

FIRST RECORD OF ALLODIA WINNERTZ (DIPTERA, MYCETOPHILIDAE) IN CHINA WITH DESCRIPTIONS OF SEVEN NEW SPECIES

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Abstract This paper describes Chinese species of *Allodia* Winnertz. Seven species are listed and described as new to science. A key to known species is provided. The type specimens are deposited in Zhejiang Forestry College, China.

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

The genus *Allodia* Winnertz has a wide distribution in the Northern Hemisphere, mainly in the Holarctic region. There are more than 30 Palearctic and 2 Oriental species. In the present paper, 7 species are recorded as new to science. A key to the Chinese species is given. The type specimens are deposited in Zhejiang Forestry College, Lin'an.

Allodia Winnertz is new record to China.

Key to species of *Allodia* from China

1. Mesoscutum with 2-3 dark longitudinal stripes 2
Mesoscutum without such stripes 3
2. Antennae 1.7 times as long as combined length of head and thorax, flagellar segments 2.0 times as long as wide; gonostyli rectangular rounded, with cirrate structure on inner side
..... *A. oblonga* sp. nov.
Antennae slightly longer than combined length of head and thorax, flagellar segments slightly longer than wide; gonostyli irregular, with 1 strong spine on inner side *A. macrodontusa* sp. nov.
3. Tergite 9 with extremely long strong bristles 4
Tergite 9 with at most moderately long bristles 5
4. Antennae 1.4 times as long as combined length of head and thorax, base of antennae yellow; gonostyli without cirrate structure on inner side *A. fuliginosa* sp. nov.
Antennae slightly longer than combined length of head and thorax, whole antennae brown; gonostyli with broad and long cirrate structure on inner side *A. pectinata* sp. nov.
5. Antennae 1.5 times as long as combined length of head and thorax, flagellar segments 2.0 times as long as wide; gonostyli with xiphoid spines on inner side *A. xiphodeusa* sp. nov.
Antennae subequal to combined length of head and thorax, flagellar segments at most 1.6 times as long as wide; gonostyli without such structure 6
6. Fore metatarsus 1.3 times as long as tibia; middle tibia with 30 p; legs without brown markings *A. attenuata* sp. nov.
Fore metatarsus subequal to tibia; middle tibia with less than 11 p; posterior base of hind coxa and ventral base of femora with brown markings, apical parts of hind femur and tibia brown
..... *A. solida* sp. nov.

1 *Allodia attenuata* sp. nov. (Figs. 1-3)

Male. Wing length 2.6 mm. Head dark brown. Antennae brownish yellow, subequal to combined length of head and thorax; flagellar segments 1.6 times as long as wide. Pronotum brownish yellow. Mesoscutum yellowish brown. Pleura and mediotergite brownish yellow. Wing clear brownish yellow. Cross vein r-m 1.3 times as long as m-stalk. Halter brownish yellow. Legs yellow. Fore metatarsus 1.3 times as long as tibia. Middle metatarsus 1.1 times as long as tibia. Middle tibia with 30 a, 9p-v, 4p, 4p-d. Hind tibia with 6 a, 3p, 4p-d. Abdominal tergites brown. Sternites brownish.

Holotype, Gutianshan (29°16' N, 118°06' E), Kaihua County, Zhejiang, 20 July 1992, collected by WU Hong, No. 931968.

Remarks. This species is somewhat similar to *Allodia septentrionalis* Hackman, 1971, but the structure of the gonostylus is distinctly different.

2 *Allodia fuliginosa* sp. nov. (Figs. 4-6)

Male. Wing length 2.3-2.6 mm. Head brown. Antennae brown, with scape, pedicel and 1st flagellum yellow; 1.4 times as long as head and thorax; flagellar segments 1.0-1.4 times as long as wide. Proepisternum yellowish brown, with 2 bristles. Mesoscutum yellowish brown, without discal bristle. Mesanepisternum yellow brown. Scutellum, laterotergite and mediotergite brown. Wing clear yellowish. Sc ending in R. Apical part of R₅ almost straight. Cross vein r-m 0.8-1.0 times as long as m-stalk. Base of posterior fork anterior to that of median fork. Halter yellow. Legs brownish yellow. Fore metatarsus 1.2 times as long as

