

Clelimyia paradoxa, a newly recorded genus and species of Tachinidae (Diptera) from China

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Abstract: One newly recorded species from China, *Clelimyia paradoxa* Herting, 1981 (Diptera), is redescribed and illustrated. This is the first recorded genus in China.

Key words: Calyptratae; Phasiinae; *Clelimyia*; taxonomy

中国寄蝇科一新纪录属及一新纪录种（双翅目）

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摘要: 发现中国产突颜寄蝇亚科 1 新纪录属: 彩虹寄蝇属 *Clelimyia* Herting, 1981, 及 1 新纪录种: 奇彩虹寄蝇 *C. paradoxa* Herting, 1981; 首次记述其雌性, 并补充记述其雄性。

关键词: 有瓣蝇类; 突颜寄蝇亚科; 彩虹寄蝇属; 分类

Introduction

The genus *Clelimyia* Herting 1981 belongs to the tribe Leucostomatini of the subfamily Phasiinae (Diptera), with only one known species (*C. paradoxa* Herting 1981) from Minano, Saitama Prefecture of Honshu, Japan (Herting 1984; Herting & Dely-Draskovits 1993; Tschorsnig & Richter 1998). During our study of the Phasiinae of China, we examined some specimens from Palearctic Liaoning, Shanxi and Oriental Shaanxi, Zhejiang and Guizhou, and *C. paradoxa* Herting was recognized as newly recorded genus and species in China. We described the female for the first time and additional details of the male.

Material and methods

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

In this paper, *Clelimyia* is newly reported from China and one newly recorded species is described. The specimens are deposited in the Insect Collection of Shenyang Normal

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Taxonomy

Clelimyia Herting, 1981

Clelimyia Herting, 1981: 15. Type species: *Clelimyia paradoxa* Herting, 1981, by original designation. Holotype male, type locality: Minano, Saitama, Japan.

Generic diagnosis. Eye bare; parafacial with a row of short fine black hairs in male, bare in female; genal height less than width of prementum; arista bare; occiput with black hairs below postocular setae; prosternum and proepisternum bare; thoracic dorsum without longitudinal dark vittae; 1 presutural and 1 postsutural acrostichal setae, 2 presutural and 3 postsutural dorsocentral setae, 2 postsutural intra-alar setae, prealar seta weaker than notopleural seta; 2 katepisternal setae; scutellum with 3 pairs of marginal setae, strong apical setae crossed; legs black or reddish brown; postmetacoxal area sclerotized; preapical anterodorsal seta on fore tibia about as long as preapical dorsal seta, mid tibia with 1 ventral seta; wing hyaline, without dark marking, vein cell r_{4+5} closed, with a short petiole; abdomen black or partly reddish brown, mid-dorsal depression on syntergite 1+2 confined to less than anterior half of the segment, without pruinosity; 5th tergite obviously shorter than the 4th tergite in both sexes, tergites without discal seta. Terminalia concealed, not visible in profile.

