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A newly recorded species of the genus *Melanthrips* Haliday (Thysanoptera: Melanthripidae) in China

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Abstract: 【Objective】To investigate the species and distribution of Melanthripidae, Thysanoptera in China. 【Method】Collected thrips specimens from various host plants by flapping method, then mounted slides and identified the species. 【Result and conclusion】Three species of the genus *Melanthrips* were found in China, of which *Melanthrips knechteli* Priesner was a newly recorded species. Description and illustrations of the new record species, and an identifying key and the diagnostic features of the known species of Chinese *Melanthrips* were provided.

Key words: Thysanoptera; Melanthripidae; *Melanthrips*; new record; China
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中国黑蓟马属一新记录种记述(缨翅目:黑蓟马科)

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摘要:【目的】调查中国缨翅目黑蓟马科的种类和分布.【方法】用拍打法采集各种植物上的蓟马标本,并制成玻片标本,进行形态学分类和鉴定.【结果和结论】黑蓟马科在中国仅发现1属3种,其中1种为中国新记录种:克氏黑蓟马 *Melanthrips knechteli* Priesner. 本文描述了该新记录种并提供了中国该属已知种的鉴别特征和检索表.

关键词:缨翅目;黑蓟马科;黑蓟马属;新记录;中国

Melanthripidae is one of the eight families recognized in the suborder Terebrantia. Members of this family feed on flowers, which is also the place for their breeding^[1]. The members of this family are identified by having a pair of lobes with an associated two pairs of setae on the posterior margin of the seventh sternite; a well developed pair of trichobothrium on the tergite X; transverse sensoria on the antennal segments, and a fully developed tentorium in the head.

This family includes 65 species in four genera, of which *Melanthrips* with 36 species is the largest ge-

nus^[2]. In China, the genus *Melanthrips* was recorded with two species: *M. fuscus* and *M. pallidior*^[3]; and there is the third species: *M. knechteli*, which is recorded for the first time. Specimens for study were mounted with Canada balsam. Illustrations were made using a camera lucida. The specimens are now preserved in the insect museum of department of entomology, South China Agricultural University, Guangzhou (SCAU).

Genus *Melanthrips* Haliday
Melanthrips Haliday, 1836: 450^[4].
Generic diagnosis. The body generally dark

brown, brownish in some species, antennal segment III is yellowish or slightly lighter than other segments; fore wings grey or brownish but pale at base. Antennal distal segments fully distinct from each other and segments II – VII with rows of microtrichia, sensoria on III and IV in the form of an oblique line or ring near the apex of the segments and partly or entirely encircling them. Head prolonged between the base of antennae and maxillary palps 3-segmented. Pronotum has 4 – 7 pairs of posteromarginal setae, rarely 3 pairs in certain species, others with 6 – 7 pairs; both pronotum and pterothorax covered with microtrichia; mesosternum with spinula. Fore wings broad with 2 longitudinal and 5 cross-veins. Fore tibia with a robust spine at the apex. Abdominal tergite X with paired trichobothria is fully developed; sternites with discal setae; sternites VII with a pair of posteromarginal lobes.

Key to Chinese species of *Melanthrips*

1. Fore wings with cilia between the costal setae much shorter than these setae *M. fuscus* (Sulzer)
- Fore wings without cilia between the costal setae 2
2. Sense lines of the antennal segments III and IV of the ventral widely across the dorsal side ; sensory areas

broad, and much widened at their tips (Fig. 1a). Sternite III with only one discal setae
..... *M. knechteli* Priesner
Sensory areas on antennal segments III and IV short, and exactly circumpolar, semicircularly following the apical margin of the segments. Abdominal sternite III with 2 – 3 and IV with 1 – 2 pairs of discal setae
..... *M. pallidior* Priesner

Melanthrips fuscus (Sulzer)

Thrips fuscus Sulzer, 1776: 113; in Priesner, 1936: 32.
This species was identified based on the descriptions by Priesner (1936)^[5] and the key provided by zur Strassen (2003)^[6].

Material examined. CHINA: Zhejiang Province: 1 ♀, Huajiachi Campus at Zhejiang University, Hangzhou, from flowers, 9. iv. 2010, coll. M. Mirabalou.

Diagnosis. Body, legs and antennae dark brown, fore tarsi and antennal segment III paler; fore wing shaded brown; head with 3 pairs of prominent postocular setae, and one pair of long ocellar setae; antennae 9-segmented, segments III and IV with oblique sensorium at apex; pronotum with 6 – 7 pairs of posteromarginal setae; tarsi 2-segmented, fore tibia with stout dagger shaped seta at inner apex; metanotal median setae small and arising near posterior margin; fore wings with cilia between the costal setae much shorter than these setae; abdominal tergite X with a pair of trichobothria; sternite II with 2 pairs of marginal setae, and no discal setae, III – V(+ VI) with a few scattered discal setae; VII with 3 pairs of marginal setae, also 2 pairs of smaller setae at base of paired marginal lobes.

Male similar to female but smaller; abdominal sternites III – VI with 2 – 3, 0 – 2, 0 – 1 and 0 discal setae, respectively.

