

## Lygistorrhinidae (Diptera) from Taiwan

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**Abstract** – The first records of the family Lygistorrhinidae (Sciaroidea) are given from Taiwan. A new genus *Matileola*, with its type species *M. yangi* sp. n. and *Lygistorrhina chaoi* sp. n. are described. With three figures.

**Key words** – Lygistorrhinidae, *Matileola*, new taxa, Taiwan, Oriental region.

Lygistorrhinidae is a small family of the Sciaroidea (Mycetophiloidea). Their family status had been debated for a period of time (e.g. TUOMIKOSKI 1966 and others) but most modern workers (e.g. THOMPSON 1975 to BECHEV 2000) accept Lygistorrhinidae as family.

In the course of our collection trip to Taiwan in 2000, we found two lygistorrhinid specimens in light trap materials. Actually they were selected under a stereomicroscope from large quantity of noctuids and other moths and they were minuten-pinned on the site. One of the specimens represents a new species of *Lygistorrhina* SKUSE. The other specimen is a most peculiar one. It must belong to an undescribed genus. Otherwise these are the first records for the family Lygistorrhinidae from Taiwan.

The type specimens are preserved in the collection of the Hungarian Natural History Museum (HNHM), Budapest.

### **Matileola** gen. n.

(Fig. 1)

*Type species* – *Matileola yangi* sp. n.

*Gender* – Feminine.

*Description* – Head much higher than long. Proboscis medium-long, twice as long as fore coxa. Antennae comparatively short, 14 flagellomeres are counted on our specimen.

Mesonotum just slightly humped, scutellum rather small, mediotergite humped and bare. Pleural sclerites of thorax bare.

Legs comparatively short. Coxae not particularly elongated, but fore coxa as long as height of head and 1.5 times as long as hind coxa. Hind leg far longer and thicker than fore and mid legs, hind tibia baseball-bat shaped, hind metatarsus extremely thick. Tibial spurs 0:1:2 (mid tibial spur rather weak).

Wing (Fig. 1) comparatively short, much shorter than abdomen. Wing darkened but not conspicuously patterned. Costal area at  $R_1$  conjointment simple. Sc vein reaching to the middle of wing but ends free.

Abdomen thin and much longer than that of *Seguyola* MATILE. Tergite 9 broad and slightly longer than gonocoxites.

Male genitalia not prepared. In this case it does not seem indispensable to regard the details of male genitalia in order to know the most important relations among the known genera. On one hand, body characteristics are markedly different, the male genital parts of the different genera are not basically different, on the other.

*Etymology* – I name this new genus after Dr LOÏC MATILE, the greatest student of the Mycetophiloidae families.

*Remark* – I concur with MATILE's classification of the Lygistorrhinidae in four genera (but cf. BECHEV 2000). This new genus is not readily treatable by his key for the genera. I think its closer relative is *Seguyola* MATILE, 1990, an Afro-tropical genus (only two ocelli, hind leg enlarged and thickened, no macrochaeta on tibia). The differentiating characters of the two genera are numerous:

	<i>Seguyola</i>	<i>Matileola</i>
head	rather globular	much higher than long
proboscis	minute	medium long
flagellomeres	11	14
mesonotum	strongly humped	slightly humped
fore/hind coxa	nearly 1:1	1:1.5
tibial spurs	1:2:2	0:1:2
wing	vividly coloured	almost unicolorous
C area at apex of $R_1$	broadened	normal
abdomen	ca. as long as wing, not thin	much longer than wing, very thin
tergite 9/gonocoxites	much less than 1.0	1.0 or slightly more