Clelimyia paradoxa Herting, 1981 (Figs. 1–15), new record to China

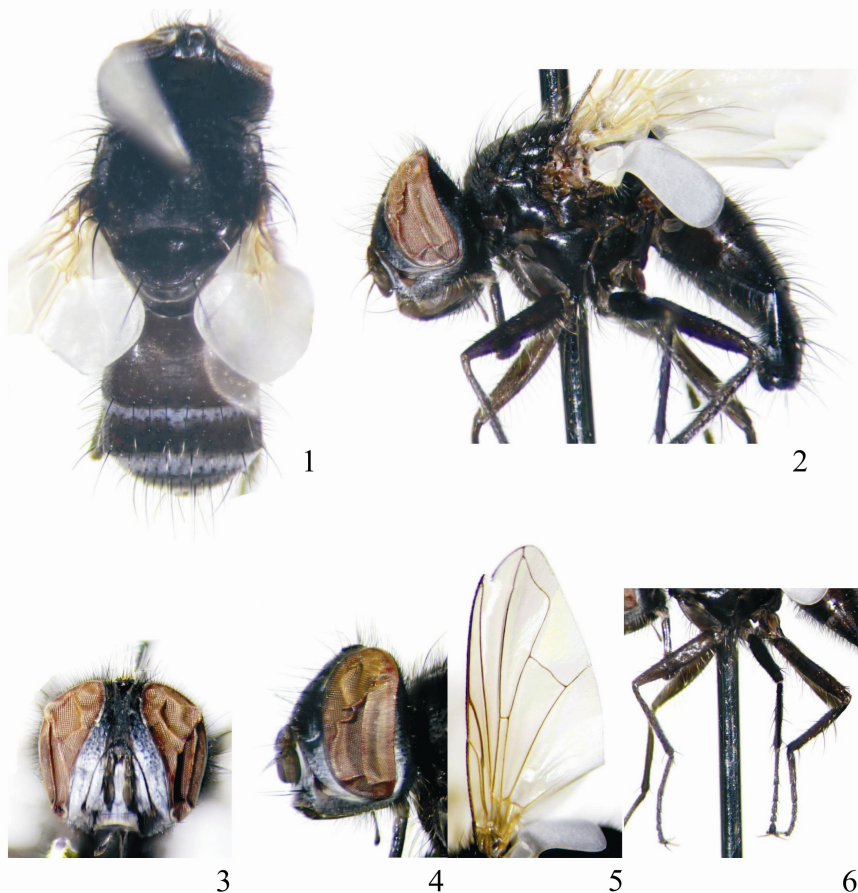
Diagnosis. Body black, palpus black; vertex 0.17–0.18 of head width, parafacial 1.4–1.6 times as wide as 1st flagellomere. Thorax and scutellum without pruinosity; lower calypter entirely and uniformly white; tegula black, base of vein R_{4+5} with 1 fine seta dorsally and ventrally; legs black. Abdomen black or reddish brown, basal 1/5 of 3rd, 2/5 of 4th and 1/2 of 5th tergites covered with thin grayish white pruinosity, without median discal seta. Apex of abdomen of female with pincers.

Body length 5.5–6.0 mm. A black small-sized species (Figs. 1, 2).

Male. Coloration. Head and occiput brown to black in ground colour, covered with silvery white to grayish white pruinosity. Antenna and palpus dark brown to black. Prementum black. Thoracic dorsum including scutellum black, without pruinosity. Wing hyaline, yellowish on base and anterior margin. Tegula black, basicosta dark brown to black. Lower calypter entirely and uniformly white. Haltere reddish brown on basal half and black on apical half. Legs entirely black or reddish brown. Pulvillus yellowish brown. Abdomen black or reddish brown, basal 1/5 of 3rd, 2/5 of 4th and 1/2 of 5th tergites covered with thin grayish white pruinosity.

Head (Figs. 3, 4). Eye nearly as high as head in profile. Vertex 0.17–0.18 times of head width. Frontal vitta about as wide as fronto-orbital plate at middle, the latter widened anteriorly. Parafacial 1.4–1.6 times as wide as 1st flagellomere at middle height in anterior view. Face weakly protruded, lower margin slightly forward. Genal height less than width of 1st flagellomere, 0.08–0.10 times as wide as eye height. Inner vertical seta fine, 0.32–0.34 times of eye height, outer vertical seta fine, undifferentiated with postocular seta. Ocellar seta fine, 0.32–0.34 times of eye height and 2–4 fine black hairs on the ocellar triangle. Two fine postocellar setae, apices bent forward, 0.7–0.8 times as long as inner vertical seta, 2 poster

vertical setae, 0.9–1.0 times as long as inner vertical seta. 8–10 pairs frontal setae, 1.2–1.4 times as long as inner vertical seta, lowest seta inserted above the level with base of pedicel and 2–3 rows of short fine black hairs. Parafrons with a row of short fine black hairs. Vibrissa inserted above level with lower margin of face, 0.7–0.8 times as long as face height. Facial ridge with 1–2 rather short hairs just above vibrissa and 4–5 short fine subvibrissal setae. Antenna with 1st flagellomere 2.2–2.4 times as long as wide and 2.0–2.2 times as long as pedicel. Pedicel bearing black hairs and a long seta, the latter 1.0–1.2 times as long as pedicel. Arista thickened on basal 1/3, 1st aristomere and 2nd aristomere as long as wide or less, Palpus nearly cylindrical, only weakly widened near apex, subequal or longer than antenna.

