

***Ctenopleuriphora* gen. n.: A remarkable new genus of Phoridae (Diptera)
from China**

GUANGCHUN LIU

Department of Plant Protection, Shenyang Agricultural University,
Shenyang, Liaoning 110161, P. R. China

Taxonomy, Phoridae, Diptera, description, new genus, new species

Abstract. A new genus, *Ctenopleuriphora*, is described for a new species, *C. decemsetalis*, collected in Hainan, China. The genus shows some resemblance to *Phlebothrix* and *Spiniphora* in having more than one pair of dorsocentral bristles and to *Psyllomyia* in having several hair palisades, but differs from other existing genera in possessing a mesopleural comb.

INTRODUCTION

Among some phorid flies collected in South China, a curious specimen was found. It differs from other genera of Phoridae in having a mesopleural comb, five pairs of dorso-centrals and the multiple hair palisades on the hind tibia. Furthermore, it is interesting that it has characters of both Phorinae and Metopininae. Since the specimen could not be associated with any existing genus of Phoridae, it was necessary to describe a new genus.

Genus *Ctenopleuriphora* gen. n.

TYPE SPECIES: *Ctenopleuriphora decemsetalis* sp. n.

DIAGNOSIS. Supra-antennal bristles absent. Mesopleuron divided (with a mesopleural furrow) and with a comb on the posterior part. Thorax with 5 pairs of dorsocentral bristles. Vein Rs with a row of fine hairs along upper face. Mid tibia with isolated bristles. Hind tibia with 5 palisades.

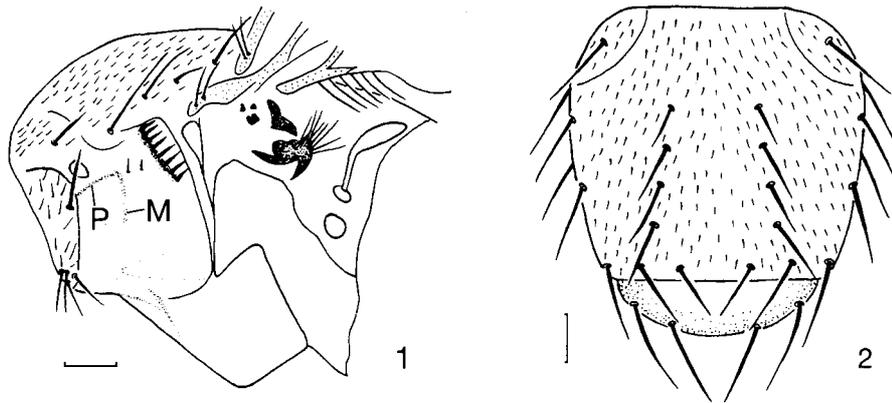
DESCRIPTION. Frons broader than high, with short hairs, without median furrow. Supra-antennal bristles absent. Chaetotaxy: 4-4-4. Eyes developed, with minute hairs. Third antennal segment globose. Arista dorsal. Palps slender, with 4 bristles below distal half.

Thorax with long hairs. Scutum with 5 pairs of dorsocentral bristles. Scutellum with 4 subequal bristles. Propleuron with long hairs and bristles. Mesopleuron divided, with a longitudinal comb on posterior part.

Wing fully developed. Costa longer than half of wing length. Vein R_1 without hairs. Vein Rs with a row of fine hairs along upper face. Vein M_{1+2} (first thin vein) concave, curved basally and originating before radial fork.

Legs long. Fore tibia with 1 palisade and some antero-dorsal spines in longitudinal row. Mid tibia with 1 pair of isolated bristles and 4 palisades; at dorsal face below distal half with a series of combs in transverse rows. Hind tibia with 5 palisades.

Abdomen with long bristles, particularly on hind margin of tergum 6.



Figs 1–2. *Ctenopleuriphora decemsetalis* gen. et sp. n., female, thorax. 1 – left view; 2 – dorsal view. M – median mesopleural ridge; P – post propleural ridge. Scale bars = 0.1 mm.

