

**A review of the Chinese species of the genus *Blera*
(Diptera: Syrphidae) with the description of a new species**
**Обзор китайских видов рода *Blera* (Diptera: Syrphidae)
с описанием нового вида**

A.V. BARKALOV & X.-Y. CHENG

А.В. БАРКАЛОВ, Х.-Е. ЧЕНГ

A.V. Barkalov, Siberian Zoological Museum, Institute of Systematics and Ecology of Animals, Siberian Branch of Russian Academy of Sciences, 11 Frunze Str., Novosibirsk 630091, Russia. E-mail: bark@eco.nsc.ru

Xin-Yue Cheng, College of Life Science, Beijing Normal University, 19 Xijiekouwai Av., Haidian, Beijing 1000875, China. E-mails: chengxy@bnu.edu.cn, chengxinyue2002@yahoo.com

A review of species of the genus *Blera* Billberg, 1820 known from China is given. A new species, *Blera longiseta* sp. nov., is described. Three species, *B. japonica* (Shiraki, 1930), *B. nitens* (Stackelberg, 1923) and *B. violovitshi* Mutin, 1991, are recorded for the first time from China. An illustrated key to species is provided.

Выполнен обзор видов рода *Blera* Billberg, 1820, известных из Китая. Описан новый вид – *Blera longiseta* sp. nov. Три вида – *B. japonica* (Shiraki, 1930), *B. nitens* (Stackelberg, 1923) и *B. violovitshi* Mutin, 1991 – впервые обнаружены на территории Китая. Приведен иллюстрированный ключ для определения видов.

Key words: China, review, Diptera, Syrphidae, *Blera*, new species

Ключевые слова: Китай, обзор, Diptera, Syrphidae, *Blera*, новый вид

INTRODUCTION

Species of the genus *Blera* Billberg, 1820 are characterised by the following characters: size medium to large; central facial knob weakly developed; antennae simple; eyes bare, usually holoptic in males; legs simple, without spurs or strong bristles on ventral parts of the femora; sternopleuron with distinctly separated upper and lower hairs; metasternum bare; abdomen as a rule with yellow or reddish spots or bands, rarely black or reddish; wings with vein *rm* (*ta*) connecting M_1 after the middle of cell d ; cell r_3 closed (Barkalov & Mutin, 1991a, 1991b). The genus has mostly the Holarctic distribution, only one species (*Blera himalaya* Thompson, 2000) was re-

cently described from the Oriental Region (Thompson, 2000).

No special study of the genus *Blera* has been done for the territory of China. Stackelberg (1928) carried out a review of the East Palaearctic species of *Blera*. He recorded five species, two of which, *B. eoa* Stackelberg, 1928 and *B. ochrozona* Stackelberg, 1928, he described as new. Barkalov and Mutin (1991a, 1991b) published a revision of the Holarctic fauna of *Blera*. According to this work, six species of *Blera* were established for the East Palaearctic Region. Later on, Thompson (2000) described a new species from the Himalaya Mountains.

All the material examined is kept in the collection of the Institute of Zoology, Chinese Academy of Sciences (Beijing).

RESULTS

Order DIPTERA

Family SYRPHIDAE

Blera Billberg, 1820*Blera (Blera) longiseta* sp. nov.

(Figs 1–4)