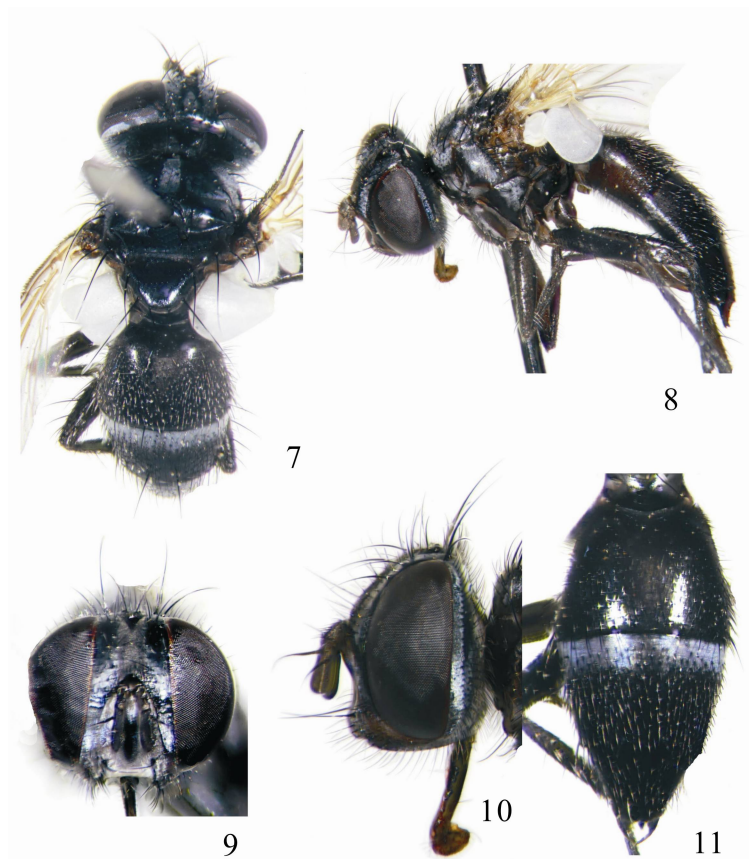


Figures 1–6. *Clelimyia paradoxa* Herting. ♂. 1, 2. Body, dorsal and lateral views; 3, 4. Head, anterior and lateral views; 5. Wing, dorsal view; 6. Legs, lateral view.

Thorax. Covered with fine and erect black hairs. Postpronotum with 3 setae nearly arranged nearly in a line. Strong apical scutellar setae 1.50–1.52 times as long as scutellum, strong subapical scutellar seta 2.0–2.2 times as long as scutellum. Katepisternum covered with several fine hairs between 2 katepisternal setae. Katepimeron covered with hairs. Anepimeron covered with long black hairs and anepimeral seta strong. Wing (Fig. 5) hyaline. Wing base with scale-like setae. 2nd costal section bare ventrally. Relative length of costal sections 2nd, 3rd and 4th approximately as 2.5 : 6 : 2. Vein R_1 bare. Bend of vein M rounded. Crossvein

dm-cu nearly straight, 1.75–1.80 times as long as the last section of CuA₁. Lower calypter developed, extending nearly to the basal of syntergite 1+2. Apex of halter larger than posterior spiracle. Legs (Fig. 6). Fore tarsi 0.7–0.8 times of head height. Claw of fore leg slightly shorter than combined 4th and 5th tarsomeres.

Abdomen. Long ovate. Hairs on dorsum black, spinulose and erect; syntergite 1+2 and 3rd tergite each with a row of 10 marginal setae; 4th tergite with a row of 8–10 marginal setae; 5th tergite with a row of 6–8 marginal setae.

