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## Two new species of the genus *Stilpon* LOEW from China (Diptera: Hybotidae)

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**ABSTRACT.** The genus *Stilpon* LOEW (Diptera: Hybotidae) is recorded for the first time from China with two species new to science: *S. freidbergi* n. sp. (Taiwan) and *S. nanlingensis* n. sp. (Guangdong). Both species are described and illustrated.

**Key words:** entomology, taxonomy, Diptera, Empidoidea, Hybotidae, *Stilpon*, new species, Palaeartic, China.

### INTRODUCTION

This paper presents the first record of the Tachydromiinae fly of the genus *Stilpon* LOEW from China. Two species new to science have been discovered, one from Taiwan and a second one from the southern Chinese province Guangdong. The record of this group of empidooids from China is not a surprise because *Stilpon* species are common and very diverse in the Oriental realm (SHAMSHEV & GROOTAERT 2004a). Additionally, the genus has been recently found to occur in Middle Asia and the Russian Far East (SHAMSHEV & GROOTAERT 2004b). Phylogenetically, the two species described below are more closely related to some Oriental species rather than to those discovered from the Nearctic (CUMMING & COOPER 1992) or Palaeartic. Taking into account the great natural diversity of the Chinese terri-

tory it is evident that in the future undescribed species may yet be found from that area, especially from the southern provinces.

The study is based on Diptera material deposited in the Entomological Museum of China Agricultural University (CAU, Beijing) and in Tel Aviv University (Israel). For details of the methods, including morphological terms and descriptive format, we refer to the paper published recently by the authors (SHAMSHEV & GROOTAERT 2004a). In the descriptions, right and left sides of the male terminalia are based on the unrotated position viewed posteriorly, such that in the illustrations the right surstylus appears on the readers left side and vice versa. The male terminalia are figured in their unrotated position.

#### SYSTEMATIC ACCOUNT

#### *Stilpon freidbergi* n. sp.

##### TYPE MATERIAL

Holotype: Male, Taiwan center, Mushe (Jenai), 1000 m, Taichung 45 Km E., Rt. 14, 5X93, (F. KAPLAN and A. FREIDBERG). Deposited in Tel Aviv University, Israel.

##### DIAGNOSIS

Species with wholly black thorax; legs almost wholly yellow, only tarsomere 5 of all legs black; mid femur with 1 row of 5 ventral spine-like bristles in basal part; hind femur constricted and bent near middle; abdominal gland-like structures not prominent; male terminalia lacking spines, surstyler comb present, small.

##### DESCRIPTION

Male: Body length 1.5 mm, wing length 1.4 mm. Head black in ground-colour. Occiput subshining, finely greyish pollinose. Two moderately long, black, vertical bristles present. Frons linear with sides nearly parallel, rather broad, nearly 4 times as broad as anterior ocellus, entirely tomentose. Clypeus silvery white tomentose. Antenna with scape and pedicel reddish yellow, postpedicel and style brown. Palpus pale yellow, with rather short, black, subapical bristle.