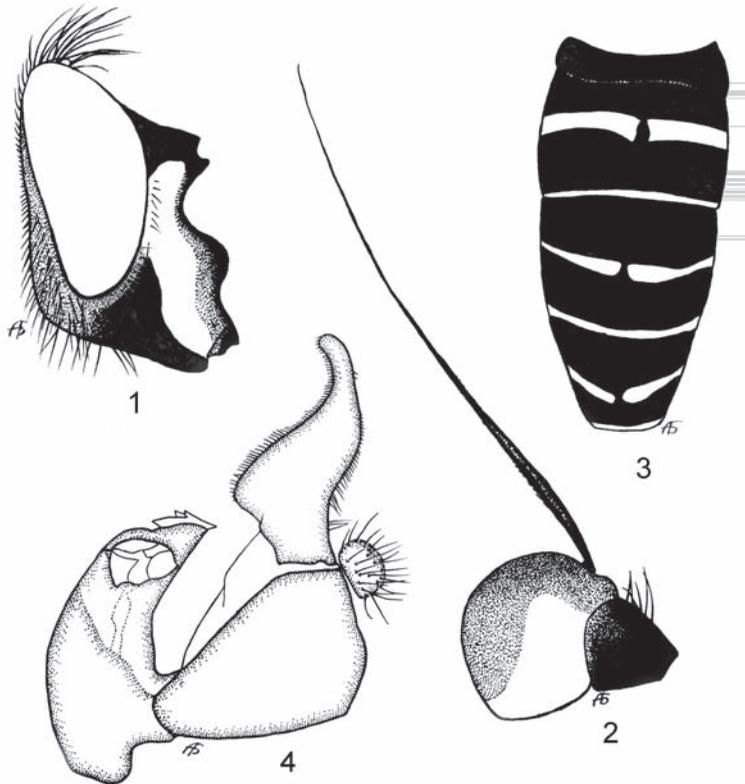
Holotype. Male; **China**, Xizang [=Tibet Autonomous Region], Milin, N of Duoxiongla Shan, 4000 m, 13 Aug. 1975. The holotype is deposited in the Institute of Zoology, Chinese Academy of Sciences (Beijing).

Diagnosis. The new species differs distinctly from all other *Blera* species in the coloration of abdomen (Fig. 3) and the shape of face (Fig. 1). In the key to Chinese species, it runs to *B. japonica* (Shiraki, 1930) and *B. nitens* (Stackelberg, 1923), but differs from them in the male genitalia and coloration of abdomen (see key below).

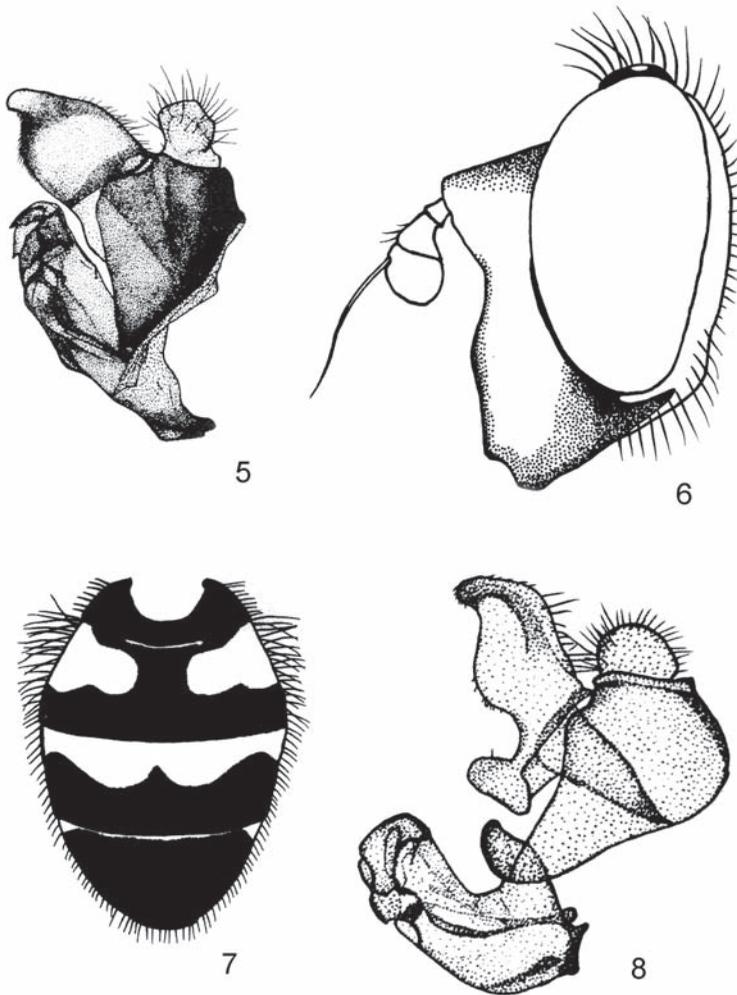
Description. *Male*. Body length 14.9 mm; wing length 12.5 mm.