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

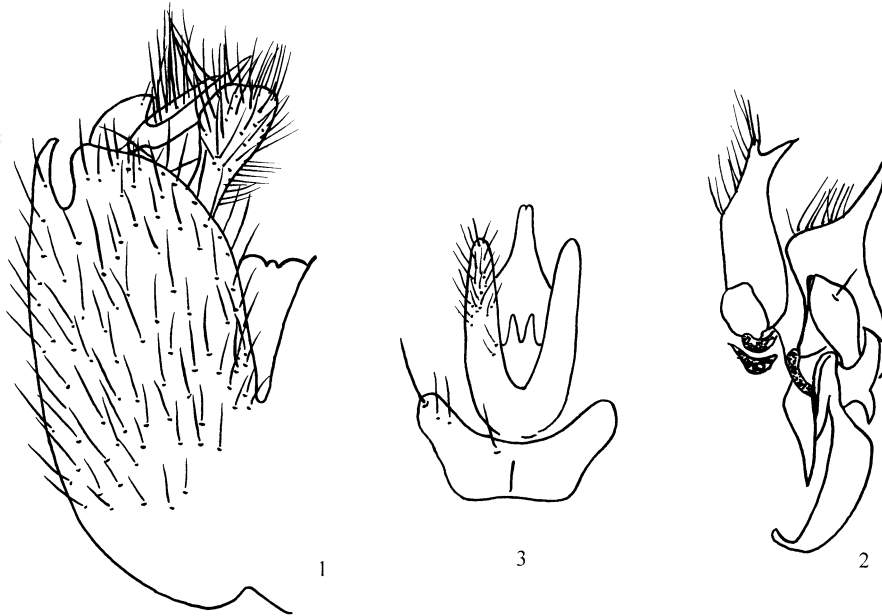
Received 15 Oct. 2002, accepted 13 Dec. 2002.

tibia. Middle tibia with 15-19 a, 6p-v, 6p, 3p-d. Hind tibia with 11 a, 7p-d. Abdominal tergites brown, lighter markings at anterior angles of tergites 1-4, tergite 6 yellow. Sternites yellow.

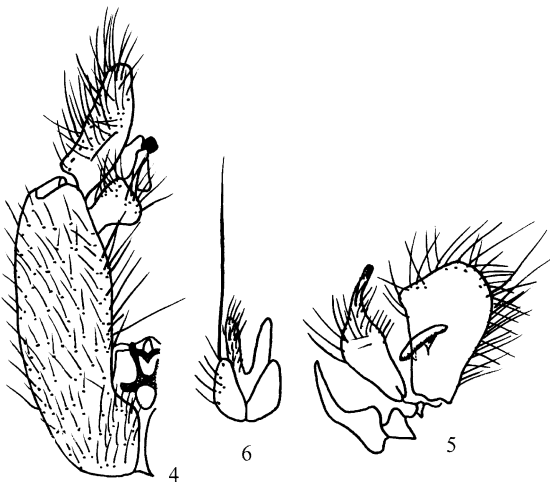
Holotype ♂, Gutianshan, Kaihua County, Zhejiang, 25 July 1992, collected by WU Hong, No. 931929. Paratypes 2 ♂, the same data as holotype, Nos. 931927, 931934; 1 ♀, the same locality as

holotype, 17 July 1992, collected by MA Yun, No. 920510; 3 ♀, Anji County: Longwangshan (30°23' N, 119°24' E), Zhejiang, 13-16 July 1995, collected by WU Hong, Nos. 950104, 950108, 950538.

Remarks. This species is allied to *Allodia angulata* (Lundstrom, 1913), but differs in the structure of gonostylus.



Figs. 1-3. *Allodia attenuata* sp. nov. 1. Male genitalia, ventral view. 2. Gonostylus, lateral view. 3. Tergite 9 and cerci.



Figs. 4-6. *Allodia fuliginosa* sp. nov. 4. Male genitalia, ventral view. 5. Gonostylus, lateral view. 6. Tergite 9 and cerci.

