–186 of TANASIJTSHUK).

## Xenasteiidae

### ***Xenasteia chinensis* sp. n.**

(Figs 18–20)

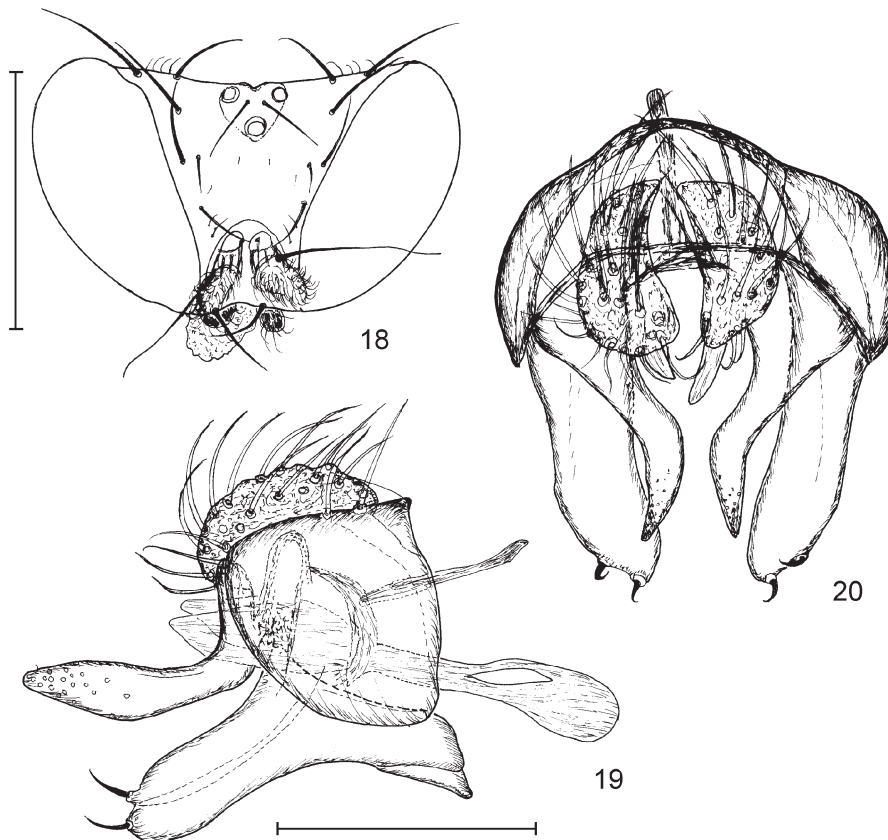
Holotype male (HNHM): Pingtung Hsien, Kenting, Heng-Chun Tropical Botanical Garden, light traps, October 4–6, leg. L. PEREGOVITS & L. PAPP, No. 15. Abdomen with genitalia are prepared and preserved in glycerol in a plastic microvial; its wings are prepared on a normal slide; head and thorax with legs (left hind leg lost) are in canada balsam between two small pieces of cover glass attached to a card.

Description – Measurements in mm: body length ca 1.20 (abdomen downcurved), wing length 1.52, wing breadth 0.59. Frons and thorax darker brown, shiny (frons anteriorly reddish), abdomen blackish brown, shiny.

Head very broad: 0.68 mm. Scape and pedicel reddish yellow, first flagellomere greyish with long fine cilia (Fig. 18). Anterior orbital seta inclinate; 2 posterior orbital pairs present: a short, more medial, proclinate and a long lateral reclinate pair (Fig. 18).

Mesonotum semiglobular, much bulging. One small anterior, plus 1 very large posterior pairs of dorsocentrals, no enlarged prescutellar, 1 katepisternal pairs. Mesonotal chaetae medium long: 1 postpronotal, 1 notopleural, 1 presutural, 1 supra-alar, 1 + 1 postalar (supra-alar and intra-alar) pairs.

Wings hyaline, shiny, veins pale yellow. Vein  $R_{4+5}$  gently downcurved in its distal half (but less so than in HARDY's two species figured). Subcostal setae on costa 0.11 and 0.10 mm. Costal index 1.33, i.e. closer to that of *X. sabroskyi* and much less than to that of *X. okinawensis*. Medial vein continued to 3/7 of wing. Longest ventral fringe 0.055 mm. Alula blackish with 10 long (up to 0.09



**Figs 18–20.** *Xenasteia chinensis* sp. n., holotype male. 18 = head, dorsal view; 19–20 = genitalia: 19 = lateral view, 20 = caudal-subventral view. Scale bars: 0.4 mm for Fig. 18, 0.1 mm for Figs 19–20 (mm) setae. Halter with longish, not globular black knob, yellow stalk.