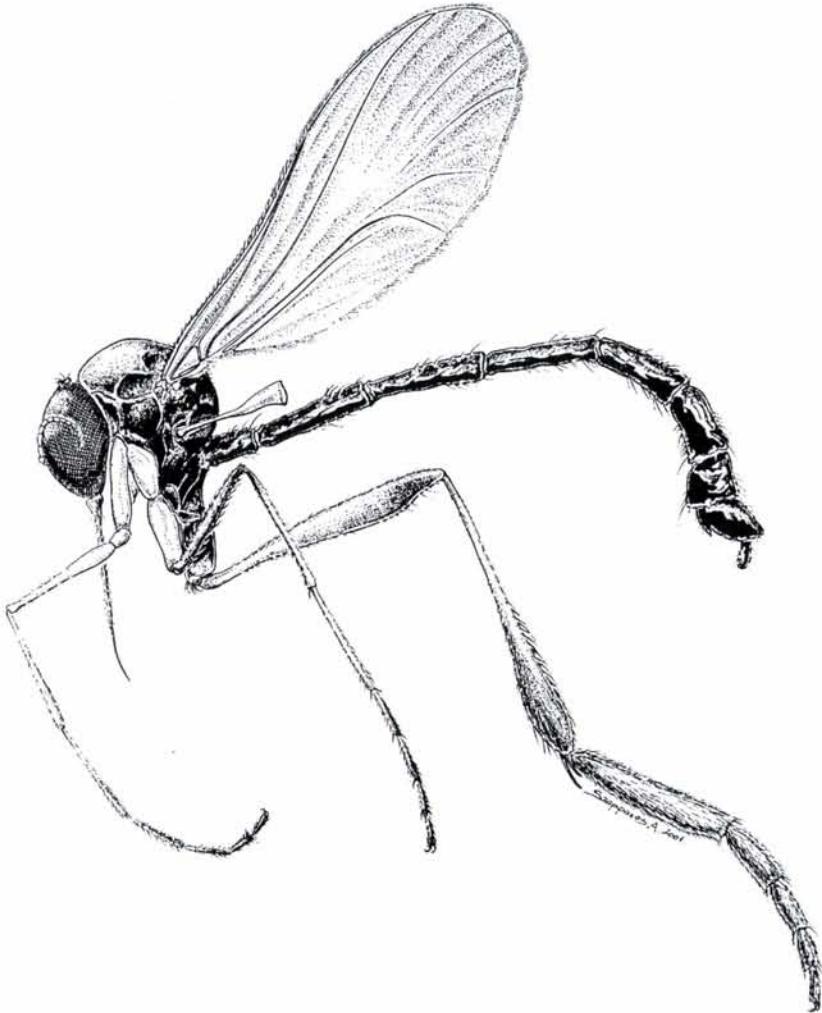
While describing this new genus, one specimen of *Seguyola variegata* MATILE, 1990 was found in the collection of the HNHM. This is a damaged male (abdomen, antennae for legs, left mid leg lost, the minuten pin pricked through right wing), but the main generic characteristics are easily seen on it. Its label data are: Ghana, Kumasi, 12–14. VI. 1965, leg. Endrődy-Younga. This record much wid-

ened its known distribution. Its possession was important for comparison in describing the new genus.

***Matileola yangi* sp. n.**

(Fig. 1)

*Type material* – Holotype male (HNHM): TAIWAN: Ilan Hsien, Fu-Shan LTER Site, Sep 25, 2000 – light traps, L. Ronkay, L. Peregovits & L. Papp, No. 5.



**Fig. 1.** *Matileola yangi* sp. n., holotype male, habitus in lateral

*Description* – Measurements in mm: body length not precisely measurable, ca. 3.2, wing length 2.15, wing breadth ca. 0.80, length of proboscis 0.85.

All body, including abdominal tergites dark.

Male frons linear, facettes comparatively large, round, microtrichia between minute but distinct. Two large lateral ocelli. Antenna all dark, ca. 0.35 mm long.

Mesonotal microtrichia short: a sagittal acrostichal and 2 dorsocentral rows are distinct. Only supra-alar and postalar setae of thorax are stronger. Scutellum short (0.07 mm long) with short pale hairs.