3 *Allodia macrodontusa* sp. nov. (Figs. 7-9)

Male. Wing length 2.2-3.1 mm. Head brown. Antennae yellow, with apical half of flagella brownish, slightly longer than head and thorax combined;

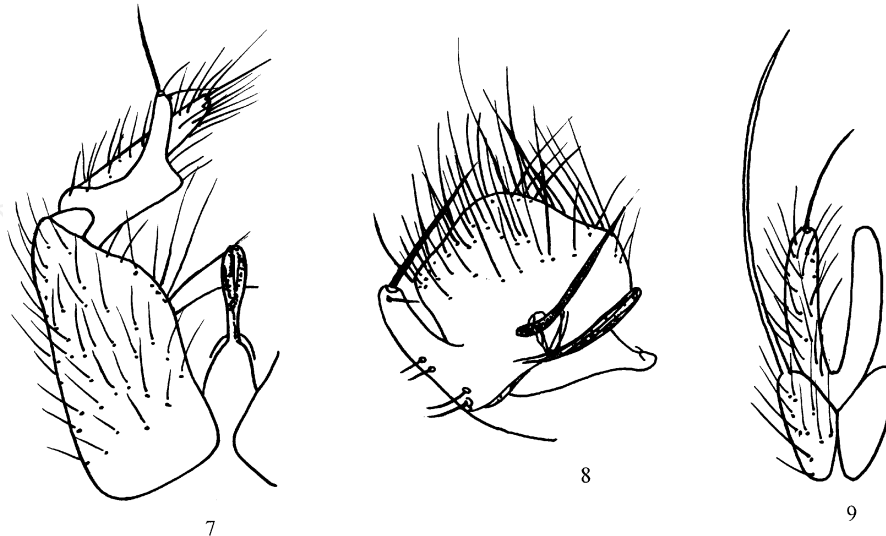
flagellar segments slightly longer than their width. Proepisternum yellow, with 1 bristle. Mesoscutum brownish yellow, with 3 brown longitudinal stripes, discal bristles well developed. Mesanepisternum, scutellum, laterotergite and mediotergite brownish yellow. Wing clear yellowish. Sc ending in R. Apical part of R₅ almost straight. Cross vein r-m 0.6-1.1 times as long as m-stalk. Base of posterior fork before that of r-m. Halter yellowish. Legs brownish yellow. Fore metatarsus subequal to tibia. Middle tibia with 20-25 a, 6p-v, 5p-d. Hind tibia with 10-13 a, 8p-d. Abdomen brown, with lighter markings at base of segments.

Holotype ♂, Gutianshan, Kaihua County, Zhejiang, 29 Oct. 1992, collected by WU Hong, No. 931549. Paratypes 8 ♂, the same data as holotype, Nos. 930021, 931547, 931557, 931655, 931719, 931721, 931724, 931727; 5 ♀, the same locality as holotype, 16-22 July, 1992, collected by WU Hong, Nos. 920339, 931944-45, 931950-51; 18 ♀, the same locality as holotype, 28 Oct. 1992,

collected by WU Hong, Nos. 930007, 930020, 931641-43, 931648, 931652, 931654, 931662, 931666, 931668, 931672, 931675, 931743, 931746-48, 931751; 25, the same locality as holotype, 28-29 Oct. 1992, collected by DENG Yi-Fei, Nos. 931473, 931478-79, 931483, 931489-90, 931756,

931759, 931763, 931765, 931767, 931769, 931771, 931844, 931851, 931853, 931859, 931871-74, 931879, 931891, 931893.

Remarks. This species is slightly similar to *Allodia oblonga* sp. nov., but the structure of gonocoxipites and gonostylus are distinctly different.



Figs. 7-9. *Allodia macrodontusa* sp. nov. 7. Male genitalia, ventral view. 8. Gonostylus, lateral view. 9. Tergite 9 and cerci.

4 *Allodia oblonga* sp. nov. (Figs. 10-12)

Male. Wing length 2.6-3.0 mm. Head blackish brown. Antennae brown, with scape, pedicel, 1st to 2nd or 4th flagella yellow; 1.7 times as long as head and thorax; flagellar segments 2.0 times as long as wide. Proepisternum yellow, with 2 bristles. Mesoscutum yellow, with 2 or 3 broad brown longitudinal stripes, discal bristles forming rows. Mesanepisternum yellow. Scutellum and mediotergite brown. Laterotergite yellow brown. Wing clear yellowish. Sc ending in R. Apical part of R_5 straight. Cross vein r-m subequal m-stalk. Base of posterior fork before that of median fork. Halter yellow. Legs brownish yellow. Fore metatarsus 1.2 times as long as tibia. Middle tibia with 24-29 a, 7 p-v, 8 p, 4 p-d. Hind tibia with 9 a, 10 p-d. Abdominal tergites brown, with lighter markings on sides and basal margins of tergites. Sternites yellow.