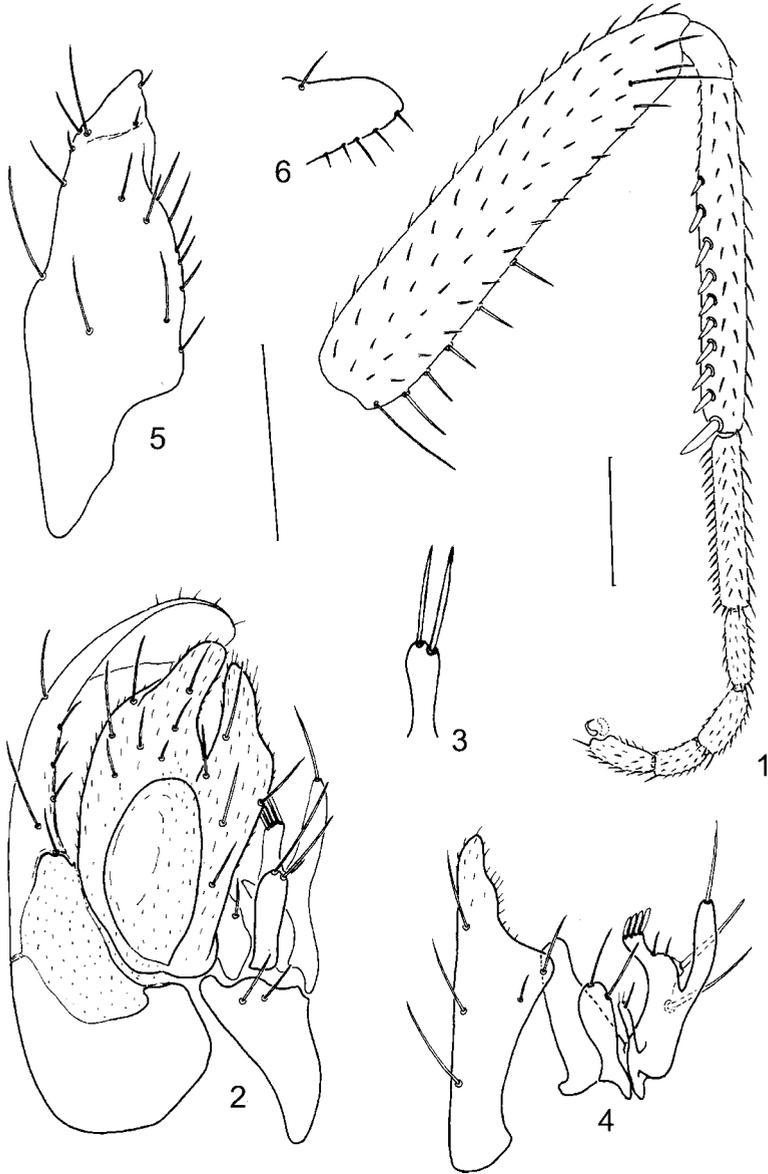
Thorax black in ground-colour. Scutum entirely tomentose. Postpronotal bristle long, inclinate. Dorsocentral bristles in multiple rows, complete posteriorly. Acrostichal bristles 2-serial, complete posteriorly.

Legs almost wholly yellow, tarsomere 5 of all legs black. Mid coxa with 2 yellow bristles on outer side. Hind trochanter lacking spinules. Fore femur markedly thickened, with rows of moderately long antero- and posteroventral bristles. Mid femur (Fig. 1) slender, with 1 row of 5 ventral, brownish, spine-like bristles in basal part and 1 longer, yellow bristle near base.

Hind femur (viewed laterally) constricted and bent near middle, with several dorsal, erected, black bristles beyond constricted part of femur, bearing some

prominent dorsal, yellow bristles near base and 1 row of black, anteroventral bristles in apical half (3 bristles longer).

Fore tibia spindle-like, with ordinary setation. Mid tibia with row of black, ventral spinules and 1 longer subapical spinule. Hind tibia with unmodified



1-6. *Stilpon freidbergi* n. sp., male: 1 - mid leg, anterior view, 2 - hypopygium ventral view, 3 - subapical bristles on hypandrium, dorsal view, 4 - left surstylus and left cercus, right lateral view, 5 - right surstylus, dorsal view, 6 - apical part of right surstylus, dorsal view. Scale 0.1 mm

posterior apical comb, clothed in moderately long, erect bristles. Tarsomeres of all legs unmodified.

Wing normally developed, covered with uniform microtrichia; more or less uniformly, finely infusate. Costal vein with moderately long setulae along anterior margin. Vein R2+3 about 3 times longer than Rs. Distance between apices of veins R2+3 and R4+5 subequal to distance between apices of veins R1 and R2+3. Veins R4+5 and M1+2 slightly divergent and arcuate in apical part. Halter yellow.

Abdomen largely brownish yellow, pregenital segments darker. Intersegmental gland-like structures not prominent.

Hypopygium (Fig. 2) brown, rather small. Hypandrium with 2 long, spine-like bristles sitting on elongate tubercle (Fig. 3). Epandrium completely divided. Left epandrial lamella small, fused to hypandrium, with 2 long bristles in apical part. Left surstylus (Fig. 4) with upper lobe undivided, with small surstyler comb. Right surstylus (Figs 5, 6) moderately large, subtriangular, elongate, lacking spines. Cerci unbranched, subequal in size and similar in shape, rather subtriangular, lacking spines, ventral bristle and left marginal bristles in basal part. Phallus short.