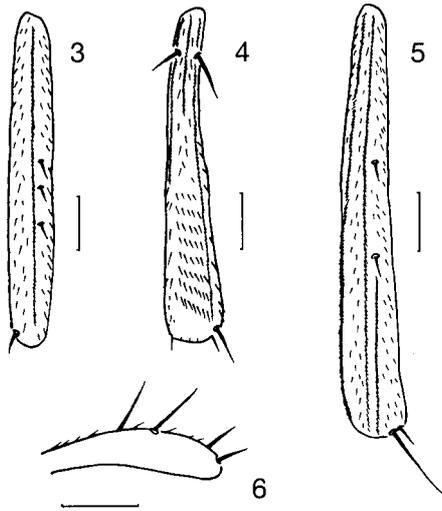
ETYMOLOGY. *Ctenopleuriphora* is derived from the Greek, referring to the setae on the thoracic pleura. The word is feminine.

AFFINITIES. The new genus is easily distinguished from all other genera by its 10 dorso-central bristles, 5 palisades of hind tibia and a comb on mesopleuron. In Disney's key to genera of females (Disney, 1994), *Ctenopleuriphora* runs to 114 as *Borophaga* Enderlein. The two genera differ in characters as above-mentioned. The dorsocentral bristles are similar to those in *Phlebothrix* Borgmeier and *Spiniphora* Enderlein, which have also more than 1 pair of dorsocentral bristles. However, the latter has no palisades on the hind tibia and *Phlebothrix* has a row of hairs on vein R_1 . *Psyllomyia* Loew has also several hair palisades, but the other features are different from *Ctenopleuriphora*.

The present supra-generic classification of the Phoridae follows Schmitz (1929) and his subsequent revision (Schmitz, 1951) which advocates six subfamilies: Phorinae, Aenigmatiinae, Thaumatoxeninae, Metopininae, Alamirinae and Termitoxeniinae. The new genus, which has isolated bristles on the mid tibia and a mesopleural furrow, possesses characters found in both Phorinae and Metopininae. However, the feature of the isolated bristles was considered as plesiomorphic state (Brown, 1992) and is not suitable for diagnostic of Phorinae. Disney (1996) demonstrated that the mesopleural furrow in Metopininae comprises two elements: a post-propleural ridge (P in Fig. 1) and a median-mesopleural ridge (M in Fig. 1). The former is considered as plesiomorphy and the latter as apomorphy. In *Ctenopleuriphora* the vertical element of the mesopleural ridge appears to be homologous with that in Metopininae. Therefore, it is suggested that this genus should be placed in Metopininae. However, further study, including finding its male sex, is needed in order to understand its phylogeny.

Ctenopleuriphora decemsetalis sp. n.

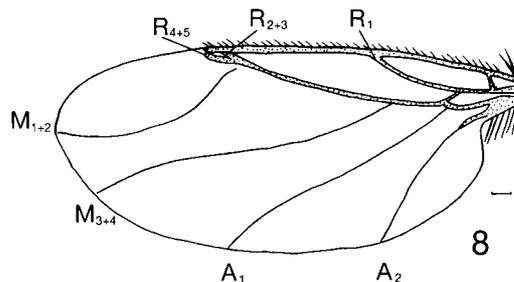
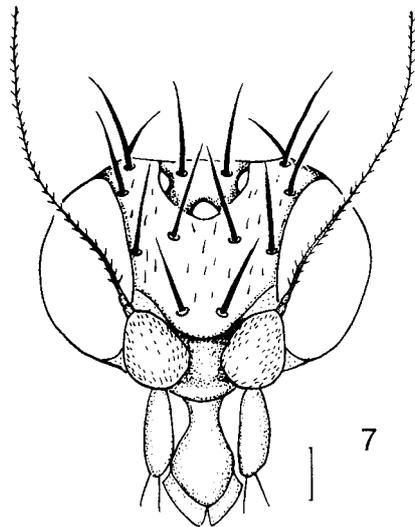
FEMALE. Head width 0.60 mm. Frons (Fig. 7) 0.28 mm wide, broader than high (7 : 5); dark brown, but ocellar area black; with scattered hairs, without median furrow. Supra-antennal bristles absent. Antials closer together than pre-ocellars. Antero-laterals only a little lower than pre-ocellar bristles. Medio-laterals a little higher on frons than pre-



Figs 3–6. *Ctenopleuriphora decemsetalis* gen. et sp. n., female. 3 – right fore tibia in dorsal view; 4 – right mid tibia in dorsal view; 5 – right hind tibia in frontal view; 6 – left palp. Scale bars = 0.1 mm.

are fully developed. Tergum 6 also with bristles on hind margin.