Holotype, Gutianshan, Kaihua County, Zhejiang, 28 Oct. 1992, collected by DENG Yi-Fei, No. 931842. Paratypes 3, the same locality as holotype, collected by WU Hong, Nos. 920625, 931637, 931684; 3, Longwangshan, Anji County, Zhejiang, 13 July 1995, collected by WU Hong, Nos. 950073, 950084, 950101; 1, Maoershan (25°53' N, 110°25' E), Guangxi, 18 Aug. 1992, collected by

YANG Chi-Kun, No. 920227.

Remarks. This species is allied to *Allodia flavorufa* Matile, 1997, but can be separated from the latter by the structure of gonostylus.

5 *Allodia pectinata* sp. nov. (Figs. 13-15)

Male. Wing length 2.3-2.7 mm. Head brown. Antennae brown, slightly longer than head and thorax; flagellar segments with their length subequal to width. Proepisternum brown, with 3 bristles. Mesoscutum brown, discal bristles rudimentary. Mesanepisternum, scutellum, laterotergite and mediotergite brown. Wing clear yellowish. Sc ending in R. Apical part of R_5 straight. Cross vein r-m 0.9-1.1 times as long as m-stalk. Base of posterior fork well before that of median fork. Halter yellow. Legs brownish yellow. Fore metatarsus 0.9 times as long as tibia. Middle tibia with 23 a, 8-10 p-v, 10-12 p, 5 p-d. Hind tibia with 9-10 d, 10 a. Abdominal tergites brown, with lighter markings located at base of tergites. Sternites brownish.

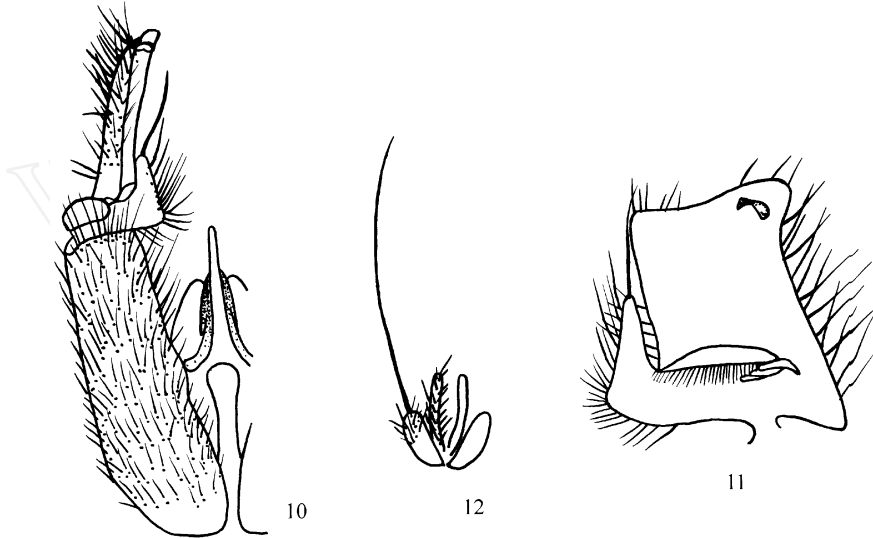
Female. Wing length 2.8 mm. Coloration and characters same as in male. Female terminalia brown.

Holotype, Gutianshan, Kaihua County, Zhejiang, 17 July 1992, collected by MA Yun, No. 920513. Paratypes 1, the same data as holotype,

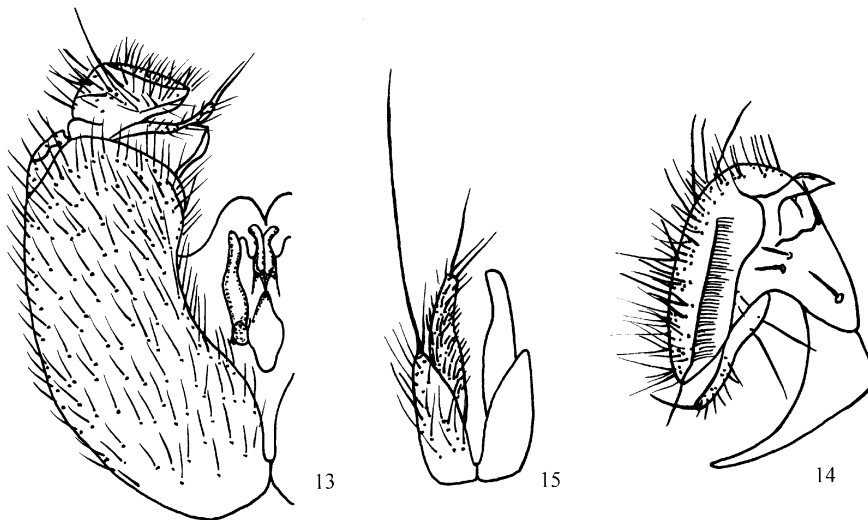
No. 920521; 2, the same data as holotype, collected by CHEN Xue-Xin, Nos. 931537, 931975; 7, the same locality as holotype, 17-25 July 1992, collected by WU Hong, Nos. 920472, 931925, 931931, 950965, 950968, 950990-91; 4, 1, Guiyang (26°35' N, 106°42' E), Guizhou, 21-25 July 1987, collected by YANG Chi-Kun, Nos. 880049,