Head. Face protruded anteriorly, mostly black with longitudinal yellow stripes on sides (Fig. 1); central knob distinct; eye-margins narrow, black with short, sparse yellow hairs; cheeks black with grey dusting. Frons distinctly protruded anteriorly, black, shiny in middle and with yellow dusting laterally. Antennae mostly dark brown; third segment orange in basal half, darkened in apical half (Fig. 2); arista very long, bare, black. Eyes bare, connected over a short distance (shorter than length of ocellar triangle). Occiput covered with long black hairs; posterior part of head with long dense yellow hairs.

Thorax. Humeri black laterally and bright yellow ventrally. Mesonotum black with a fine bluish reflection, covered with



Figs 1–4. *Blera longiseta* sp. nov., male (holotype): 1, head, lateral view; 2, antennal segments 2–3, lateral view; 3, abdomen, dorsal view; 4, genitalia, lateral view.

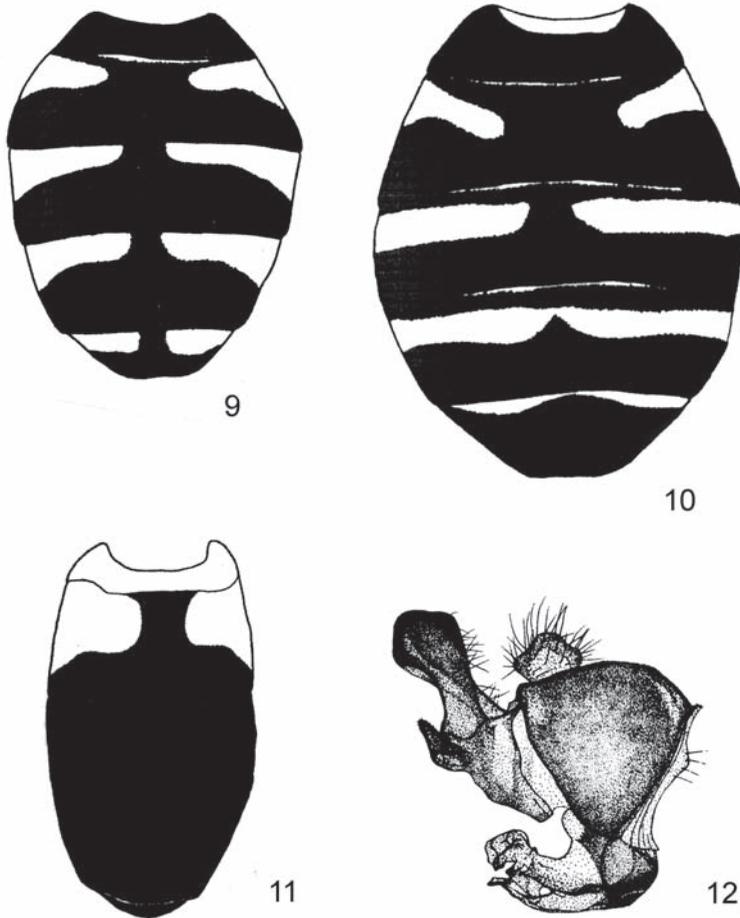


Figs 5–8. *Blera ochrozona*, male (5), *B. violovitshi*, male (6–8). 5, 8, genitalia, lateral view; 6, head, lateral view; 7, abdomen, dorsal view (after Barkalov & Mutin, 1991b).

