

# Fauna and a new species of the genus *Palpomyia* (Diptera: Ceratopogonidae) from China

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**Abstract:** In this paper, 33 known species of *Palpomyia* are described. A new species of *Palpomyia* named *Palpomyia nanniwana* He, Liu and Yu sp. nov. is reported from Shaanxi Province, China.

**Key words:** Culicoidea; biting midges; taxonomy

## 中国须蠓属名录及一新种记述（双翅目：蠓科）

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**摘要：**本文记录了我国已知须蠓属 *Palpomyia* 33 种。报告了陕西省须蠓属 *Palpomyia* 1 新种，命名为南泥湾须蠓 *Palpomyia nanniwana* He, Liu and Yu sp. nov.。

**关键词：**蚊总科；蠓虫；分类

## Introduction

There are 234 extant species of *Palpomyia* Meigen, 1818, widely distributed all over the world. Among them, 33 known species of *Palpomyia* are in China and they account for about 14% of the whole world. In this paper, a new species of *Palpomyia* from Yan'an Nanniwan, Shaanxi Province and geographical distribution of 33 known species in China were reported.

## Taxonomy

### Known species and geographical distribution of *Palpomyia* in China

Previous research on *Palpomyia* is limited in China to only 1912 to 1921. Kieffer (1921) had described 6 species of *Palpomyia* in Taiwan, China: *Palpomyia tainan* Kieffer, *Palpomyia divisa* Kieffer, *Palpomyia indivisa* Kieffer, *Palpomyia abdominalis* Kieffer, *Palpomyia aterrima* Kieffer and *Palpomyia murina* Kieffer. Yixin YU (2006) reported 27 species of *Palpomyia* in 2006; among them, 22 new species of *Palpomyia* were described. A new species named *Palpomyia nanniwana* He, Liu and Yu sp. nov. is described in the paper. So far, there are 34

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species of *Palpomyia* in China, the list is as follows:

1. *P. abdominalis* Kieffer, 1921: Taiwan
2. *P. abrupt* Yu, 2006: Jigong Mountain, Xinyang, Henan
3. *P. alba* Yu & Liu, 2006: Nachitai, Qinghai
4. *P. amplofemoria* Yu & Zhang, 2006: Nyalam, Tibet
5. *P. arcutibia* Yu, 2006: Wudang Mountain, Hubei
6. *P. aterrima* Kieffer, 1921: Taiwan
7. *P. brachialis* (Haliday), 1833: Chengde, Hebei
8. *P. chongqingi* Yu, 2006: Chongqing
9. *P. curtatus* Yu & Deng, 2006: Nyalam, Tibet
10. *P. divisa* Kieffer, 1916: Taiwan
11. *P. downesi* Grogan & Wirth, 1979: Nachitai, Qinghai
12. *P. ectasa* Yu, 2006: Golmud, Qinghai
13. *P. fulva* Yu & Qi, 2006: Wuwei, Gansu; Taxkorgan, Xinjiang
14. *P. fulvastra* Yu, 2006: Wudang Mountain, Hubei
15. *P. fumiptera* Yu & Zhang, 2006: Nyalam, Tibet
16. *P. fuscipeda* Yu & Liu, 2006: Peng County, Sichuan; Xinyang, Henan
17. *P. fuscitibia* Yu & Deng, 2006: Nyalam, Tibet
18. *P. indivisa* Kieffer, 1916: Taiwan
19. *P. langyaensis* Yu, 2006: Chuzhou, Anhui
20. *P. longtana* Yu, 2006: Wudang Mountain, Hubei
21. *P. murina* Kieffer, 1921: Taiwan
22. *P. multisaeta* Yu & Xu, 2006: Raohe, Heilongjiang
23. *P. nanniwana* He, Liu and Yu sp. nov.: Nanniwan, Shaanxi
24. *P. nitela* Yu & Deng, 2006: Dandong, Liaoning
25. *P. pallidipeda* Yu & Liu, 2006: Cuona, Tibet
26. *P. pilea* Yu, 2006: Sanya, Hainan
27. *P. reversa* Remm, 1972: Cuona, Tibet
28. *P. rufipes* Meigen, 1818: Nyalam, Tibet
29. *P. serripes* Meigen, 1818: Wudang Mountain, Hubei; Luding, Sichuan
30. *P. tainan* Kieffer, 1912: Taiwan
31. *P. xizanga* Yu & Liu, 2006: Cuonale Village, Tibet
32. *P. yuanqingi* Yu, 2006: Nanniwan, Yan'an, Shaanxi
33. *P. ziliangi* Yu, 2006: Wudang Mountain, Hubei
34. *P. zyzza* Yu & Zou, 2006: Malipo, Yunnan

**The new species of *Palpomyia nanniwana* He, Liu and Yu sp. nov. (Figs. 1–4)**

Diagnosis. Medium and brown, mandible with 7 teeth, the distal five segments of antenna distinctly elongated, wing with no irregular greyish black markings but macrotrichia, the ends of femur and tibia base and ends of each leg with brown annulation, hind tibia with 7 terminal bristles and 15 comb teeth, two spherical spermatheca, with short necks.

Female.

Wing length 1.91 mm, breadth 0.63 mm.

Head. Compound eyes broader, separated by width of 3 ommatidial facets but no

pubescent, antenna uniformly brown, the distal five segments distinctly elongated, 13th segment slenderest, relative length of all flagellar segments 25 : 15 : 13 : 12 : 12 : 12 : 12 : 12 : 19 : 20 : 20 : 22 : 32, AR1.0; antenna 5-segmented, relative length of palp segments 5 : 13 : 25 : 20 : 19, PR2.5.



Figures 1–4. *Palpomyia nanniwana* He, Liu and Yu sp. nov. 1. Wing (♀); 2. Head; 3. Leg; 4. Abdomen.

Thorax. Light brown, without spots, scutellum with seven strong bristles. Wing with no irregular greyish black markings but macrotrichia, wing base pale brown. The ends of femur and tibia base and ends of each leg with brown annulation, 3–5 short bristles at fore femur and tibia, the third segment at distal 1/3 to fifth segment of tarsus brown. Claw of fore-, mid-, hind-legs of equal length, not forked at distal. Hind tibia with 7 terminal bristles and 15 comb teeth. TR and FT as follows:

**Table 1. Ratios of tarsi (TR) and femur-tarsi (F-T) of all legs of *Palpomyia nanniwana* He, Liu and Yu sp. nov. (♀)**

leg	TR	F-T
fore leg	1.75	196 : 176 : 70 : 40 : 31 : 25 : 40
mid leg	2.14	245 : 235 : 107 : 50 : 35 : 26 : 40
hind leg	2.15	290 : 295 : 118 : 55 : 38 : 26 : 40

Abdomen. Light brown, five pairs of dorsal gland rods, inserted on 3, 4, 5, 6, 7 abdominal segments respectively; third to sixth at the end of sternum with narrow brown transverse bands, fifth to sixth at the middle of sternum with a pair of narrow brown longitudinal bands extending from ends to base; two spermatheca, subequal, nearly spherical with short necks.

**Holotype.** ♀, **China**, Nanniwan, Yan'an, Shaanxi Province, 09-XI-1962.

The type specimen is deposited in the Medical Insect Collection, Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing.

### Remarks

The morphological features of the female's legs in this new species are similar to *Palpomyia lineate* Meigen 1818, but this species is dark brown and it is obviously different. The dorsal gland rod of the abdomen of this new species is quite similar to *Palpomyia montana* Tokunaga 1939, but one of the spermatheca of this species is big, another is small, it can be identified accordingly.

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