880076, 880080, 880089, 880092; 1, Guiyang, Guizhou, 29 Aug. 1987, collected by YANG Chi-Kun, No. 880064.

Remarks. This species is similar to *Allodia angulata* (Lundstrom, 1913), but the structure of the gonocoxites and gonostylus are distinctly different.



Figs. 10-12. *Allodia oblonga* sp. nov. 10. Male genitalia, ventral view. 11. Gonostylus, lateral view. 12. Tergite 9 and cerci.



Figs. 13-15. *Allodia pectinata* sp. nov. 13. Male genitalia, ventral view. 14. Gonostylus, lateral view. 15. Tergite 9 and cerci.

6 *Allodia solida* sp. nov. (Figs. 16-18)

Male. Wing length 2.7-3.7 mm. Head blackish brown. Antennae brown, with scape, pedicel and 1st flagellum yellow; flagellar segments 1.4 times as long as wide. Proepisternum brown, with 3 bristles. Mesoscutum black brown, with humeral angles yellow; discal bristles well developed. Scutellum black brown.

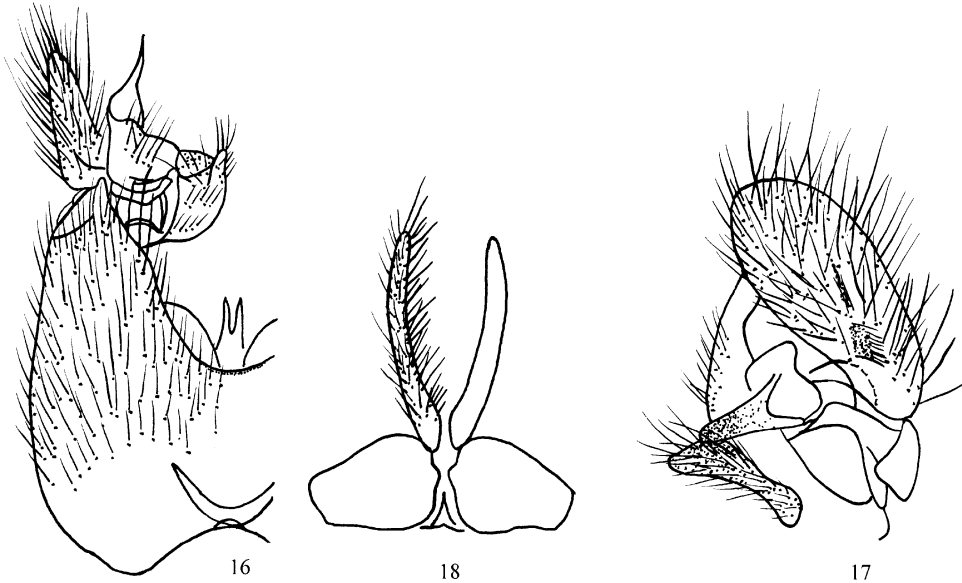
Mesanepisternum brown. Laterotergite dark brown. Mediotergite blackish brown. Wing clear yellow. Sc ending in R. Apical part of R₅ straight. Cross vein r-m subequal to m-stalk. Base of posterior fork slightly beyond that of median fork. Halter yellow. Legs brownish yellow, but posterior base of hind coxa and ventral base of femora with markings, apical parts of hind

femur and tibia brown. Fore metatarsus subequal to tibia. Middle tibia with 8-11 a, 10p, 4-6p-d. Hind tibia with 11 a, 6-8p-d. Abdominal tergites dark brown. Sternites brown.

