

A newly recorded genus and species of *Subclytia* (Diptera: Tachinidae) from China

Qiang WANG¹, Chuntian ZHANG², Xinhua WANG^{1①}

1. College of Life Sciences, Nankai University, Tianjin 300071, China

2. College of Chemistry and Life Science, Shenyang Normal University, Shenyang, Liaoning 110034, China

Abstract: One newly recorded species from China, *Subclytia rotundiventris* (Fallén, 1820) is described and illustrated. This is the first record of this genus in China. The specimens are deposited in the Insect Collection of Shenyang Normal University (SYNU).

Key words: Muscoidea; taxonomy; new record

中国突颜寄蝇亚科一新纪录属及一新纪录种（双翅目：寄蝇科）

王 强¹, 张春田², 王新华^{1①}

1. 南开大学生命科学学院, 天津 300071; 2. 沈阳师范大学化学与生命科学学院, 辽宁 沈阳 110034

摘要: 记述中国产突颜寄蝇亚科 1 新纪录属: 亚美寄蝇属 *Subclytia* Pandellé, 1894 及 1 新纪录种, 圆腹亚美寄蝇 *S. rotundiventris* (Fallén, 1820)。标本保存于沈阳师范大学昆虫标本馆 (SYNU)。

关键词: 蝇总科; 分类; 新纪录

Introduction

The genus *Subclytia* Pandellé, 1894 belongs to the tribe Phasiini of the subfamily Phasiinae, with only one known species (*S. rotundiventris* Fallén, 1820) in the world (Herting 1984; Tschorsnig & Herting 1994). *Subclytia* can be distinguished from other genera of Phasiinae by the following characters: eye and parafacial bare; gena about 1/4 times as long as eye height; occiput with yellowish or white hairs and several short black hairs behind postocular setae; prosternum and proepisternum bare; postpronotum with 2–3 setae; scutum with 2 postsutural acrostichal setae, 1 presutural dorsocentral and 1 postsutural intra-alar seta; scutellum only with two pairs of marginal setae; antenna, scutellum, legs and abdomen entirely or predominantly yellow, fore tibia with 1 weak preapical anterodorsal seta and 1 preapical dorsal seta, wing without dark marking, vein cell r_{4+5} open, abdomen in posterior view without pruinosity.

In this paper, *Subclytia* is newly reported from China and *S. rotundiventris* is described.

Material and methods

Terminology for morphology and measurements follow Tschorsnig & Richter (1998).

Accepted 11 January 2015. Published 25 June 2015. Online published 21 May 2015.

①Corresponding author, E-mail: xhwang@nankai.edu.cn

Terminology of the male terminalia follows Sinclair (2000) and that of other structures follows McAlpine (1981). The dissection and drawings of male terminalia was carried out following the method described in detail by O'Hara (2002) and Wang & Zhang (2012).

The specimens are deposited in the Insect Collection of Shenyang Normal University, Liaoning, China (SYNU).

Taxonomy

Subclytia Pandellé 1894

Subclytia Pandellé, 1894: 96. Type species: *Tachina rotundiventris* (Fallén, 1820). Holotype female, type locality: Smaland, Sweden.

Synonyms. *Borisia* Rohdendorf, 1924: 125. Type species: *Borisia kuzini*.

rotundiventris Fallén, 1820: 23 (*Tachina*); *rotundicollis* Robineau-Desvoidy, 1863: 287 (*Clytia*); *kuzini* Rohdendorf, 1924: 125 (*Borisia*).

Subclytia rotundiventris (Fallén, 1820) (Figs. 1–12)

Diagnosis. Body yellow, vertex 0.18–0.20 of head width, gena 0.40–0.42 times of eye height, antenna, scutellum, legs, and abdomen entirely or predominantly yellow, tegula black, basicosta reddish yellow, abdomen with black spots on median and lateral tergites or connected together as a stripe.