Female: unknown.

#### ETYMOLOGY

The new species is dedicated to Dr. AMNON FREIDBERG of Tel Aviv University (Israel) who collected it and many other interesting empidoids.

#### DISTRIBUTION

China: Taiwan.

#### REMARKS

The new species can be readily distinguished from all known Palaearctic species of *Stilpon* by the hind femur constricted and bent near middle. Within the key to the species from the Oriental realm (SHAMSHEV & GROOTAERT 2004a) *S. freidbergi* would run to *S. paradoxus* SHAMSHEV & GROOTAERT known from Thailand only. However, this species has the hind tibia with long, spur-like posterior apical comb and abdominal tergite 1 produced laterally into a small corner-like projection bearing 3 black, spine-like bristles. Some Nearctic species possessing the hind femur constricted and bent near middle differ primarily from *S. freidbergi* in incompletely tomentose scutum (CUMMING & COOPER 1992). The relationships of the new species are not quite clear but it appears to show some affinities to the Oriental *S. paradoxus* and *S. yai* SHAMSHEV & GROOTAERT.

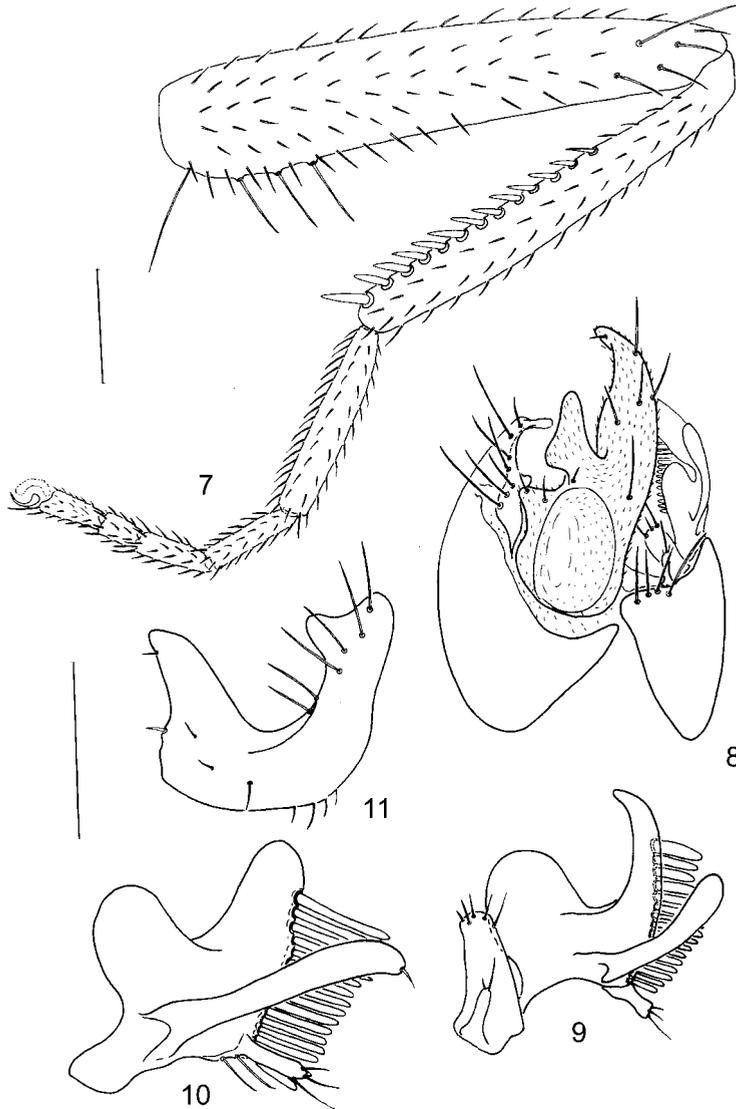
### *Stilpon nanlingensis* n. sp.

#### TYPE MATERIAL

Holotype: Male, China: Guangdong province, Ruyuan Nanling, 7 May 2004 (National Nature Reserve, near headquarters; alt. 1000 m; sample n° 24010, coll. P. GROOTAERT). Deposited in CAU.

