

# A newly recorded genus with one new species of *Stomosis* Melander (Diptera: Milichiidae) from China

Yuqiang XI<sup>1</sup>, Xinming YIN<sup>1, 2</sup>, Ding YANG<sup>3①</sup>

1. College of Plant Protection, Henan Agricultural University, Zhengzhou, Henan 450002, China

2. Xinyang College of Agriculture and Forestry, Xinyang, Henan 464000, China

3. Department of Entomology, China Agricultural University, Beijing 100193, China

**Abstract:** The genus *Stomosis* Melander is recorded from China for the first time with the following species new to science: *Stomosis melannotala* sp. nov.. This new species is described and illustrated.

**Key words:** Cyclorrhapha; Carnoidea; taxonomy

中国叶蝇科一新纪录属及一新种（双翅目：叶蝇科）

席玉强<sup>1</sup>，尹新明<sup>1,2</sup>，杨定<sup>3①</sup>

1. 河南农业大学植物保护学院，河南 郑州 450002；2. 信阳农林学院，河南 信阳 464000；3. 中国农业大学昆虫学系，北京 100193

**摘要：**记述中国叶蝇科 1 新纪录属：膨端叶蝇属 *Stomosis* Melander, 1913 及 1 新种：黑背膨端叶蝇 *S. melannotala* sp. nov.。

**关键词：**环裂亚目；鸟蝇总科；分类

## Introduction

The genus *Stomosis* Melander, 1913 is a small genus in the subfamily Phyllomyzinae with only 6 species known worldwide. Previous species were restricted to the Nearctic, Neotropical and Australian Regions (Melander 1913; Frey 1919; Malloch 1925; Sabrosky 1958; Brake 2010). *Stomosis* can be distinguished from other genera by the following characteristics: C extending to M<sub>1</sub>; proboscis elongate; labella, when open, together at least twice as long as broad, each labellum with two pseudotracheae; and hind femur with a strong seta anteroventrally on distal half. *Stomosis flava* has been reared from puparia collected in tree cavities and some specimens were collected in a privy trap (Sabrosky 1958); *Stomosis arachnophila* is kleptoparasitic on spiders (Brake 2010). The biology of the other described species is unknown.

In this paper, the genus *Stomosis* is recorded from China for the first time. One species, *S. melannotala* sp. nov. is described as new to science.

## Material and methods

Terms used for adult structures follow those of McAlpine (1981) and Brake (2000). The following abbreviations are used: asc—apical scutellar seta(e), bsc—basal scutellar seta(e), dc—dorsocentral seta(e), h—humeral seta(e), kepsts—katepisternal seta(e), pa—postalar seta(e), pos—postsutural seta(e), prs—presutural seta(e), prsc—prescutellar seta(e), sa—supraalar seta(e), S—sternite, T—tergite.

The type specimens are deposited in the Entomological Museum of China Agricultural University, Beijing (CAU).

## Taxonomy

### *Stomosis* Melander 1913, new record to China

*Stomosis* Melander, 1913: 242. Type species: *Stomosis* (*Desmometopa*) *luteola* Coquillett, 1902. Holotype male, type locality: North America.