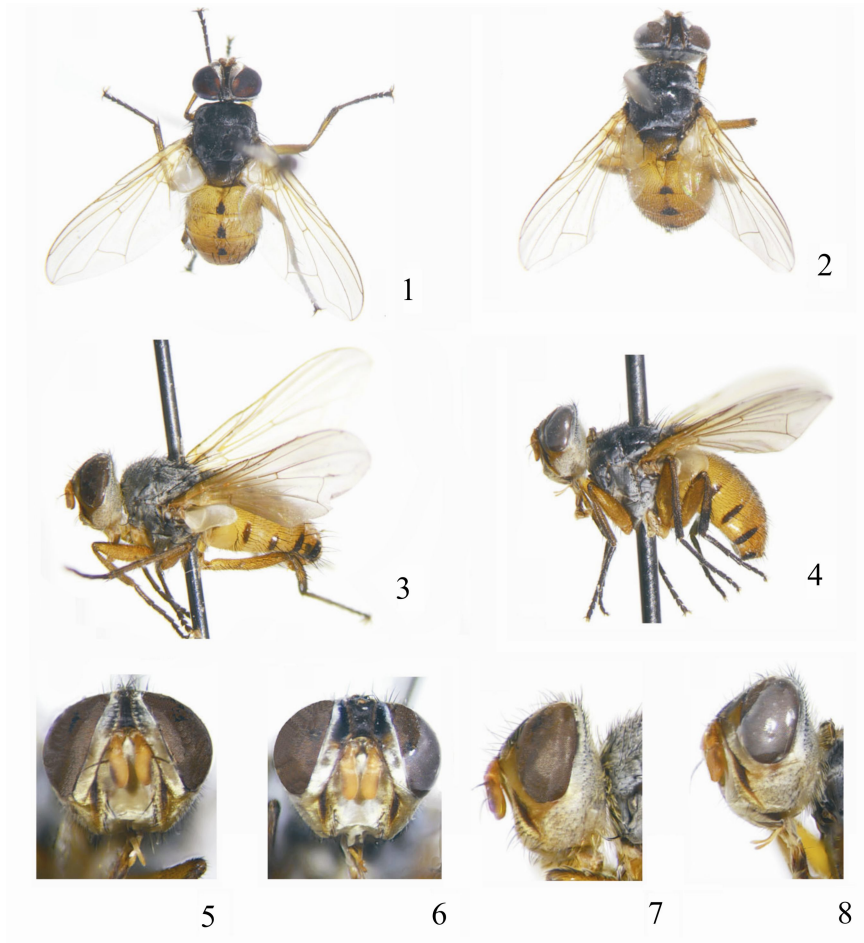
Body length 6–7 mm. A yellow small-sized species.

Male. (Figs. 1, 3, 5, 7, 9–12)

Coloration. Head and occiput black in ground colour, covered with yellowish white pruinosity. Frontal vitta dark brown to reddish brown. Fronto-orbital plate dark brown to black, covered with thin yellowish white pruinosity. Parafacial and gena yellowish brown, covered with thin yellowish pruinosity. Genal dilation reddish brown, covered with yellowish white pruinosity. Antenna reddish yellow, reddish brown on anterior margin. Palpus yellow. Prementum yellowish brown. Thorax black in ground colour, covered with silvery grayish pruinosity. Scutellum reddish yellow on basal half or more and black on base, with thin silvery grayish pruinosity. Wing hyaline and yellowish on anterior margin. Tegula black, basicosta reddish yellow. Lower calypter white, posterior margin yellowish. Haltere reddish yellow. Legs reddish yellow, tarsi dark brown or black. Pulvillus yellowish brown. Abdomen reddish yellow in ground colour, with black spots on median and lateral tergites, covered with thin silvery white pruinosity in lateral view, without pruinosity in posterior view.

Head. Eye about 0.75 times as high as head in lateral view. Vertex 0.18–0.20 of head width. Frontal vitta 0.9–1.0 times as wide as fronto-orbital plate at middle, the latter obviously widened anteriorly. Parafacial 0.9–1.0 times as wide as 1st flagellomere at middle height in anterior view. Face weakly concave, lower margin slightly forward, extending at base of vibrissa. Gena 0.40–0.42 of eye height in lateral view. Inner vertical and outer vertical setae fine or slightly stronger than upper occipital setae. Ocellar seta strong, 1.1–1.2 times as long as inner vertical seta and 2–4 fine black hairs on the ocellar triangle. Two to 4 strong postocellar setae, apices bent forward, 1.1–1.2 times as long as inner vertical seta. 10–12 fine frontal setae, lowest seta at the level with base of pedicel. Vibrissa inserted above level of lower margin of face, 0.37–0.40 times as long as face height. Facial ridge with 4–6 short hairs just above

vibrissa and 4–5 short subvibrissal setae. Antenna with 1st flagellomere 1.9–2.1 times as long as wide and 1.8–1.9 times as long as pedicel. Pedicel bearing black hairs and a long seta, the latter 0.7–0.8 times as long as pedicel. Arista bare, 1st aristomere shorter than wide, 2nd aristomere 0.9–1.0 times as long as wide, 3rd thickened on basal 1/3. Palpus nearly cylindrical, only weakly widened near apex, subequal or shorter than pedicel and 1st flagellomere combined.