fine grey dusting and comparatively long dense black hairs, with some yellow hairs on sides. Scutellum black with yellow hind margin, covered with long mixed yellow and black hairs; subscutellar fringe absent. Pleurae black with grey dusting and long yellow hairs, some black hairs on pleurotergite; lower and upper patches of hairs on sternopleuron broadly separated; spiracles with dense bright white fringe of hairs; metasternum small, bare. Legs simple, mostly yellow. Anterior femur with longitudinal black stripe on posterior side; midfemur in

basal half with a black spot on anteroventral side; hind femur with incomplete black ring in basal half. Anterior tibia black; mid and hind tibiae yellow. Anterior tarsus black; mid and hind tarsi yellow with two apical segments black. Wing with anterior half brown, darker near crossveins. Squama white with yellow margin and hairs; halter dark brown.

Abdomen elongate, black. Tergites II–IV each with two narrow orange-yellow transverse spots in the middle (looking as a band divided medially) and with narrow



Figs 9–12. *Blera japonica* (9), *B. nitens* (10, 12), *B. ochrozona* (11). **9–10**, abdomen of female, dorsal view; **11**, abdomen of male, dorsal view; **12**, male genitalia, lateral view (after Barkalov & Mutin, 1991b).

same-coloured stripe along posterior margin (Fig. 3). Tergites covered with comparatively short, erect, mostly yellow hairs; tergite IV with black hairs; on sides of abdomen hairs distinctly longer. Sternites black with yellow stripes; sternite IV with straight posterior margin. Genitalia as in Fig. 4.

Female unknown.

Distribution. *Blera longiseta* sp. nov. is known only from the type locality.

Etymology. The species name reflects its characteristic feature, a very long arista.

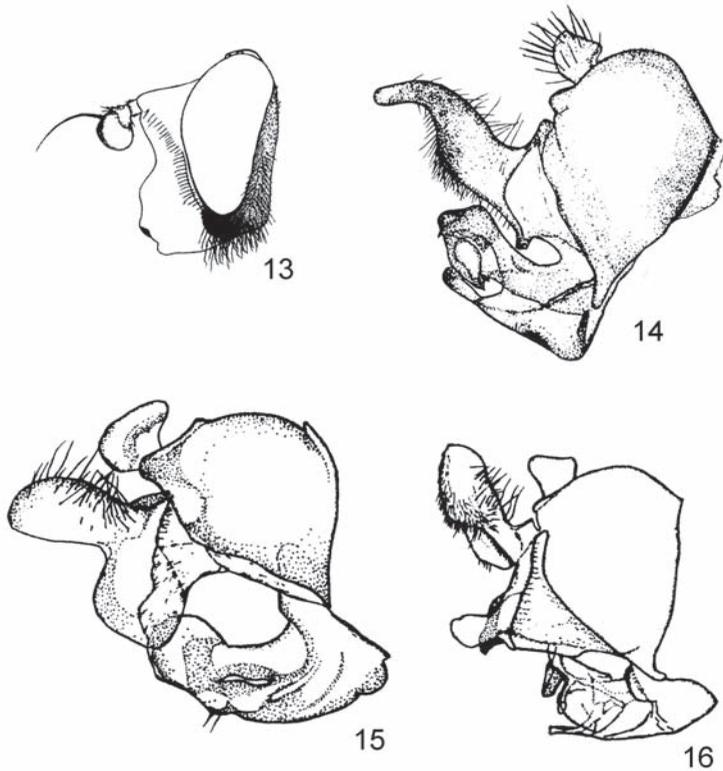
***Blera (Blera) fallax* (Linnaeus, 1758)**

Material examined. **China**, *Nei Mongol Prov.*: 2 males, Suge River, 20 June 1957; *Heilongjiang Prov.*: 1 female, Xinlin, 10 July 1970.

Notes. This species was known from Xinjiang Uygur Autonomous Region (Peck, 1988). In *Nei Mongol Province*, it is found for the first time.

***Blera (Blera) japonica* (Shiraki, 1930)**

Material examined. **China**, *Nei Mongol Prov.*: 1 female, Manzhouli, 13 June 1940.