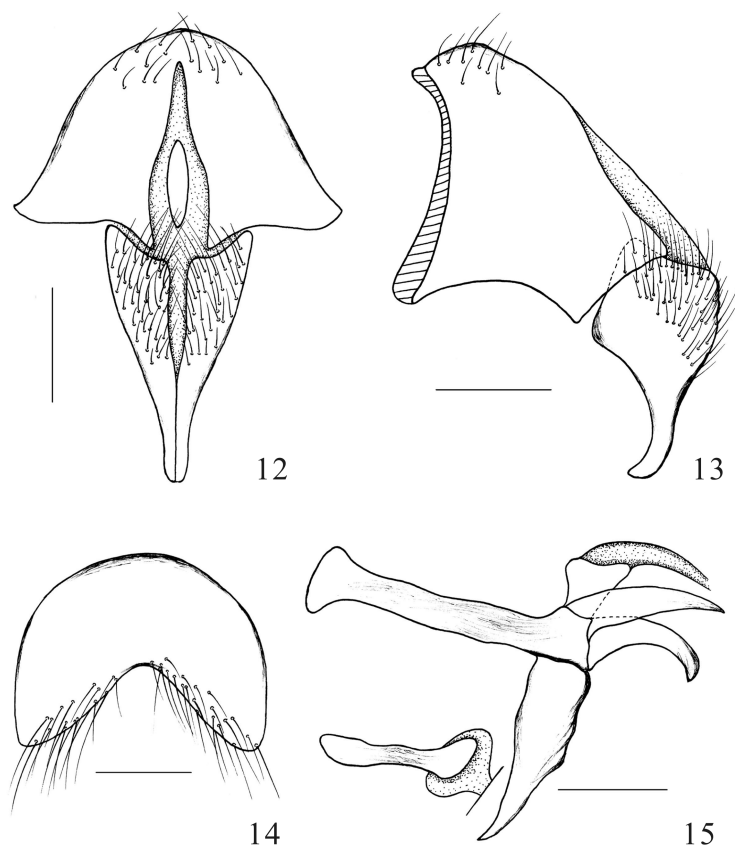


Figures 7–11. *Clelimyia paradoxa* Herting. ♀. 7, 8. Body, dorsal and lateral views; 9, 10. Head, anterior and lateral views; 11. Abdomen, dorsal view.

Male terminalia (Figs. 12–15). Fifth sternite (Fig. 14) deep V-shaped in ventral view, without membraneous area anterior to the excavation, with fine long hairs on posterior lobe; cerci (Figs. 12, 13) in dorsal view separated on upper half, lateral margin concaved, apex rounded, with dense long hairs on upper half, in lateral view dorsal margin slightly concaved and ventral margin strongly concaved near middle, dorsal area portion with dense long and strong hairs on upper half; bacilliform sclerite short; pregonite slightly inferior curved near middle, pointed apically; postgonite curved near middle, pointed apically in lateral view; distiphallus membraneous; ejaculatory apodeme long, nearly shank-shaped (Fig. 15).

Female (Figs. 7–11). Vertex 0.28–0.29 of head width. Frontal vitta 0.28–0.30 times as

wide as fronto-orbital plate at middle, the latter not widened anteriorly. Parafrons 0.9–1.0 times as wide as 1st flagellomere at middle height. Inner and outer vertical setae strong, separately about 0.6, 0.44 times as long as eye height. 2 proclinate orbital setae and 1 upper orbital seta. Arista thickened on basal 2/5. Claw of fore leg shorter than 5th tarsomere. Lower calypter extending only to the basal 1/3 of sytergite 1+2. Abdomen (Fig. 11) black or reddish brown, 5th tergite obviously shorter than the 4th tergite, grayish white pruinosity only on the basal 1/4 of 3rd tergite. The marginal setae on tergites hair-like. Other characters are the same as in male.



Figures 12–15. *Clelimyia paradoxa* Herting. ♂. 12, 13. Epandrium, cerci and surstyli, caudal and lateral views; 14. Sternite 5, ventral view; 15. Aedeagal apodeme, ejaculatory apodeme, hypandrium, pregonite, postgonite, basiphallus, distiphallus, lateral view. Scale bars = 0.1 mm.

Specimens examined. China, 1♂ (SYNU09182), Zhejiang, Wuyanling Mountain, 29.09°N, 120.65°E, 05-X-2005, Xin GAO; 1♀ (SYNU09183), Guizhou, Fanjing Mountain, 1200 m, 27.95°N, 108.62°E, 10-IX-1993, Yongsheng CUI; 1♀ (SYNU12443), Liaoning, Kuandian, Mt. Baishilazi, 500–540 m, 40.91°N, 124.77°E, 19-VIII-2007, Jing HAO; 2♀ (SYNU34043, SYNU34044), Shanxi, Qinsui, Xiachuan, 1200–1600 m, 35.82°N, 112.28°E, 12–16-VII-2012, Qiang WANG; 1♀ (SYNU08922), Shaanxi, Southern Taibai Mountain, 34.12°N, 107.90°E, 08-VI-1989, Mingfu WANG.

Distribution. China (Guizhou, Liaoning, Shaanxi, Shanxi, Zhejiang); Japan; Russian Far East.

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