Holotype , Longwangshan, Anji County, Zhejiang, 13 May 1996, collected by WU Hong, No.

960101. Paratypes 6 , the same data as holotype , Nos. 960090, 960092, 960094-95, 960100, 960147.

Remarks. This species is somewhat similar to *Allodia lugens* (Wiedemann, 1817), but differs in the structure of cerci and gonostylus.

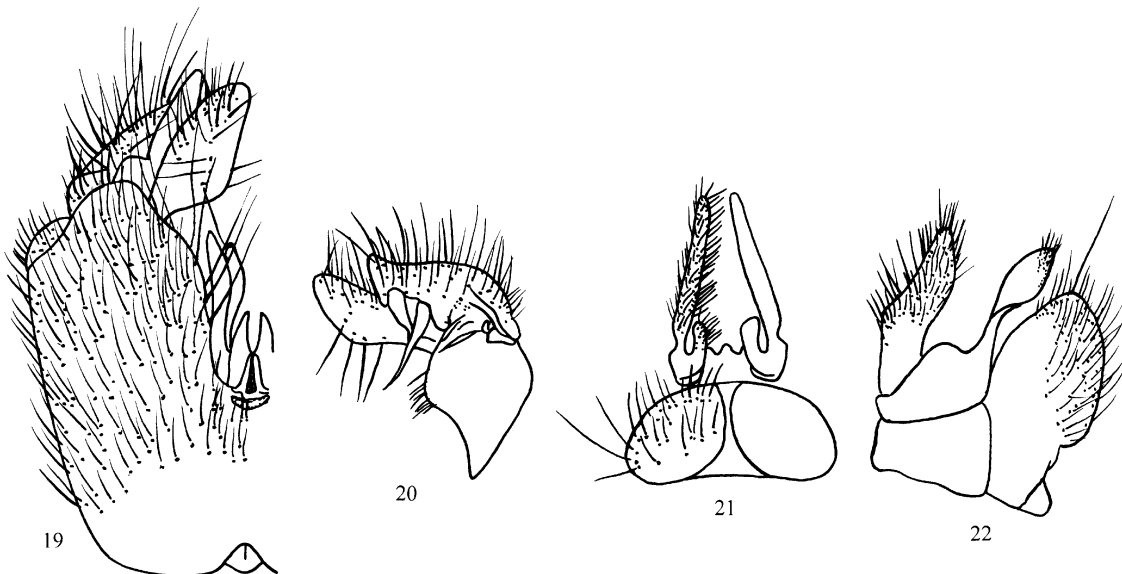


Figs. 16-18. *Allodia solida* sp. nov. 16. Male genitalia, ventral view. 17. Gonostylus, lateral view. 18. Tergite 9 and cerci.

7 *Allodia xiphodeusa* sp. nov. (Figs. 19-21)

Male. Wing length 4.2 mm. Head blackish brown. Antennae brown, with scape, pedicel and half of 1st flagellum at base yellow; 1.5 times as long as head and thorax; flagellar segments 2.0 times as long

as wide. Proepisternum brown, with 3 bristles. Mesoscutum brown, with lateral margins yellow; discal bristles rudimentary. Mesanepisternum, scutellum, laterotergite and mediotergite brown. Wing clear yellowish. Sc ending in R. Apical part of R₅ curved down



Figs. 19-22. *Allodia xiphodeusa* sp. nov. 19. Male genitalia, ventral view. 20. Gonostylus, lateral view. 21. Tergite 9 and cerci. 22. Female terminalia, lateral view.

ward. Cross vein r-m 1.2 times as long as m-stalk. Base of posterior fork at that of median fork. Halter yellow. Legs brownish yellow. Fore metatarsus subequal to tibia. Middle tibia with 45 a, 5p-v, 5p, 6p-d. Hind tibia with 3 a, 8p, 9p-d. Abdominal tergites 1-5 brown, with lighter markings on sides of tergites; tergite 6 dark brown. Sternites slightly lighter in color.

Female. Wing length 4.3 mm. Coloration and characters the same as in male. Female terminalia brown.

Holotype, paratype, Baishanzu (27°45' N, 119°12' E), Qingyuan County, Zhejiang, 17 Aug. 1993, collected by WU Hong, Nos. 931115, 931116.

Remarks. This species is allied to *Allodia czernyi* (Landrock, 1912), but the shape of abdominal tergite 9 and the structure of cerci and gonocoxites are distinctly different.

