

A new species and two newly-recorded species of the genus *Triphleba* Rondani (Diptera: Phoridae) from China

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Abstract: A new species in the genus *Triphleba* Rondani (Diptera: Phoridae), *T. ovipalpis* sp. nov., is described and illustrated. The main diagnostic characters are as follows: postpedicel globose; palpus swollen, oval, with very short pubescence; one pair of scutellar setae; vein R_{2+3} present; halter brown; left surstylus long band-like, apex broad, truncated; right surstylus triangular, narrowed at base. The species *T. palposa* (Zetterstedt, 1848) and *T. nudipalpis* (Becker, 1901) are newly recorded from China.

Key words: phorid fly; taxonomy; East Asia

中国寒蚤蝇属一新种二新记录种（双翅目：蚤蝇科）

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摘要：记述了中国蚤蝇科 1 新种：卵须寒蚤蝇 *Triphleba ovipalpis* sp. nov.。本种主要鉴别特征为：触角后梗节球形；下颚须膨大，卵形，具短绒毛；小盾片鬃 1 对； R_{2+3} 脉存在；平衡棒褐色；左侧尾叶长带状，端部加宽，平截；右侧尾叶三角形，基部窄。首次记录了阔须寒蚤蝇 *T. palposa* (Zetterstedt, 1848) 和独鬃寒蚤蝇 *T. nudipalpis* (Becker, 1901)。

关键词：蚤蝇；分类；东亚

Introduction

The genus *Triphleba* Rondani, 1856 (Diptera: Phoridae) is a large group of scuttle flies. The species of this genus adapt to living in cold areas and some can be active in the snowy season (Disney 1994; Soszyńska & Durska 2002). About 100 species are recorded in the world, which are mainly distributed in the Palearctic and Nearctic regions. In China, only one species has been previously reported (Liu 2001). In this paper, a new species of *Triphleba* is described and illustrated and two species of this genus are recorded for the first time in China.

Material and methods

Specimens were collected by sweeping nets and Malaise traps and stored in 75% ethanol. The head, legs and wing were detached and mounted on slides according to the method of Disney (2001). Photos were made using Leica M205A and Leica DM2500B microscopes with

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the help of a CCD 450 multi-focus imaging system. The terms used follow Cumming and Wood (2017). The type specimens are deposited in the Natural History Museum of Shenyang University (NMSU), Shenyang, China.

Taxonomy

1. *Triphleba ovipalpis* sp. nov. (Fig. 1)

Description. Body (Fig. 1) length 2.04 mm.

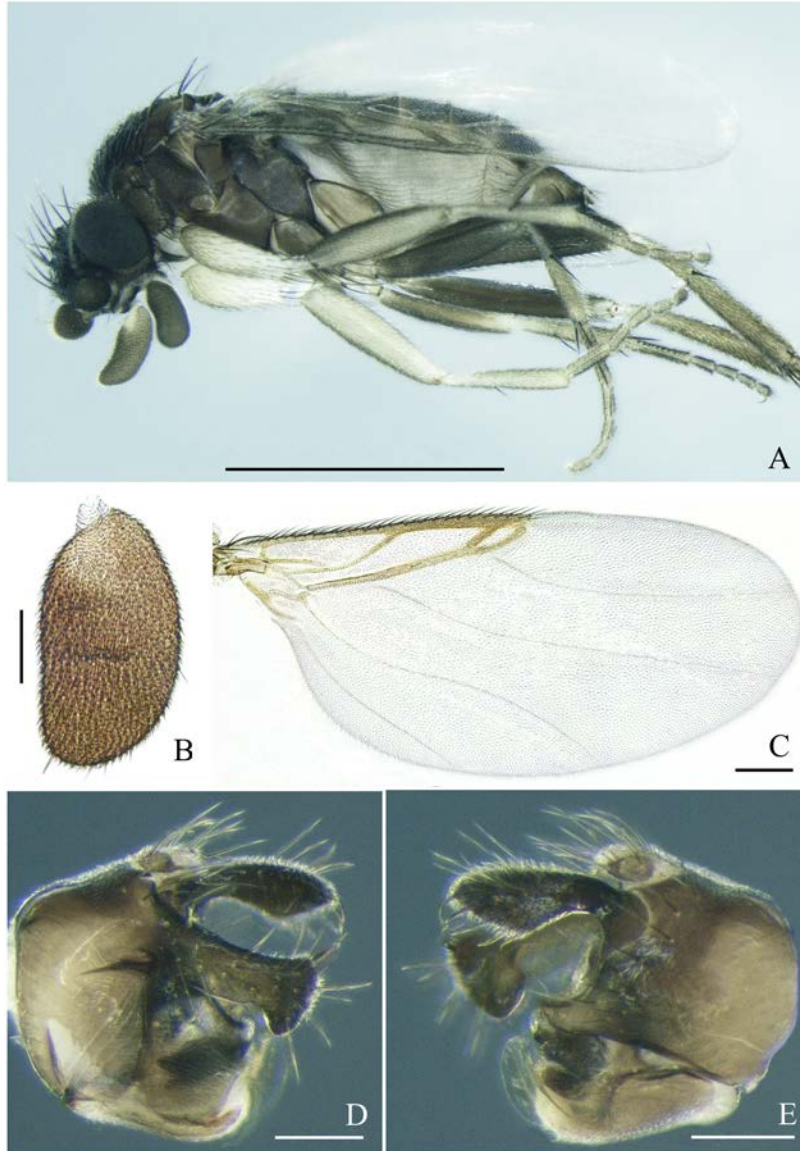


Figure 1. *Triphleba ovipalpis* sp. nov., ♂. A. Body, left view; B. Palpus, lateral view; C. Wing; D. Terminalia, left view; E. Terminalia, right view. Scale bars = 0.1 mm (B, D, E); 0.2 mm (C); 1 mm (A).