### *Stomosis melannotala* sp. nov. (Figs. 1–5)

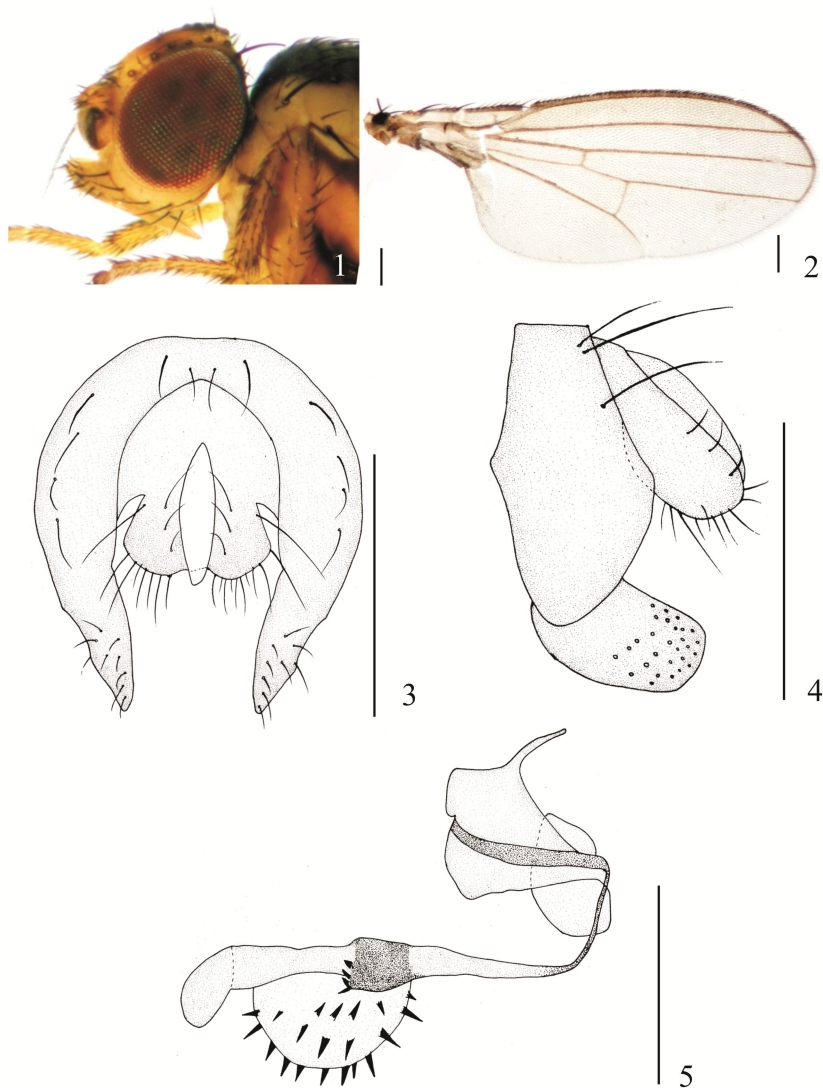
Diagnosis. Gena approximately one-eighth eye height; mesonotum shining black; distiphallus membranous and with many setae at apex; subepandrial tubular and sclerite developed.

Body length 1.5 mm; wing length 1.2 mm.

Male. Head (Fig. 1) darkish yellow with brownish microtomentum; orbital plates subshiny darkish yellow without microtomentum, ocellar triangle brownish without microtomentum; lunule small, yellow with brownish yellow margin. Posterior eye margin ventrally diverging from head margin; eye 1.4 times as high as long, gena approximately one-eighth eye height. Setae and setulae on head black; ocellar triangle with 2 ocellar setae and 3 short setae; frons with 3 orbital and 2 frontal setae, orbital setae laterocline and frontal setae mediocline, 1 interfrontal seta; postocellar setae cruciate. Vibrissal angle relatively blunt; vibrissa strong, located above the level of lower eye margin. Antenna blackish yellow with microtomentum; pedicel with short black setulae at middle and margin, marginal setulae longer than others, longest one about 4 times longer than others; first flagellomere with pubescence, irregularly circular; arista 4 times as long as first flagellomere, black, distinctly pubescent. Proboscis slightly longer, geniculate, yellow, margin with sparse setulae. Palpus very short, rodlike with blunt apex in lateral view, about 0.1 mm, 3 times longer than wide; darkish yellow, with short dense black pubescence, terminal with short and long sparse strong setae.