No stronger setae on legs but femoral and tibial microtrichia are comparatively long and less numerous than in *Lygistorrhina* spp. (e.g., fore tibia with 8 rows only, probably also mid tibia with 8 rows). Microtrichia are ordered in rows, which are less regular than in *Lygistorrhina*. Fore tibia 0.525 mm long, fore metatarsus 0.475 mm. Fore and mid tarsi are thin (Fig. 1). No tibial spur on fore tibia, mid tibia with only 1 thin spur, which is only 0.038 mm long. Hind tibia baseball-bat shaped, length 1.29 mm, hind metatarsus 0.725 mm long, breadth 0.13 mm. Hind tibia with a 0.225 mm long medial and a 0.10 mm long lateral spur.

Wing uniformly brown, not spotted, costal and radial veins light brown, other veins ochre. Vein  $R_1$  reaches 0.625 of wing. Costal vein is extremely thick from its conjointment with  $R_1$  to its apex. Costa ends at 2/3 of distance of  $R_5$  and  $M_1$ .  $Cu_1$  curved arched;  $Cu_2$  straight, parallel to  $Cu_1$ , and continued to the curve in  $Cu_1$ .  $A_1$  close to and nearly parallel with hind wing margin.

Halter light yellow, length (measured) 0.45 mm, actually longer since knob deformed in our specimen.

Abdomen very thin and much longer than wing, tergites all dark. Tergite 9 broad and slightly longer than gonocoxites. Sternite 8 broader than in *L. chaoi*. Gonostylus (Fig. 1) shorter than gonocoxite, at its apical third ca. 1.5 times broader than basally, with widely rounded apex. Gonocoxites and gonostyli without any conspicuous armature.

Female unknown.

*Etymology* – This new species is named after Prof. Dr. JENQ-CHUAN YANG, Director General of the Taiwan Forestry Research Institute (Taipei), for his support of our and all former Hungarian entomologist groups, which made studies and collections possible in Taiwan, and for his kind hospitality.

### ***Lygistorrhina chaoi* sp. n.**

(Figs 2–3)

*Type material* – Holotype male (HNHM): TAIWAN: Ilan Hsien, Fu-Shan LTER Site, Sep 25, 2000 – light traps, L. Ronkay, L. Peregovits & L. Papp, No. 5.

*Description* – Measurements in mm: body length not precisely measurable (abdomen down-curved), ca. 3.75, wing length 3.12, wing breadth ca. 1.00, length of proboscis 2.30, length of fore tibia 1.45, length of fore metatarsus 1.80.

Frons and thorax dull dark brown (blackish), abdomen subshiny with basal (cranial) lateral small round lights spots on T2 to T6 (on T6 minute, indistinct).

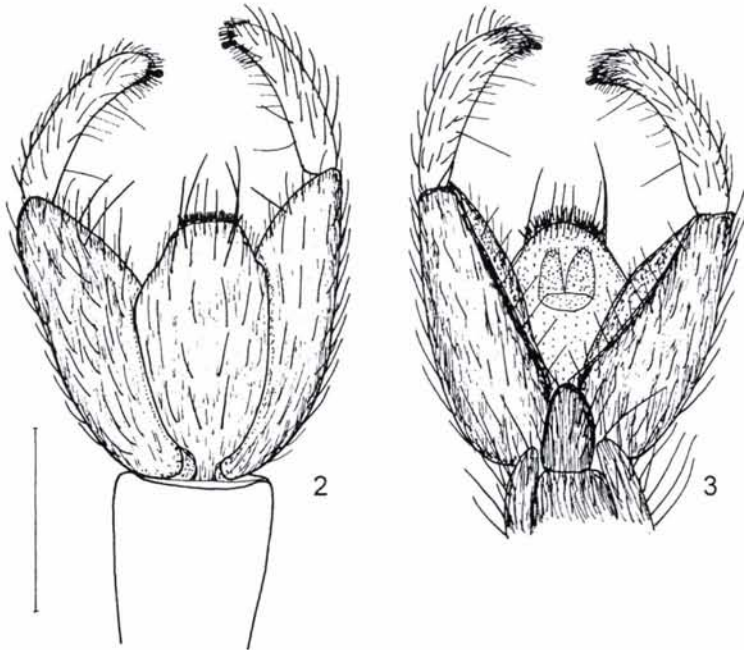
Eyes with evenly distributed short hairs; also mid ocellus present. Scape, pedicel and four basal flagellomeres yellow, 5th to 8th flagellomeres black, 9th and 10th flagellomeres yellow, 11th to 13th flagellomeres black again and apical (14th and 15th) flagellomeres yellow again.