Male. Frons dark brown, slightly broader than high (0.33 mm : 0.25 mm), scattered with about 30 fine setulae. Supra-antennal setae short, 1/2 times as long as interfrontal setae. Lower fronto-orbital setae present. The first row of frontal setae convex, the distance between the lower interfrontal setae is further than either is to a lower fronto-orbital seta. The second row of frontal setae slightly convex, the distance between upper interfrontal setae is equal to upper fronto-orbital seta. Postpedicel brown, globose, shortly pilose; palpus (Fig. 1B) lightly brown, swollen, aspect ratio: 1.9 : 1 (0.35 mm : 0.19 mm), with short pubescence and only 1–2 short setulae.

Thorax dark brown, covered with short setulae. Scutum with 3 notopleural setae. Scutellum with two setae and two very fine setulae 1/5 as long as the setae. Fore leg brown, mid and hind legs dark brown. Fore tibia with an anterodorsal seta at basal 1/3, without apical spur; tarsomeres without palisades. Mid tibia with 1 anterodorsal and 1 dorsal setae at basal 1/3. Hind femur broad, with short setulae at ventral edge; hind tibia with 1 anterodorsal seta at basal 1/3. Wing (Fig. 1C) length 2.03 mm, width 0.93 mm. Veins brown, the membrane tinged grayish brown. The second section of costa gradually thickened. Sc slightly swollen at middle and reaching R₁. R₂₊₃ present. Alula with 1 seta. Costa index 0.53, costal ratio 2.68 : 2.22: 1, costal setulae 0.08 mm. M₁ concave basally; M₂ slightly curved; CuA₁ slightly S-formed. A₁+CuA₂ reaching wing edge. Halter brown.

Abdominal tergites brown, scattered with setulae which are longer at rear edge of tergite VI. Venter grayish brown, with very few minute setulae. Terminalia (Figs 1D, 1E) dark brown. Left surstylus long, band-like, broad and truncated apically. Right surstylus triangular, narrower basally, scattered with long setulae. Hypandrium short, pubescent. Anal tube short.

Female. Unknown.

Holotype. ♂(NMSU), **China**, Heilongjiang, Daxinganling, Xinling, 51°40'41"N, 124°23'26", 850 m, 23-VII-2018, Faxiang ZHANG leg.

Etymology. The specific epithet is derived from the Latin words *ovatus* and *palpus* referring to the egg-shape of the palpus.

Remarks. In the keys of Schmitz (1943), Disney (1983) and Michailovskaya (1999), this species will not key out to any species. In terms of the swollen palpus, this new species is similar to *T. truncata* Michailovskaya, 1999 and *T. nudipalpis* (Becker, 1901). It differs from *T. truncata* by lower fronto-orbital seta present, scutellum with two setae and two fine setulae, left surstylus parallel-sided and right surstylus triangular. It can be distinguished from *T. nudipalpis* by palpus lacking long setae, halter brown, and left surstylus narrow, parallel-sided, widened apically, and right surstylus triangular.

2. *Triphleba palposa* (Zetterstedt, 1848), new record to China

Trineura palposa Zetterstedt, 1848: 2870.

Triphleba palposa: Schmitz, 1927: 74.

Specimens examined. 20♂9♀, **China**, Xinjiang, Urumchi, Crater Lake Scenic Spot 1980 m, 16-VIII-2004, Hong FANG (NMSU); 13♂5♀, Gansu, Zhangye, Matishi, 06-VIII-2004, Hong FANG & Hongtao HAN (NMSU); 1♂, Hebei, Zhangjiakou, Mt. Xiaowutai, 23-VIII-2005, Hong FANG & Wei ZHU (NMSU); 3♂, Hebei, Zhangjiakou, Mt. Xiaowutai, 24-VI-2009, Lixin SU (NMSU).

Diagnosis. First flagellomere oval, pointed apically; palpus enlarged and curved; two scutellar setae; R₂₊₃ present; left surstylus narrow basally and wide and concave apically; right surstylus broad and large apically; anal tube short.

Distribution. China (Hebei, Gansu, Xinjiang); Finland; Germany; Romania; Sweden; USA (Alaska).

3. *Triphleba nudipalpis* (Becker, 1901), new record to China

Phora nudipalpis Becker, 1901: 29.

Triphleba nudipalpis: Schmitz, 1943: 182.

Specimens examined. 3♂, China, Heilongjiang, Yichun, Huilongwan, 02-VIII-2019, Jiao ZHANG, Zhongyin WANG & Zixuan LIU (NMSU); 1♂1♀, Heilongjiang, Yichun, Nanshan Park, 03-VIII-2019, Jiao ZHANG, Zhongyin WANG & Zixuan LIU (NMSU); 1♂, Liaoning, Dandong, Baishilazi Nature Reserve, 28-VI-2021, Jianfeng WANG (NMSU).

Diagnosis. Postpedicel oval; palpus enlarged, with a long apical seta; two scutellar setae; R₂₊₃ present; halter brown; right surstylus broad in the middle, narrow basally and apically, covering long setulae.

Distribution. China (Heilongjiang, Liaoning); Russia (Far East); Austria; Belgium; Czech Republic; Germany; Denmark; France; Great Britain; Ireland; Netherlands; Poland; Slovakia; Switzerland; Sweden; Finland.

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