Figs 13–16. *Blera eoa*, male (13, 14), *B. fallax*, male (15), *B. japonica*, male (16). 13, head, lateral view; 14–16, genitalia, lateral view (after Barkalov & Mutin, 1991b).

Notes. The first record for China; this species was known from the Far East of Russia, Japan and Korea.

Blera (Blera) nitens (Stackelberg, 1923)

Material examined. China, Jilin Prov.: 1 male, Changbai Shan, 850 m, 21 July 1996.

Notes. The first record from China; the species was known from Russia (from the Urals to southern Primorskiy Terr.) and Korea.

Blera (Blera) violovitshi Mutin in Barkalov & Mutin, 1991

Material examined. China, Jilin Prov.: 1 female, Manjiang, 08 June 1955.

Notes. The first record from China; the species was known from Yakutia and Far East of Russia.

Key to Chinese *Blera* species

Two species, *Blera eoa* (Stackelberg, 1928) and *B. ochrozona* (Stackelberg, 1928), have not been found in China, but we suggest that they are present because they were recorded from neighbouring territories of Russia.

1. Humeral calli yellow. Abdomen with two large yellow spots on tergites I–II (Fig. 11). Hypopygium as in Fig. 5. ***B. ochrozona***
 - Humeral calli black. Colour of abdomen otherwise 2
2. Abdominal tergites IV–V reddish. Hypopygium as in Fig. 15 ***B. fallax***
 - Abdominal tergites IV–V black or with yellow spots, or with narrow yellow stripes (Figs 7, 9–10) 3
3. Abdomen entirely black. Face as in Fig. 13. Hypopygium as in Fig. 14 ***B. eoa***
 - At least tergites II–IV with yellow spots on anterior angles or in the middle (Figs 7, 9–10). Face as in Figs 1 or 6, not as in Fig. 13 4

- 4. Tergite III with a broad yellow band in anterior half (Fig. 7). Hypopygium as in Fig. 8 *B. violovitshi*
- Tergite III only with yellow spots on anterior angles, or with narrow stripes in the middle and at posterior margin (Figs 3, 9–10) 5
- 5. Tergites II–IV with narrow yellow bands along posterior margin and in the middle; the latter band divided medially, consisting of two narrow transverse spots (Fig. 3). Hypopygium as in Fig. 4 *B. longiseta* sp. nov.
- Tergites II–IV with broader yellow spots along anterior margins (Figs 9–10) 6
- 6. Arista brown, lighter basally. Spots on tergites broader, triangular in males and almost rectangular in females (Fig. 9). Hypopygium as in Fig. 16 *B. japonica*
- Arista entirely black. Spots on tergites narrower (Fig. 10). Hypopygium as in Fig. 12 *B. nitens*

ACKNOWLEDGEMENTS

We thank Francis Gilbert for checking and improving the English of the manuscript. The

work was supported by the Russian Foundation for Basic Research, grant No. 10-04-00093-a.

REFERENCES

Barkalov A.V. & Mutin V.A. 1991a. Revision of hover-flies of the genus *Blera* Billberg, 1820 (Diptera, Syrphidae). I. *Entomologicheskoye Obozreniye*, **70**(1): 204–213. (In Russian).

Barkalov A.V. & Mutin V.A. 1991b. Revision of hover-flies of the genus *Blera* Billberg, 1820 (Diptera, Syrphidae). II. *Entomologicheskoye Obozreniye*, **70**(3): 737–749. (In Russian).

Peck L.V. 1988. Syrphidae. In: **Soós Á. & Papp L.** (Eds.). *Catalogue of Palaearctic Diptera*, **8**: 11–230. Budapest: Akadémiai Kiadó.

Stackelberg A.A. 1928. Species palaearticcae generis *Cynorrhina* (Dipt., Syrphidae). *Konowia*, **7**(3): 252–258.

Thompson F.C. 2000. A new Oriental *Blera* (Diptera: Syrphidae). *Entomological News*, **111**(3): 181–184.

Received May 18, 2011 / Accepted September 27, 2011