## DIAGNOSIS

Species with wholly black thorax; legs with tibiae and tarsi entirely brown; mid femur with 3 posteroventral spine-like bristles in basal 1/3 and 1 row of 8 anteroventral shorter bristles; wings deeply infuscate, with veins R4+5 and M1+2 straight, subparallel in apical part; abdominal gland-like structures not prominent; male terminalia lacking spines, with markedly developed surstyler comb.



7-11. *Stilpon nanlingensis* n. sp., male: 7 - mid leg, anterior view, 8 - hypopygium ventral view, 9 - left surstylus, ventro-lateral view, 10 - same, dorsal view, 11 - right surstylus, dorsal view. Scale 0.1 mm

## DESCRIPTION

Male: Body length 2.4 mm, wing length 1.9 mm. Head black in ground-colour. Occiput subshining, finely greyish pollinose. Two long, black, vertical bristles present. Frons linear with sides nearly parallel, rather broad, nearly 3 times as broad as anterior ocellus, entirely tomentose, subshining. Antenna with scape and pedicel yellow, postpedicel and style yellowish brown. Ocellar tubercle with minute setulae. Palpus pale, with moderately long, black, subapical bristle.

Thorax black in ground-colour. Scutum entirely tomentose. Postpronotal bristle long, inclinate. Dorsocentral bristles in multiple rows, complete posteriorly. Acrostichal bristles 2-serial, complete posteriorly.

Legs with fore coxae and trochanters yellow, mid and hind coxae and trochanters yellowish brown; fore femur largely brownish yellow, darker dorsally, mid and hind femora yellow in basal half and brownish in apical half; tibiae and tarsi entirely brown. Hind trochanter lacking spinules. Fore femur markedly thickened, with rows of moderately long antero- and posteroventral bristles. Mid femur (Fig 7) slender, with 3 posteroventral, moderately long, black, spine-like bristles in basal 1/3, 1 row of 8 anteroventral, shorter, spine-like bristles and 1 long, subapical bristle anteriorly. Hind femur (viewed laterally) evenly thickened toward middle, with 1 row of anteroventral bristles (about 4 subapical ones longer), bearing some dorsal erect bristles near base. Fore tibia spindle-like, with ordinary setation. Mid tibia with 1 row of black ventral spinules. Hind tibia with unmodified posterior apical comb, clothed in moderately long, erect bristles. Fore and mid tarsomeres slender, hind tarsomere 1 thickened.

Wing normally developed, covered with uniform microtrichia, uniformly, rather deeply infuscate. Costal vein with long setulae along anterior margin. Vein R2+3 about 2.5 times longer than Rs. Distance between apices of veins R2+3 and R4+5 somewhat (1.2 times) longer than distance between apices of veins R1 and R2+3. Veins R4+5 and M1+2 straight, subparallel in apical part. Halter with yellow stem and black knob.

Abdomen mostly with light brown tergites and sternites, bearing hardly prominent bristles; segment 8 dark brown, with several moderately long bristly hairs. Most of sternites (except for sternites 7 and 8) divided by narrow, yellow, median area into two parts. Intersegmental gland-like structures not prominent.

Hypopygium (Fig. 8) dark brown, rather large. Hypandrium lacking bristles in apical part. Epandrium completely divided. Left epandrial lamella rather small, fused to hypandrium, with 4 long bristles in apical part. Left surstylus (Figs 9, 10) largely divided; lower part with greatly developed surstyler comb, upper part digitiform, fused with lower part basally. Right surstylus (Fig 11) moderately large, bilobed, lacking spines. Left cercus consisting of two lobes, lacking spines, ventral bristle and left marginal bristles in basal part. Right cercus unbranched, small, lacking spines. Phallus short.

Female: unknown.

## ETYMOLOGY

The new species is named after the type locality.

## DISTRIBUTION

China: Guangdong.

## REMARKS

*S. nanlingensis* is most closely related to *S. yai* known from Thailand only (SHAMSHEV & GROOTAERT 2004a). It can be readily distinguished from the latter by the armature of the male mid femur and by darker legs.

## ACKNOWLEDGEMENTS

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