Thorax darkish black without grey microtomentum, mesonotum shining black with sparse black microtomentum; scutellum darkish black with grey microtomentum. Setae and setulae on thorax black; 1 h, 2 dc, 1 prsc, 2 npl, 1 prs, 1 pos, 1 sa, 2 pa, 1 kepsts (setulae at forward position); scutellum 1.3 times wider than long, with pair of asc and bsc, asc 2.5 times longer than bsc. Legs slender, darkish yellow. Setae and setulae on legs black. Mid tibia with 1 black preapical dorsal setae; hind femur with 1 strong seta anteroventrally on distal half. Wing (Fig. 2) hyaline, unspotted; veins brown; Sc strong; C extending to M<sub>1</sub>; M<sub>1</sub> between r-m and dm-cu longer than dm-cu. Calypter yellowish, with dense brownish microtrichiae, margin with long setulae. Knob of halter yellowish white, stalk yellow.

Abdomen darkish brown and yellow with gray microtomentum. Setae and setulae on abdomen black; T2–T5 with setae, marginal setae longer than others; sternites with sparse black setulae at posterior 3/4. Posteromedial triangular projection of T1 into T2 strong; S2 and S3 irregularly subquadrate, S4 horizontally rectangular, S5 irregularly subquadrate, the margin unsmooth and apical margin slightly upward arched. Male genitalia (Figs. 3–5): epandrium with 4 pairs of strong setae, irregularly sphere-shaped, surstylus slightly short and with short setulae, hypandrium strap-shaped; distiphallus membranous and with many setae at apex; subepandrial sclerite tubular and sclerite developed; cercus blunt and with sparse long setae.



Figures. 1–5. *Stomosis melannotata* sp. nov. male. 1. Head, lateral view; 2. Wing; 3. Epandrium, cercus, and surstylus, posterior view; 4. Epandrium, cercus and surstylus, lateral view; 5. Hypandrium, distiphallus and subepandrial sclerite, lateral view. Scale bars = 0.1 mm.

Female. Unknown.

Etymology. The species epithet refers to the colour of mesonotum.

**Holotype.** ♂, **China**, Yunnan, Lvchun, Qimaba, 770 m, 22.81°N, 102.24°E, 11-VI-2013, Jinying YANG. **Paratype.** 1♂, same data as holotype.

Distribution. China (Yunnan).

Remarks. This new species is somewhat similar to *S. vittata* Malloch, but can be separated from it by the mesonotum shining black; palpus short, rodlike with blunt apex, darkish yellow; legs darkish yellow. In *S. vittata*, the mesonotum is yellow and has 3 black stripes; palpus is flat, brown; legs are brownish (Malloch 1925).

## Acknowledgements

The authors express their sincere thanks to Ms. Jinying YANG (Beijing) for her kind help and for collecting the specimens. The research was funded by the Agricultural Science and Technology Innovation Project of Henan (30600309) and the Agricultural Technology System of Henan (S2014-11-G03).

## References

- Brake I. 2000. Phylogenetic systematics of the Milichiidae (Diptera, Schizophora). *Entomologia Scandinavica*, 57(supplement): 1–120.
- Brake I. 2010. *Stomosis arachnophila* sp. n., a new kleptoparasitic species of freeloader flies (Diptera, Milichiidae). *Zookeys*, 50: 91–96.
- Frey R. 1919. Mitteilungen über südamerikanische Dipteren. *Öfvers finska VetenskSoc Förh*, 60: 35.
- Malloch JR. 1925. Notes on Australian Diptera. No. X. *Proceedings of the Linnean Society of New South Wales*, 50: 80–97.
- Melander AJ. 1913. A synopsis of the dipterous groups Agromyzidae, Milichiinae, Ochthiphilinae and Geomyzinae. *Journal New York Entomological Society*, 21: 219–273.
- McAlpine JF. 1981. Morphology and terminology—adults. In: McAlpine JF, Peterson BV, Shewell GE, Teskey HJ, Vockeroth JR & Wood DM (Eds.), *Manual of Nearctic Diptera. Vol. 1*. Canadian Government Publishing Centre, Quebec, pp. 9–63.
- Sabrosky CW. 1958. New species and notes on North American acalyptrate Diptera. *Entomological News*, 69: 169–176.