Acknowledgements We wish to thank Prof. HE Jun-Hua of the Zhejiang University (Hangzhou) and Prof. YANG Chi-Kun of Chinese Agricultural University (Bei-

jing) for their constant encouragement and support.

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中国配菌蚊属新种记述 (双翅目, 菌蚊科)

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摘要 记述中国配菌蚊属 7 新种, 模式标本保存在浙江林学院昆虫标本室。本属为中国新纪录属。

渐尖配菌蚊, 新种 *Allodia attenuata* sp. nov. (图 1~3)

雄 翅长 2.6 mm。新种与分布于欧洲的 *A. septentrionalis* Hackman, 1971 相似, 但后者的生殖刺突构造和比例明显不同, 新种的生殖刺背突末端渐尖。

正模, 浙江开化古田山, 1992-07-20, 吴鸿采。

黄褐配菌蚊, 新种 *Allodia fuliginosa* sp. nov. (图 4~6)

雄 翅长 2.3~2.6 mm。新种与分布于欧洲的 *A. angulata* (Lundstrom, 1913) 相似, 但后者的生殖刺背突末端渐尖, 内侧无特殊构造。

正模, 浙江开化古田山, 1992-07-25, 吴鸿采。副模 2, 同正模; 1, 浙江开化古田山, 马云采; 3, 浙江安吉龙王山, 1995-07-13~16, 吴鸿采。

大齿配菌蚊, 新种 *Allodia macrodonta* sp. nov. (图 7~9)

雄 翅长 2.2~3.1 mm。新种与模式产地在浙江和广西的矩圆配菌蚊 *A. oblonga* sp. nov. 相近似, 但后者的生殖基节和生殖刺突的构造明显不同。

正模, 浙江开化古田山, 1992-10-29, 吴鸿采。副模 8

, 同正模; 5, 浙江开化古田山, 1992-07-16~22, 吴鸿采; 18, 浙江开化古田山, 1992-10-28, 吴鸿采; 25, 浙江开化古田山, 1992-10-28~29, 邓一飞采。

矩圆配菌蚊, 新种 *Allodia oblonga* sp. nov. (图 10~12)

雄 翅长 2.6~3.0 mm。新种与分布于科摩罗的 *A. flavorufa* Matile, 1977 相似, 但后者的生殖刺背突末端圆形, 内侧也无特殊构造。

正模, 浙江开化古田山, 1992-10-28, 邓一飞采。副模 3, 浙江开化古田山, 1992-10-28, 吴鸿采; 3, 浙江安吉龙王山, 1995-07-13, 吴鸿采; 1, 广西猫儿山庵堂坪, 1992-08-18, 杨集昆采。

梳状配菌蚊, 新种 *Allodia pectinata* sp. nov. (图 13~15)

雄 翅长 2.3~2.7 mm。新种与分布于英国等地的 *A. angulata* (Lundstrom, 1913) 相似, 但后者的生殖基节和生殖刺突构造完全不同。

正模, 浙江开化古田山, 1992-07-17, 马云采。副模 1, 同正模; 2, 浙江开化古田山, 1992-07-17, 陈学新采; 7, 浙江开化古田山, 1992-07-17~25, 吴鸿采; 4, 1, 贵州贵阳贵州省林科所, 1987-07-21~25, 杨集

昆采; 1, 贵州贵阳贵州省林科所, 1987-08-29, 杨集昆采。

坚实配菌蚊, 新种 *Allodia solida* sp. nov. (图 16~18)

雄 翅长 2.7~3.7 mm。新种与广布于全北区的 *A. lugens* (Wiedemann, 1817) 相似, 但后者的尾须和生殖刺突构造不同。

正模, 浙江安吉龙王山, 1996-05-13, 吴鸿采。副模 6, 同正模。

关键词 双翅目, 菌蚊科, 配菌蚊属, 新种.

中图分类号 Q969. 441

剑齿配菌蚊, 新种 *Allodia xiphodeusa* sp. nov. (图 19~22)

雄 翅长 4.2 mm。新种与欧洲广布的 *A. czernyi* (Lan-drock, 1912) 相似, 但后者的第 9 背板形状不同, 并具 1 极长鬃, 尾须和生殖基节的构造也不同。

正模, 浙江庆元百山祖, 1993-08-17, 吴鸿采。副模, 同正模。

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