

## NEW SPECIES OF THE GENUS EXECHIA WINNERTZ FROM CHINA (DIPTERA, MYCETOPHILIDAE)

WU Hong<sup>1</sup>, XU Hua-Chao<sup>1</sup>, YU Xiao-Xia<sup>2</sup>

1. Institute of Forest Protection, Zhejiang Forestry College, Lin'an 311300, China

2. Department of Plant Protection, Zhejiang University, Hangzhou 310029, China

**Abstract** Five species of *Exechia* Winnertz from China are recorded in this paper, of which 4 species are described and 1 species is reported for the first time from China.

**Key words** Diptera, Mycetophilidae, Exechiini, *Exechia*, new species.

Five species of the genus *Exechia* Winnertz have been reported from China up to date. Four new species and one newly recorded species are added in the genus in this paper. The type specimens are deposited in Zhejiang Forestry College, China.

### 1 *Exechia atridonta* sp. nov. (Figs. 1-2)

. Wing length 2.2-2.5 mm. Head blackish brown. Antennae brown, with scape, pedicel and base of 1st flagellum yellow; 1.1 times as long as head and thorax; flagellar segment 1.3 times as long as wide. Pronotum and mesoscutum brown. Pleura and mediotergite brown. Wing clear brownish yellow. Cross vein r-m 1.7 times as long as m-stalk. Halter yellow. Legs brownish yellow. Fore metatarsus 1.2

times as long as tibia. Middle metatarsus subequal to tibia. Middle tibia with 26-32 a, 2p-v, 5p, 3p-d. Hind tibia with 7 a, 3-6p, 4-5p-d. Abdominal tergites dark brown, with sides of tergites 2-4 broad and yellow. Sternites 1-3 yellow, sternites 4-6 brown.

**Holotype** , paratype 1 , Maoershan (25°53' N, 110°25' E), Guangxi, 19 Aug. 1992, collected by YANG Chi-Kun, Nos. 920286, 920216.

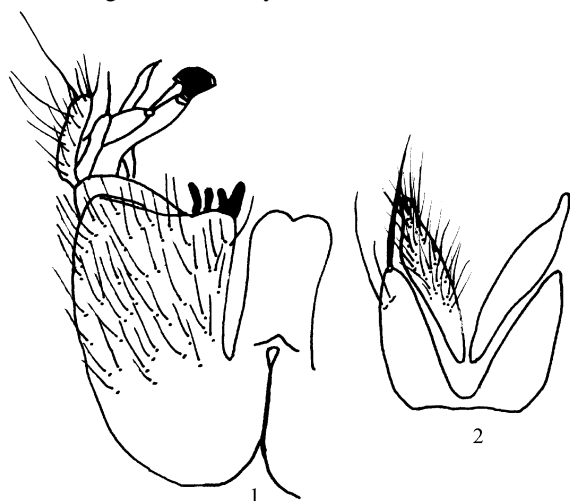
**Remarks.** This species is somewhat similar to *Exechia sororcula* Lackschewitz, 1937 from Europe, but differs in length of the wing shorter than 2.5 mm, and different structure of gonocoxipites and gonostylus.

### 2 *Exechia hebetata* sp. nov. (Figs. 3-5)

. Wing length 2.8 mm. Head black brown. Antennae brownish yellow, subequal to combined length of head and thorax; flagellar segment 1.2 times as long as broad. Pronotum dark brown. Mesoscutum black brown, with sides and humeral angles brownish yellow. Pleura and mediotergite brown. Wing clear brownish yellow. Cross vein r-m 3.3 times as long as m-stalk. Halter brownish yellow. Legs yellow. Fore metatarsus 1.1 times as long as tibia. Middle metatarsus 0.9 times as long as tibia. Middle tibia with 28 a, 6p-v, 12p, 5p-d. Hind tibia with 12 a, 6p, 8p-d. Abdominal tergites dark brown, with sides of tergites 2-3 yellowish brown. Sternites 1-3 yellowish brown, sternites 4-6 dark brown.

. Wing length 3.3 mm. Coloration same as in the male.

**Holotype** , Anji County, Longwangshan (30.4° N, 119.4° E), Zhejiang, 13 July 1995, col-



Figs. 1-2. *Exechia atridonta* sp. nov. Male genitalia. 1. Ventral view. 2. Tergite 9 and cerci.

The project was supported by the National Natural Science Foundation of China (30070102).

Received 17 Nov. 2003, accepted 12 Mar. 2004.

lected by WU Hong, No. 950103. Paratype 1, same locality as holotype, 14 July 1995, collected by WU Hong, No. 950170.

Remarks. This species is somewhat similar to *Exechia kunashirensis* Zaitzev, 1996, but differs in body size smaller, and the structure of genitalia different.



Figs. 3-5. *Exechia hebetata* sp. nov. Male genitalia. 3. Ventral view. 4. Gonostylus, lateral view. 5. Tergite 9 and cerci.

