

Five new species in the genus *Elaphropeza* (Diptera: Empididae) from Wuyishan, China

Decheng LUO^{1,2}, Fangzhou MA^{3①}, Naizhong CHEN^{2①}, Ding YANG¹

1. Department of Entomology, College of Plant Protection, China Agricultural University, Beijing 100193, China

2. Chinese Academy of Inspection and Quarantine, Beijing 100123, China

3. Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment, National Key Laboratory of Biosafety, State Environmental Protection Scientific Observation and Research Station for Ecology and Environment of Wuyi Mountains, Ministry of Ecology and Environment, Nanjing, Jiangsu 210042, China

Abstract: *Elaphropeza* is one of the largest genera in the family Empididae with over 220 known species distributed worldwide. 56 species were known to occur in China, of which only 3 species were known from Wuyishan. Here 7 species are added to the fauna of Wuyishan, including the following five new species: *Elaphropeza brevidigitata* sp. nov., *Elaphropeza conjunctiva* sp. nov., *Elaphropeza jiuquxiana* sp. nov., *Elaphropeza quadrata* sp. nov., and *Elaphropeza wuyishana* sp. nov. A key to the species of *Elaphropeza* from Wuyishan is presented.

Key words: dance fly; taxonomy; key

中国武夷山黄隐肩舞虻属 *Elaphropeza* 五新种 (双翅目: 舞虻科)

罗德诚^{1,2}, 马方舟^{3①}, 陈乃中^{2①}, 杨定¹

1. 中国农业大学植物保护学院昆虫学系, 北京 100193; 2. 中国检验检疫科学研究院, 北京 100123; 3. 生态环境部南京环境科学研究所/国家环境保护生物安全重点实验室/国家环境保护武夷山生态环境科学观测研究站, 江苏 南京 210042

摘要: 黄隐肩舞虻属 *Elaphropeza* 是舞虻科中最大的属之一, 已知 220 余种, 分布于世界各地, 我国已知 56 种。以前武夷山仅记述 3 种。本文又报道武夷山黄隐肩舞虻属 7 种, 其中包括 5 新种: 短突黄隐肩舞虻 *Elaphropeza brevidigitata* sp. nov., 合斑黄隐肩舞虻 *Elaphropeza conjunctiva* sp. nov., 九曲黄隐肩舞虻 *Elaphropeza jiuquxiana* sp. nov., 方突黄隐肩舞虻 *Elaphropeza quadrata* sp. nov., 武夷黄隐肩舞虻 *Elaphropeza wuyishana* sp. nov., 并编制了武夷山黄隐肩舞虻属分种检索表。

关键词: 舞虻; 分类; 检索表

Introduction

Elaphropeza Macquart is one of the largest genera in the family Empididae with over 220 known species distributed worldwide (Yang *et al.* 2007; Shamshev & Grootaert 2007;

Accepted 15 December 2022. Published online 27 February 2023. Published 25 March 2023.

① Corresponding authors, E-mails: mfz@nies.org; chennz@caiq.org.cn

Grootaert 2019). It is characterized by the following features: occiput convex, antenna not upturned, first flagellomere conical with lower margin as straight as upper margin, arista apical, mesopleuron bare, wing with shortened basal cells, abdominal intersegmental modifications usually present between tergites 3–5 or 4–5 (Chvála 1975; Yang & Gaimari 2005; Shamshev & Grootaert 2007). The Oriental species were revised by Shamshev & Grootaert (2007), Grootaert & Shamshev (2012, 2015) and Wang *et al.* (2015).

The species from the Chinese mainland were reviewed by Yang & Gaimari (2005). Yang *et al.* (2006) revised species of *Elaphropeza* from Guangdong. The fauna of Taiwan was revised by Wang *et al.* (2012), who recorded fourteen species with a key to the species of Taiwan. Grootaert (2019) revised species of *Elaphropeza* from Hong Kong. Up to now, 56 species were known to occur in China (Yang *et al.* 2018; Grootaert 2019). Only the following 3 species were known to occur in Wuyishan (Yang *et al.* 2018): *E. fujianensis* (Yang & Yang, 2003), *E. jianyangensis* (Yang & Yang, 2003) and *E. striata* (Yang & Yang, 1992). Here 7 species are added to the fauna of Wuyishan, of which 5 species are described as new to sciences. A key to the species of *Elaphropeza* from Wuyishan is presented.

Material and methods

Specimens were examined and illustrated using a ZEISS Stemi 2000–c. Genitalic preparations were made by macerating the apical portion of the abdomen in cold 10% NaOH for about 6 hours. The type specimens are deposited in the Entomological Museum of China Agricultural University, Beijing. The following abbreviations are used: acr — acrostichal bristle(s); ad — anterodorsal bristle(s); av — anteroventral bristle(s); dc — dorsocentral bristle(s); npl — notopleural bristle(s); oc — ocellar bristle(s); prsc — prescutellar bristle(s); psa — postalar bristle(s); pv — posteroventral bristle(s); sc — scutellar bristle(s); vt — vertical bristle(s).