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. FÖLDVÁRI.

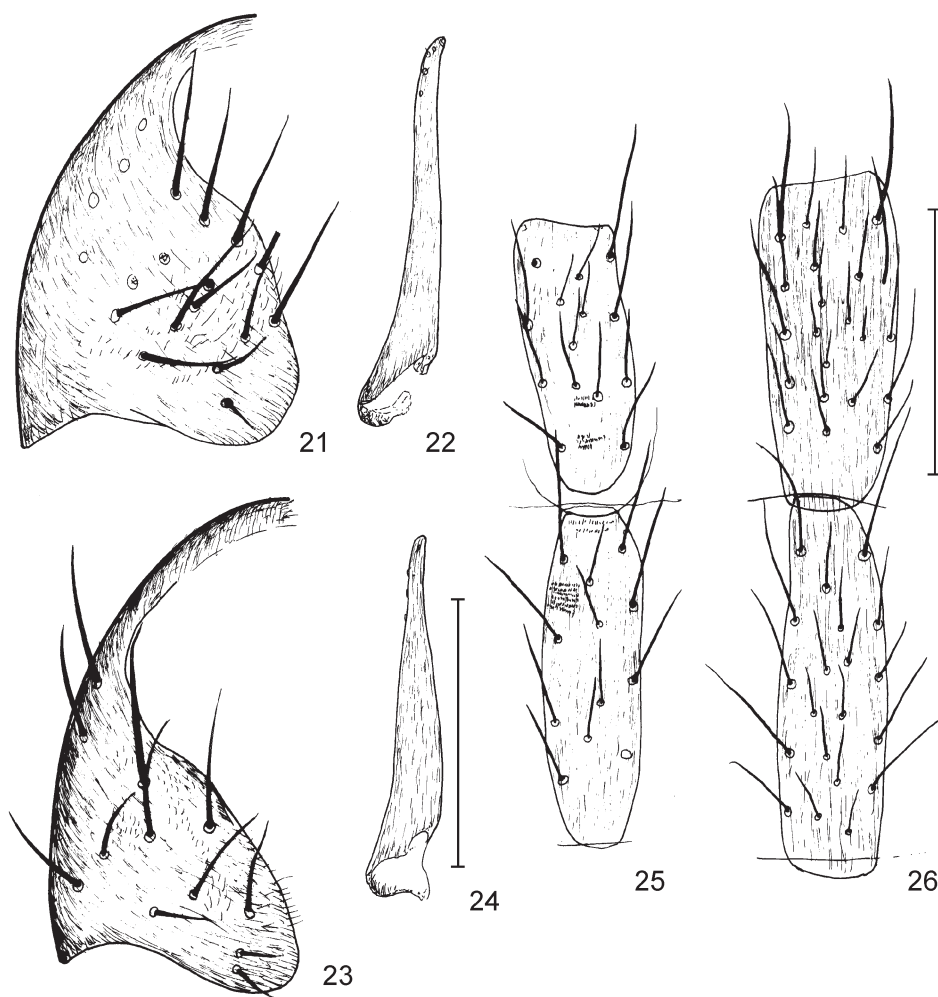
Paratypes: 1 female (HNHM): *ibid.*, Kaohsiung Hsien, Liukuei, Shan-Ping LTER Site, over/along a creek, April 2, 2003, No. 18, leg. M. FÖLDVÁRI; 1 male (NMNS, glued on tip of a point label, damaged, head and wings broken down and glued to label below minuten, gen. prep. in a plastic microvial with glycerol): Taiwan Nantou, Hsini Tungpu 1/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

comparatively short but thick. Gena only 0.025 mm broad, 5–6 thin, 0.065–0.07 mm long peristomals present. Subgenal seta thin, 0.11 mm long. Antenna and arista black. First flagellomere 0.31 mm long (measured dorsally), 0.12 mm broad, covered by 0.02 mm long cilia, longest (dorsal) aristal cilia 0.025 mm.