Legs dirty yellow. Apical 2/5 of mid and hind femur dark brown. Coxae and trochanters dark brown. Tibial setulae in well-ordered rows. Tibial spurs 1:2:2, mid tibial spurs subequal. Fore claws 0.7 mm long, thin, sharp, curved arched with a ca. 0.025 mm long ventrobasal second apex.

Wing light brownish with brown veins. Sc rather strong, ends free.  $R_1$  reaching near middle of wing,  $R_5$  joins C far from apex of wing, costal vein distinct and abruptly ends at 3/4 of the section between  $R_5$  and  $M_1$ .  $M_1$ - $M_2$  fork nearly complete, their stalk present as colourless fold only.  $M_3+4$  (cf. KRZEMIŃSKI & EVENHUIS 2000). distinct even below section of  $R_1$ .  $Cu_1$  not reaching wing margin, apical part perpendicular to alar margin.  $Cu_2$  straight, distinct almost to the curved part of  $Cu_1$ .  $A_1$  almost parallel to hind margin of wing, short, shorter than down-curved section of  $Cu_1$ . Wing patterned, 4 brown spots as follow: 1) apical 3-shaped spot from below the apex of  $R_5$  leaving the subcostal area light, continued narrowed to  $M_1$ , forming a wide band along  $M_1$ , continued in  $m_1$  cell more proximally than its  $R_5$  part and terminating below  $M_2$ , leaving  $m_1$  apical part light. 2) Second spot covers  $m_1$  at the area of the  $M_1$ ,  $M_2$  bases, continued in  $m_2$  somewhat lower than  $M_{3+4}$  and follows  $M_{3+4}$  widely to the wing apex, main part in  $m_2$ . 3) Third spot along  $Cu$ -s and widens on the down-curved part of  $Cu_1$ . 4) Fourth spot present as a round one in  $Cu$  cell (at about the middle).

Halter 0.53 mm long, pale yellow.

Gonostylus yellow, contrasting gonocoxites. Gonostylus (Figs 2–3) with a subapical medial blunt, more or less globular tooth, lacking in a number of *Lygistorrhina* species, large and pointed in *L. carayoni* MATILE, 1986. Caudally to this took a thicker short black thorn present. Tergite 9 club-shaped with rounded basal and caudal edges, caudal apex with dense short black thornlets, like in *carayoni*. Tergite 9 dorsally with long setae, 2 pairs of them in apical quarter rather long. Sternite 8 short liguliform. Phallus short and hidden, as in its congeners. Tergite 9 completely covers the short pale cerci, which bear some minute black thornlets apically.



Figs 2–3. *Lygistorrhina chaoi* sp. n., ♂ genitalia *in situ*. 2 = dorsal view, 3 = ventral view. Scale: 0.2 mm

*L. chaoi* sp. n. is an easily recognisable species. It belongs to that species-group of the true *Lygistorrhina*, where flagellomeres yellow-black patterned, namely *L. cincticornis* EDWARDS, 1926 (Borneo), *L. pictipennis* OKADA, 1937 (Japan), as well as *L. legrandi* MATILE, 1990 in the Afrotropical Region. The 5th to 8th and 11th to 13th flagellomeres are black in this new species, which separate it from the related ones. Also the male genitalia (tergite 9, gonostylus) bear distinctive features.

*Etymology* – I name this new species after Prof. Dr. JUNG-TAI CHAO, senior research scientist of the Division of Forest Protection, Taiwan Forestry Research Institute, for all his factual and mental support during our study and collecting trip to Taiwan in 2000.

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