Taxonomy

Key to species of *Elaphropeza* from Wuyishan, China

1. Thorax mostly yellow; hind tibia with 1–2 thin ad at middle 2
- . Thorax entirely blackish; hind tibia with 2 thick ad on apical half *E. jiuquxiana* **sp. nov.**
2. Head yellow 3
- . Head black 4
3. Mesonotum with two brownish spots *E. fujianensis* (Yang & Yang)
- . Mesonotum without spots *E. jianyangensis* (Yang & Yang)
4. Mesonotum entirely yellow 5
- . Mesonotum with dark markings 7
5. Antenna with only arista dark brown 6
- . Antennal first flagellomere and arista dark brown *E. conjunctiva* **sp. nov.**
6. First flagellomere 2.0 times longer than wide; postnotum black with two yellow posterior spots; hypopleuron black with ventral 1/4 or so yellow *E. brevidigitata* **sp. nov.**
- . First flagellomere 1.6 times longer than wide; postnotum black with yellow narrow lateral portion and two yellow posterior spots; hypopleuron black with lower 2/5 yellow *E. quadrata* **sp. nov.**

- 7. Arista not thickened with very short pubescence 8
- Arista thickened with plumose pubescence..... *E. plumata* (Yang, Merz & Grootaert)
- 8. Mesonotum yellow with two subtriangular spots; hind tibia with 2 ad 9
- Mesonotum black at posterior 3/5; hind tibia with 1 ad..... *E. wuyishana* **sp. nov.**
- 9. Mesonotum yellow with two very large subtriangular spots anteriorly reaching its lateral margin.....
- *E. guiensis* (Yang & Yang)
- Mesonotum yellow with two subtriangular spots separated from its lateral margin
- *E. striata* (Yang & Yang)

1. *Elaphropeza brevidigitata* **sp. nov.** (Fig. 1)

Male. Body length 2.2 mm, wing length 2.6 mm.

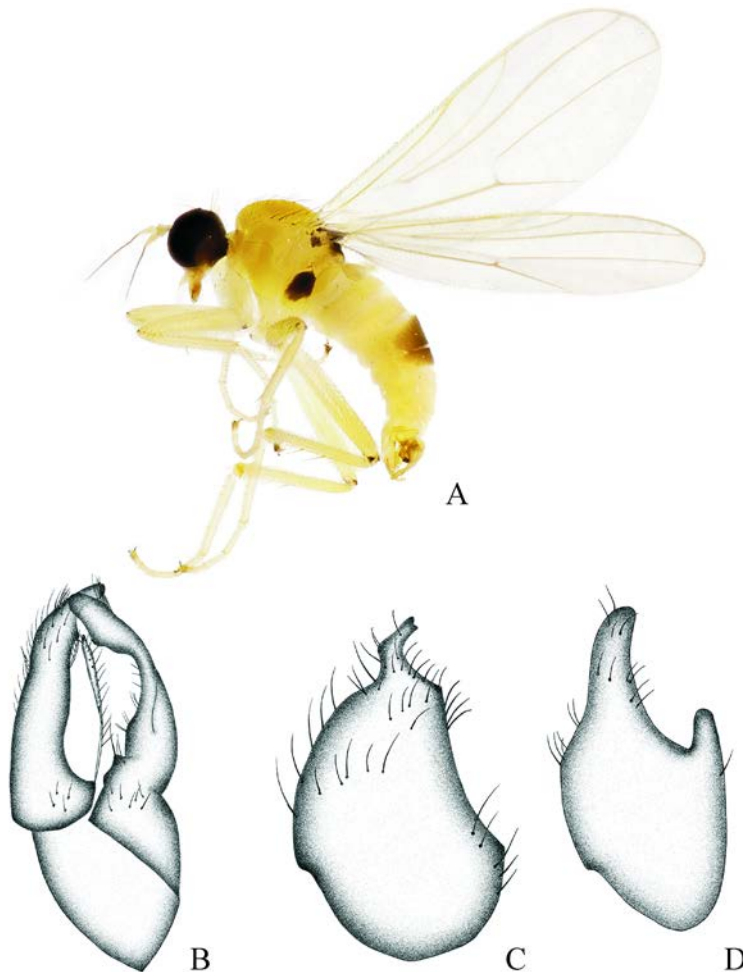


Figure 1. *Elaphropeza brevidigitata* **sp. nov.** A. Male habitus, lateral view; B. Male genitalia, dorsal view; C. Right epandrial lamella; D. Left surstylus.