Mesonotum moderately humped. Thoracic setae: 1 *pprn*, 2 *np*, 1 large *prst*, 0+2 *dc*, 1 large prealar, 1 *sa*, 1 smaller *pa*, 1 *prsc*, 2 *sc*; 1 dorsal and 1 ventral large *kepst*.



**Figs 21–26.** *Campichoeta* spp., male abdomen and genitalia. 21–22 = *C. obscuripennis* (MEIGEN, 1830): 21 = ventromedial (surstyler) lobe of epandrium, caudal view, 22 = gonopod in broadest extension (sublateral view). 23–25 = *C. spinicauda* sp. n., paratype: 23 = ventromedial (surstyler) lobe of epandrium, caudal view, 24 = gonopod in broadest extension (sublateral view), 25 = abdominal sternites 4 and 5, 26 = *C. obscuripennis* (MEIGEN, 1830), abdominal sternites 4 and 5. Scale bars: 0.2 mm for Figs 25–26, 0.1 mm for Figs 21–24



Wing uniformly dark brown, veins even darker (almost black). Longest costal setae distally to H (mg1) 0.07 mm, 0.055 mm on mg2, the longer seta at break 0.11 mm. M vein sections 0.715, 0.97, ratio 1.35. Terminal section of Cu 0.33 mm. Anal cell very small. Anal (A1) and axial (A2) veins present as shadows of veins only. Squamal cilia black. Halteres greyish yellow.

Legs mainly yellow; coxae and femora (except yellow apical 1/5) greyish brown. Fore femur posteroventrally with 7 (paratype: 8) peg-like black thornlets. Fore coxa with 2 long ventrally curved and some other shorter setae. Mid femur with a row of long anterior setae. Preapicals on tibiae comparatively weak, ventroapical of mid tibia 0.16 mm long.

Sternites (Fig. 25) similar to those of *C. obscuripennis* (Fig. 26), i.e. long and narrow but with distinctly fewer setae: sternite 4 with 12 (vs 20), sternite 5 with 14 (vs 22) setae. The holotype male with 4, the paratype male with 6 long setae on tergite 7 (medial pair of the paratype must be weaker, judged by the setal bases).

Male surstylus reduced, or rather, fused to epandrium as its ventromedial lobe (Figs 21, 23). This is one of the main distinctive features of the nominate subgenus (males of the subgenus *Thryptocheta* Rondani have true surstyli). Surstyler lobe (Fig. 23) more slender, distinctly less broad than in *C. obscuripennis* (Fig. 21), and with less setae. Gonopod (Fig. 24) long and slender as in *obscuripennis* (Fig. 22) but definitely different (when seen in its broadest extension).

Female cerci short, hidden under tergite 7 and tergite 8, with short thin setae only.

Remarks – This new species does not only belong to the *C. obscuripennis* group (i.e. to the nominate subgenus *Campichoeta*), also its closest relative is *C. obscuripennis* (MEIGEN, 1830). The new species is different from *C. obscuripennis* by the number of setae on abdominal sternites and by the details of the male genitalia (see above and in figures). OKADA (1966) reported *C. obscuripennis* from Nepal. Now I question the identity of that Nepalese species.

#### Heleomyzidae

*Tephrochlamys fasciata* CZERNY, 1924 – 2 males (HNHM): Taiwan: Nantou Co., Yuanfeng, 2760 m, SW Hohuan Mountain, 24°07'24" N, 121°14'55" E, 29. XI. 99., RONKAY, KUN, PEREGOVITS; 1 female (HNHM): *ibid.*, Hohuanshan Experimental Station, 24°09' N, 121°17' E, 3100 m, at light, No. 86. 23–24. Sept. 99, leg. G. CSORBA; 1 male, 3 females (NMNS): Taiwan Nantou, Jenai Meifeng, IV/15–16/1996, C. S. LIN & W. T. YANG, UV Light – 2367–352; 2 females (NMNS): *ibid.*, Nanhuashan, 6/V/1992, YANG & HUANG, Sweeping Net – 1447–716/499; 1 female (NMNS): *ibid.*, MEIFENG, XII/23–24/1997, W. T. YANG, UV Light – 2756–253. This species was described from Vietnam. Formerly I saw its female holotype in the collection of the Naturhistorisches Museum Wien. *T. fasciata* is a representative of the subfamily Heteromyzinae, which has not been formerly reported from Taiwan.

\*

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