Wing (Fig. 8) 2.25 mm long. Costal index 0.68. Costal ratios 8.67 : 13.67 : 1. Costal cilia 0.06 mm. R_{2+3} and R_{4+5} are close together. Vein R_s , apart from 1 hair at base, with a row of 12 fine hairs along upper face. Vein M_{1+2} (the first thin vein) originates before the radial fork, sinuous near base, the other veins also sinuous. Axillary ridge with 6 bristles. Haltere yellow, with dark brown knob.



Figs 7–8. *Ctenopleuriphora decemsetalis* gen. et sp. n., female. 7 – frontal face of head; 8 – left wing. Scale bars = 0.1 mm.

ocellars. Gena with 2 bristles. Parafacial with 2 short hairs. Third antennal segment globose, dark brown. Arista dorsal, with long hairs. Palps (Figs 6 and 7) brown, with 4 bristles and some hairs below distal half.

Thorax (Figs 1–2) brown. Scutum long haired, with 5 pairs of dorsocentral bristles in two longitudinal rows, of which the anterior pair is the shortest and the posterior pair is the longest. Between the posterior pair 2 bristles also present. Scutellum with 4 bristles, the outer a little shorter. Propleuron with bristles and long hairs. Mesopleuron divided, convex on posterior margin, with a comb of 8 bristles with 2 small hairs to its anterior.

Abdomen with brown terga and black venter. Tergum 2 is the widest, the others become gradually narrower. Terga 3–5 equal in length. Terga 2 and 6 are the longest, the latter trapezoidal. Tergum 1 with 16 bristles on hind margin in transverse row, of which 6

Legs yellow. Fore tibia 0.6 mm long, with 1 palisade and 3 antero-dorsal bristles (Fig. 3). Mid tibia with 4 palisades, of which anterior and posterior are complete, but anterodorsal and posterodorsal only extend 1/2 and 1/3 the length of the tibia (Fig. 4). On the dorsal side, below the distal half, there are 8 combs. Hind tibia (Fig. 5) with 2 anteroventral bristles and 5 palisades, of which anterior and anterodorsal are complete; anteroventral occupies the distal 1/3 of the tibia, posterodorsal and posterior extend 3/4 and 4/5 along the length of tibia, respectively.

Body length 2.0 mm.

MALE. Unknown.

HOLOTYPE ♀: China, Mt. Jianfeng (850 m), Hainan, 5.iv.1992 (Guangchun Liu leg.). The type specimen is deposited in Department of Plant Protection, Shenyang Agricultural University, P. R. China.

ETYMOLOGY. The specific name refers to the number of dorsocentral bristles.

ACKNOWLEDGEMENT. I am very grateful to R.H.L. Disney (Cambridge University, UK) for his comments upon the manuscript.

REFERENCES

- BROWN B.V. 1992: Generic revision of Phoridae of the Nearctic Region and phylogenetic classification of Phoridae, Sciadoceridae and Ironomyiidae (Diptera: Phoridae). *Mem. Entomol. Soc. Can.* **164**: 1–144.
- DISNEY R.H.L. 1994: *Scuttle Flies: The Phoridae*. Chapman & Hall, London, 467 pp.
- DISNEY R.H.L. 1996: Continuing the debate relating to the phylogenetic reconstruction of the Phoridae (Diptera). *G. It. Entomol.* **7**[1994]: 103–117.
- SCHMITZ H. 1929: *Revision der Phoriden*. F. Duemmler, Berlin & Bonn, 211 pp.
- SCHMITZ H. 1951: Phoridae. In Lindner Z. (ed.): *Die Fliegen der palaearktischen Region. Lief. 165*. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart, pp. 241–272.

Received July 16, 1995; accepted November 29, 1995