### 3 *Exechia hei* sp. nov. (Figs. 6-8)

. Wing length 3.2 mm. Head dark brown. Antennae brown, with scape, pedicel and base of 1st flagellum yellow, slightly longer than head and thorax; flagellar segment longer than width. Pronotum and mesoscutum brownish yellow. Pleura and mediotergite brownish yellow. Wing clear yellowish. Cross vein  $r-m$  2.6 times as long as  $m$ -stalk. Halter yellow. Legs yellow. Fore metatarsus slightly longer than tibia. Middle metatarsus 0.9 times as long as tibia. Middle

tibia with closely concentrated, 5-6 d, 5 v, 12 p, 5 p-d. Hind tibia with 10-13 a, 7-10 p, 6-8 p-d. Abdominal tergites brown, with posterior angles of tergites 1-4 broad and yellow. Sternites 1-3 yellowish brown, sternites 4-6 brown.

Holotype, Kaihua County: Gutianshan (29°16' N, 118°06' E), Zhejiang, 27 Sept. 1994, collected by HE Jun-Hua, No. 940927. Paratypes 2, the same locality as holotype, 13 Apr. 1993, collected by CAO Feng, Nos. 932000-01.



Figs. 6-8. *Exechia hei* sp. nov. Male genitalia. 6. Ventral view. 7. Gonostylus, lateral view. 8. Tergite 9 and cerci.

Remarks. This species is somewhat similar to *Exechia kunashirensis* Zaitzev, 1996, but differs from the latter in the structure of genitalia.

**4** *Exechia insularis* Zaitzev, 1996 New recorded to China

*Exechia insularis* Zaitzev, 1996. Int. J. Dipterol. Res., 7 (2): 67.  
Type localities: Sakhalin and Kuril Is.

Material examined. 1, Kaihua County: Gutianshan, Zhejiang, 22 July 1992, collected by WU Hong, No. 931955; 8, Kaihua County: Gutianshan, Zhejiang, 28-29 Oct. 1992, collected by WU Hong, Nos. 920667, 930031, 930036, 931573, 931587, 931619, 931713, 931739; 3, Kaihua County: Gutianshan, Zhejiang, 28 Oct. 1992, collected by DENG Yi-Fei, Nos. 931802, 931824, 931832, 931504-5, 931790.

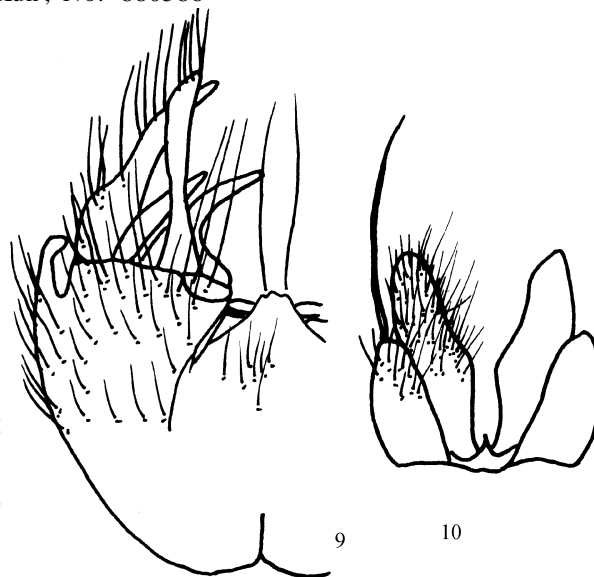
Distribution. China: Zhejiang (Gutianshan); Sakhalina and Kuril Is.

**5** *Exechia longichaeta* sp. nov. (Figs. 9-10)

. Wing length 2.7-3.1 mm. Head blackish-brown. Antennae brown, with scape, pedicel and basal 1/2 of 1<sup>st</sup> flagellum yellow, subequal to combined length of head and thorax; flagellar segment 1.2 times as long as broad. Pronotum dark brown. Mesoscutum blackish brown, with sides and humeral angles brown. Pleura and mediotergite brown. Wing clear brownish yellow. Cross vein  $r-m$  1.6-1.9 times as long as  $m$ -stalk. Halter brownish yellow. Legs brownish yellow, but base of hind femur brown ventrally. Fore metatarsus slightly longer than tibia. Middle metatarsus 0.9 times as long as tibia. Middle tibia with 22-24 a, 3 p-v, 8 p, 3-5 p-d. Hind tibia with 7-11 a, 4 p, 5 p-d. Abdominal tergites blackish brown, with sides of tergites 2-3 lighter. Sternites 1-3 brownish, sternites 4-6 brown. The male genitalia are shown in.

Holotype, Qingyuan County, Baishanzu (27°45' N, 119°12' E), Zhejiang, 15 Apr. 1994, collected by WU Hong, No. 940868. Paratypes: 1, the same locality as holotype, 18 July 1994, collected by WU Hong, No. 940407; 3, Deqing County, Moganshan (36°36' N, 119°51' E), Zhejiang, 2 May 1991, collected by WU Hong, Nos. 910014, 910018,

910038; 1, Kaihua County, Gutianshan, Zhejiang, 28 Oct. 1992, collected by WU Hong, No. 920607; 1, Wudangshan (32°23' N, 110°56' E), Hubei, 29 May 1984, collected by YANG Chi-Kun, No. 880537; 1, Kunming (25°04' N, 102°42' E), Yunnan, 20 Mar. 1981, collected by YANG Chi-Kun, No. 880586.