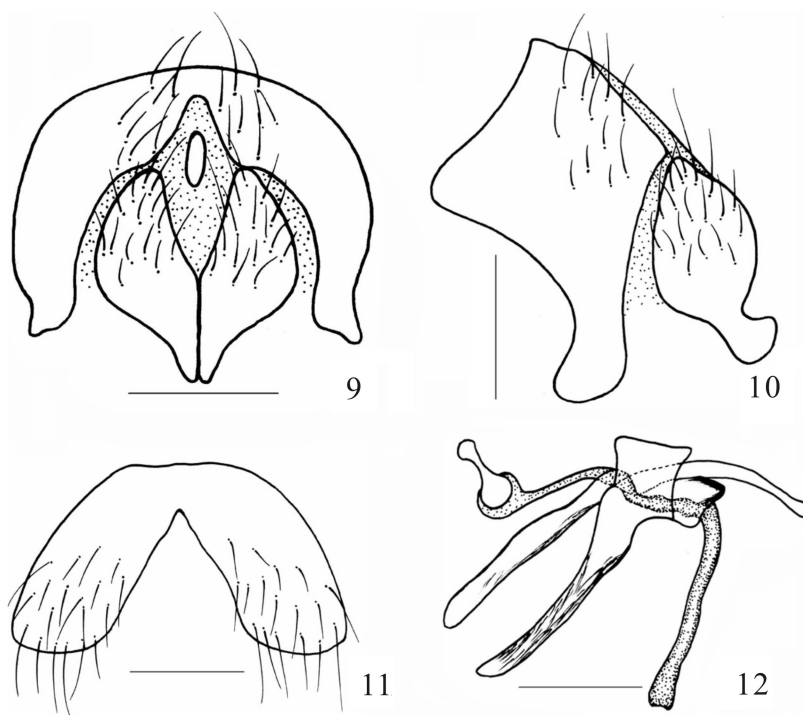


Figures 1–8. *Subclytia rotundiventris* (Fallén, 1820). 1, 3, 5, 7. ♂; 2, 4, 6, 8. ♀. 1–4, Body, dorsal and lateral view; 5–8, Head, anterior and lateral view.

Thorax. Covered with short and erect black hairs. Postpronotum with 2–3 setae. Two postsutural acrostichal setae. Three postsutural dorsocentral setae. One or two supra-alar setae, anterior one subequal in length with notopleural seta. Scutellum with a pair of apical and basal setae, the former crossed at apex, 1.2–1.4 times as long as scutellum, the latter 1.2–1.3 times as long as scutellum. Katapisternum covered with long black hairs and 2 katapisternal setae. Anepimeron covered with long black hairs. Wing. Hyaline. Wing base without scale-like setae. Relative length of costal sections 2nd, 3rd and 4th approximately as 3 : 10 : 4. R_1 and R_{4+5} bare.

Cell r_{4+5} open. Bend of vein M obtuse. Crossvein dm-cu straight, 1.0–1.2 times as long as the last section of CuA₁. Lower calypter developed. Apex of halter slightly larger or subequal in size to posterior spiracle. Legs. Fore tarsi 1.1–1.2 times as long as head height. Claw of fore leg shorter than combined 4th and 5th tarsomeres. Fore tibia with 1 anterodorsal and 1–2 posterodorsal setae, apex with 1 dorsal and 1 posteroventral setae. Mid tibia with 1 anterodorsal, 2 posterodorsal and 1 ventral setae, apex with 1 anterodorsal and 1 posterodorsal seta, 1 anteroventral and 1 posteroventral setae. Hind tibia with 2 anterodorsal, 2 posterodorsal and 1–2 anteroventral setae, apex with 1 dorsal, 1 anterodorsal and 1 anteroventral setae.

Abdomen. Ovate, broadly yellow. Hairs on dorsum black, spinulose and decumbent on the tergites; syntergite 1+2 with 6–8 laterodiscal, 2 fine median marginal and 2–4 lateral marginal setae; 3rd tergite with a pair of median marginal and 4–6 lateral marginal setae; 4th tergite with a row of 10–12 marginal setae and 5th tergite with a row of 8–10 marginal setae.



Figures 9–12. *Subclytia rotundiventris* (Fallén, 1820). 9, 10. Epandrium, cerci and surstyli, caudal and lateral view; 11. Sternite 5, ventral view; 12. Aedeagal apodeme, ejaculatory apodeme, hypandrium, pregonite, postgonite, basiphallus, distiphallus, lateral view. Scale bars = 0.25 mm.