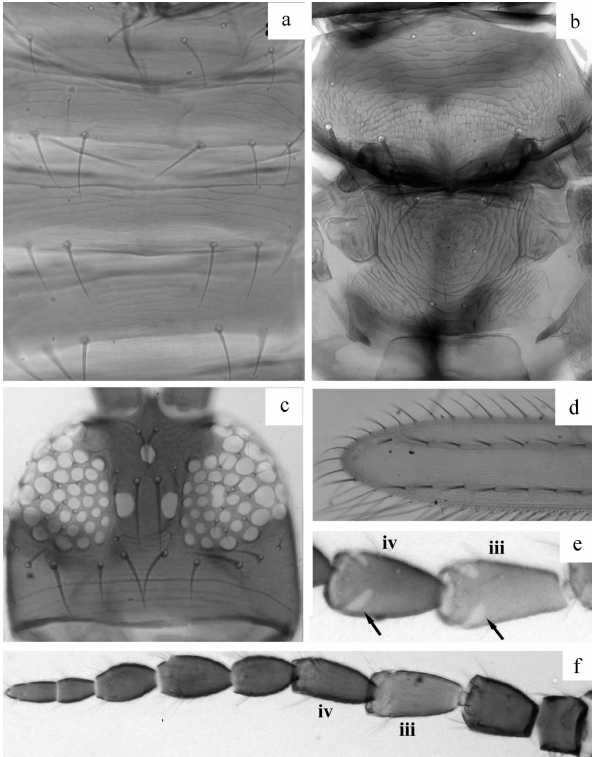
Distribution. China: Jiangsu, Zhejiang. Iran, Europe, North Africa, Cyprus, Palestine, Egypt.

Melanthrips knechteli Priesner (NEW RECORD) (Fig. 1)

Melanthrips knechteli Priesner, 1936: 40.

This species was identified based on the original description by Priesner (1936)^[5].

Material examined. China: Jiangsu Province; 3 ♀♀, Nanjing, from wheat and Chenopodiaceae, 11.



a: abdominal sternites II – V (♂), b: meso & metanotum, c: head (♂), d: fore wings, e: antennal segments III & IV (♀), f: antenna (♀)

Fig. 1 *Melanthrips knechteli* Priesner, 1936

v. 1985, 18. v. 1985, coll. Ge Zhengyan; Zhejiang Province; 1 ♂, Huajiachi Campus at Zhejiang University, Hangzhou, from grass, 9. iv. 2010, coll. M. Mirab-balou; 3 ♂♂, Jiuxi, Hangzhou, from tea, 27. III. 2010, coll. M. Mirab-balou.

Diagnosis. Body brownish gray; basal half of antennal segment III and apex of II light gray; fore wings smoky with slightly paler at base, fore tibiae yellowish apically; head with 3 pairs of ocellar setae, pair III longest; antennae 9-segmented, sensory areas on antennal segments III and IV obliquely situated; pronotum with 4–5 pairs of posteromarginal setae; mesonotum with longitudinal striate, in posterior half with rows of microtrichia; metanotal median setae small and arising near posterior margin; fore wings without cilia between the costal setae; abdominal tergite X with a pair of trichobothria; abdominal sternite II with 2 pairs of marginal setae; sternite III with only one discal setae; VII with 3 pairs of marginal setae, also 2 pairs of smaller setae at the base of paired marginal lobes.

Male similar to female but smaller, narrower and lighter than female.

Distribution. China: Zhejiang, Jiangsu. Iran, Turkey, Bulgaria, Romania, Albania, Czech Republic and Spain.

Melanthrips pallidior Priesner

Melanthrips pallidior Priesner, 1919: 119^[7].

This species was identified based on the descriptions by Priesner (1936)^[5] and the key provided by zur Strassen (2003)^[6].

Material examined. China: Zhejiang province; 1 ♀, Huajiachi Campus at Zhejiang University, Hangzhou, from flowers, 9. iv. 2010, coll. M. Mirab-balou.

Diagnosis. The body is brownish yellow or brownish black; antennal segment III is paler than others; fore wings somewhat paler at the base but sometimes only the extreme base of costa lighter; fore tibiae rather dark; head with 3 pairs of ocellar setae, pair III being the longest; antennae 9-segmented, sensory areas of antennal segments III and IV peculiar, always exactly circumpolar, and short; pronotum with 4–5 pairs of posteromarginal setae; mesonotum with longitudinal striate, in posterior half with rows of microtrichia; metanotal median setae small and arising near posterior margin; fore wings without cilia between the costal setae; ab-

dominal tergite X with a pair of trichobothria; abdominal sternite III with 2–3 pairs of discal setae, and IV with 1–2 pairs; VII with 3 pairs of marginal setae, also 2 pairs of smaller setae at the base of paired marginal lobes.

Male smaller, sternites III, IV and V with 1–2, 1 and 0–1 pairs of discal setae.

Distribution. China: Jiangsu, Zhejiang, Sichuan^[8-9]. Iran, Russia, Turkey, Palestine, Cyprus, Europe, North Africa.

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