Figs. 9-10. *Exechia longichaeta* sp. nov. Male genitalia.  
9. Ventral view. 10. Tergite 9 and cerci.

Remarks. This species is somewhat similar to *Exechia pollex* Shaw, 1935, but differs from the latter in the structure of gonostylus.

## REFERENCES

- Chandler, P. J. 1977. Some fungus gnats of the tribe Exechiini (Dipt., Mycetophilidae) new to the British Isles. Proc. Trans. Br. Ent. Nat. Hist. Soc., 10: 71-85.  
Lastovka, P. and Matile, L. 1974. Mycetophilidae (Diptera) de Mongolie. Acta Zool. Acad. Sci. Hung., 20: 93-135.  
Sasakawa, M. 1993. Fungus gnats associated with flowers of the genus *Arisaema* (Araceae) Part 1. Mycetophilidae (Diptera). Jpn. J. Ent., 61: 783-786.  
Tuomikoski, R. 1966. Generic taxonomy of the Exechiini (Diptera, Mycetophilidae). Ann. ent. Fenn., 32: 159-194.  
Wu, H and Zheng, L-Y 2001. Five new species of the genus *Exechia* Winnertz. Acta Zootax. Sin., 26 (1): 85-89. [动物分类学报]  
Zaitzev, A. I. 1996. Six new species of fungus gnats of the tribe Exechiini from Sakhalin and Kuril Islands (Diptera, Mycetophilidae). Int. J. Dipt. Res., 7: 67-70.

## 中国伊菌蚊属新种记述 (双翅目, 菌蚊科)

吴 鸿<sup>1</sup> 徐华潮<sup>1</sup> 余晓霞<sup>2</sup>

1. 浙江林学院森林保护研究所 临安 311300

2. 浙江大学植物保护系 杭州 310029

**摘 要** 记述中国伊菌蚊属 4 新种及 1 新纪录种, 模式标本保存在浙江林学院昆虫标本室。

**黑齿伊菌蚊, 新种** *Exechia atridonta* sp. nov. (图 1~2)

雄 翅长 2.2~2.5 mm。新种与分布于欧洲的 *E. sororcula* Lackschewitz, 1937 相似, 但后者的翅长大于 3.0 mm, 生殖基节后缘亚中部为粗长鬃, 生殖刺突无宽大黑褐色构造。

正模, 广西猫儿山, 1992-08-19, 杨集昆采; 副模 1, 同正模。

**钝尖伊菌蚊, 新种** *Exechia hebetata* sp. nov. (图 3~5)

雄 翅长 2.8 mm。新种与模式产地在千岛群岛的国后伊菌蚊 *E. kunashirensis* Zaitzev, 1996 相似, 但后者个体较大 (翅长 3.9 mm 以上), 生殖基节和生殖刺突的构造明显不同。

正模, 浙江安吉龙王山, 1995-07-13, 吴鸿采; 副模, 浙江安吉龙王山, 1995-07-14, 吴鸿采。

**何氏伊菌蚊, 新种** *Exechia hei* sp. nov. (图 6~8)

雄 翅长 3.2 mm。新种与模式产地在千岛群岛的国后伊菌蚊 *E. kunashirensis* Zaitzev, 1996 相似, 但后者的外生

殖器构造和比例完全不同。

正模, 浙江开化古田山, 1994-09-27, 何俊华采; 副模 2, 浙江开化古田山, 1993-04-13, 曹峰采。

**岛居伊菌蚊** *Exechia insularis* Zaitzev, 1996 中国新纪录种

标本记录: 1, 浙江开化古田山, 1992-07-22, 吴鸿采; 8, 浙江开化古田山, 1992-10-28~29, 吴鸿采; 3, 3, 浙江开化古田山, 1992-10-28, 邓一飞采。

分布: 浙江 (古田山); 国外分布于千岛群岛。

**长毛伊菌蚊, 新种** *Exechia longichaeta* sp. nov. (图 9~10)

雄 翅长 2.7~3.1 mm。新种与分布于美国的 *E. pollex* Shaw, 1935 相似, 但后者的生殖刺背突末端双尖形, 生殖刺腹突末端无排列整齐的长鬃。

正模, 浙江庆元百山祖, 1994-04-15, 吴鸿采; 副模 1, 浙江庆元百山祖, 1500 m, 1994-07-18, 吴鸿采; 3, 浙江德清莫干山, 1991-05-02, 吴鸿采; 1, 浙江开化古田山, 1992-10-28, 吴鸿采; 1, 湖北武当山, 1984-05-29, 杨集昆采; 1, 云南昆明花红洞, 1900 m, 1981-03-20, 杨集昆采。

**关键词** 双翅目, 菌蚊科, 伊菌蚊族, 伊菌蚊属, 新种.

**中图分类号** Q969.44