Male terminalia (Figs. 9–12). Fifth sternite deeply V-shaped in ventral view, without membranous area anterior to the excavation, with fine long hairs on posterior lobe; cerci in dorsal view combined on whole length, lateral margin concaved, apex rounded, with fine hairs on upper half, dorsal margin arc-shaped, strongly concaved apically and basal 1/2 of ventral margin inwardly concaved in lateral view, dorsal area portion with fine hairs on upper half;

bacilliform sclerite long; pregonite slightly inferior curved near middle, rounded apically; postgonite nearly straight in lateral view; distiphallus elongate, distal area expanded laterally; ejaculatory apodeme short, nearly dumbbell-shaped.

Female (Figs. 2, 4, 6, 8). Vertex 0.30–0.32 of head width. Frontal vitta 1.3–1.5 times as wide as fronto-orbital plate at middle, the latter gradually widened anteriorly. Parafrons 0.7–0.9 times as wide as 1st flagellomere at middle height. Gena 0.42–0.43 times of eye height. 2nd arista 1.8–2.1 times as long as wide, 3rd thickened on basal 1/2. Claw of fore leg shorter than 5th tarsomere. Abdomen reddish yellow in ground colour, with black spots on median and lateral tergites or connected together as a stripe on basal 1/5. The marginal setae on tergites hair-like. Other characters are same as in male.

Material examined. China, 1♂ (SYNU20010), Jilin, Mt. Changbai, 1000–1965 m, 42.02°N, 128.06°E, 28–29-VII-2008, Jiayu LIU; 1♂ 1♀ (SYNU08963, SYNU08964), Jilin, Mt. Changbai, 530–1735 m, 42.04°N, 128.09°E, 11-VIII-2004, Wanqi XUE & Mingfu WANG; 1♂ (SYNU08930), Shanxi, Hunyuan, Hengshan, 1440 m, 39.66°N, 113.73°E, 28-VI-1980, Mingfu WANG; 1♀ (SYNU08933), Heilongjiang, Yichun, Wuying, 850 m, 48.11°N, 129.27°E, 08–10-VII-1998, Chuntian ZHANG.

Distribution. Palaearctic China (Heilongjiang, Jilin, Shanxi). Europe, Japan.

Acknowledgements

We are grateful to Prof. Wanqi XUE and Prof. Mingfu WANG (Shenyang Normal University) and Dr. Jiayu LIU (Guiyang Medical University) for their loan of specimens, and to two anonymous reviewers for their valuable suggestions and careful corrections of the manuscript. Financial support from the National Natural Science Foundation of China (31272279, 31093430, 31272284, 31493021) is acknowledged with thanks.

References

- Fallén CF. 1820. *Monographia Muscidum Sveciae*. [Part I. II. III] [Cont.] Berlingianis, Lundae [= Lund], 40 pp.
- Herting B. 1984. Catalogue of Palaearctic Tachinidae (Diptera). *Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie)*, 369: 1–228.
- 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*. Canadian Government Publishing Center, Quebec, pp. 9–63.
- O'Hara JE. 2002. Revision of the Polideini (Tachinidae) of America north of Mexico. *Studia Dipterologica*, 10(supplement): 170.
- Pandellé L. 1894. Etudes sur les muscides de France. II^e partie. [Cont.] *Revue d'Entomologie*, 13: 1–113.
- Robineau-Desvoidy JB. 1863. *Histoire Naturelle des Diptères des Environs de Paris*. Tome second. Victor Masson et fils, Paris, Franz Wagner, Leipzig, and Williams & Norgate, London, 920 pp.
- Rohdendorf BB. 1924. Eine neue russische Phasiinen-Gattung (Dipt.) *Entomologische Mitteilungen*, 13: 125–216.
- Sinclair BJ. 2000. Morphology and terminology of Diptera male terminalia. In: Papp L & Darvas B (Eds.),

- Contribution to a Manual of Palaearctic Diptera (With Special Reference to Flies of Economic Importance). Volume 1. General and Applied Dipterology.* Science Herald, Budapest, pp. 53–74.
- Tschorsnig HP & Herting B. 1994. Die Raupenfliegen (Diptera: Tachinidae) Mitteleuropas: Bestimmungstabellen und Angaben zur Verbreitung und Ökologie der einzelnen Arten. *Stuttgarter Beiträge zur Naturkunde, Serie A (Biologie)*, 506: 1–170.
- Tschorsnig HP & Richter VA. 1998. Family Tachinidae. In: Papp L & Darvas B (Eds.), *Contributions to a Manual of Palaearctic Diptera (With Special Reference to Flies of Economic Importance)*. Volume 3. Higher Brachycera. Science Herald, Budapest, pp. 691–827.
- Wang Q & Zhang CT. 2012. A new species of the genus *Neaera* Robineau-Desvoidy (Diptera, Tachinidae) from Sichuan, China. *Acta Zootaxonomica Sinica*, 36: 63–73.