Head black with pale gray pollinosity. Setulae and setae on head brownish. Eyes very narrowly separated on face, face linear. Ocellar tubercle with 2 rather long oc (shorter than

inner vt) and 2 short posterior setulae; 2 very long vt curved inward, outer vt slightly shorter than inner vt. Antenna brownish yellow except first flagellomere dark yellow and arista dark brown; scape bare, shorter than pedicel; pedicel with circlet of blackish apical setulae; first flagellomere short conical, 2.0 times longer than wide, very short blackish pubescent; arista very long (4.0 times longer than 1st flagellomere), dark brown, very short blackish pubescent. Proboscis dark brownish yellow with brown setulae; palpus somewhat finger-like, dark yellow with brown setulae and 1 brown apical seta.

Thorax brownish yellow with thin pale gray pollinosity, but mesonotum entirely brownish yellow; scutellum black, postnotum black with two yellow posterior spots, hypopleuron black with lower 1/4 or so yellow. Setulae and setae on thorax brown to dark brown, setulae on mesoscutum somewhat sparse, biseriate acr separated from dc; h absent, 2 very long npl, 1 very long sa, 1 short psa, 1 very long prsc; scutellum with two pairs of sc (basal pair short, about 1/5 as long as apical pair). Propleuron without bristle upturned just above fore coxa. Legs yellow except tarsomere 5 dark brown. Setulae and setae on legs brownish to brown; fore coxa with anterior setae; mid coxa apically with 2 long anterior setae; hind coxa with 1 outer setae. Fore femur 1.1 times as thick as mid femur, mid and hind femora subequal in thickness. Fore and mid femora each with 1 long thin pv at extreme base; mid femur with 1 preapical anterior seta; hind femur with 4 erect dorsal bristles at base. Fore tibia with 1 ad at middle, apically with 1 av and 1 pv. Mid tibia with 1 ad at middle and one row of short spine-like dark brown ventral setae, apically with 4–5 bristles. Hind tibia with 2 ad at middle, apically with 1 short dark brown av; apical inner projection weak and obtuse with dense dark brown pubescence. Hind tarsomere 1 with 5–6 short irregular av. Wing nearly hyaline, veins brown, crossvein m-cu nearly vertical. Calypter dark brown with dark brown setulae. Halter brown.

Abdomen apically strongly curved downward, yellow with thin pale gray pollinosity except tergites 4–5 grayish brown and hypopygium brownish yellow. Tergite 4 widest; tergite 5 somewhat narrow with weak anterior transverse band densely brown micropubescent, which is dark yellow with dark brown posterior margin. Setulae and setae on abdomen brown to dark brown, tergites 4–5 without short spine-like lateral bristles.

Male genitalia. Left surstylus rather large with a short finger-like outer process at middle, apically long finger-like. Right epandrial lamella very large; right surstylus short narrow, apically distinctly inward. Left cercus very long, thin finger-like; right cercus very short, thin finger-like.

Female. Unknown.

Holotype. ♂, **China**, Fujian, Wuyishan, Liaowangtai, 1160 m, 19-IV–27-VII-2021, Malaise trap (CAU).

Etymology. The specific epithet is from the Latin *brevis* (“short”) and *digitatus* (“finger-like”), referring to the left surstylus having a short finger-like outer process at middle.

Diagnosis. Mesonotum entirely brownish yellow; scutellum black, postnotum black with two yellow posterior spots. Antenna brownish yellow except first flagellomere dark yellow and arista dark brown. First flagellomere 2.0 times longer than wide. Hind tibia with 2 ad at middle.

Remarks. This species is similar to *E. flaviscutum* Wang, Zhang & Yang from Taiwan, but may be separated from the latter by the postnotum black with two yellow posterior spots. In *E. flaviscutum*, the postnotum is entirely blackish (Wang *et al.* 2012).

2. *Elaphropeza conjunctiva* sp. nov. (Fig. 2)

Male. Body length 3.2 mm, wing length 3.0 mm.

Head black with pale gray pollinosity. Setulae and setae on head brownish. Eyes very narrowly separated on face, face linear. Ocellar tubercle with 2 very long oc (slightly shorter than inner vt) and 2 short posterior setulae; 2 vt curved inward, inner vt very long, distinctly longer than outer vt. Antenna dark yellow except first flagellomere brown and arista dark brown; scape bare, shorter than pedicel; pedicel with circlet of blackish apical setulae; first flagellomere short conical, 2.0 times longer than wide, very short blackish pubescent; arista very long (4.5 times longer than 1st flagellomere), dark brown, very short blackish pubescent. Proboscis brownish yellow with brown setulae; palpus somewhat oval, dark yellow with brown setulae and 1 brown apical seta.

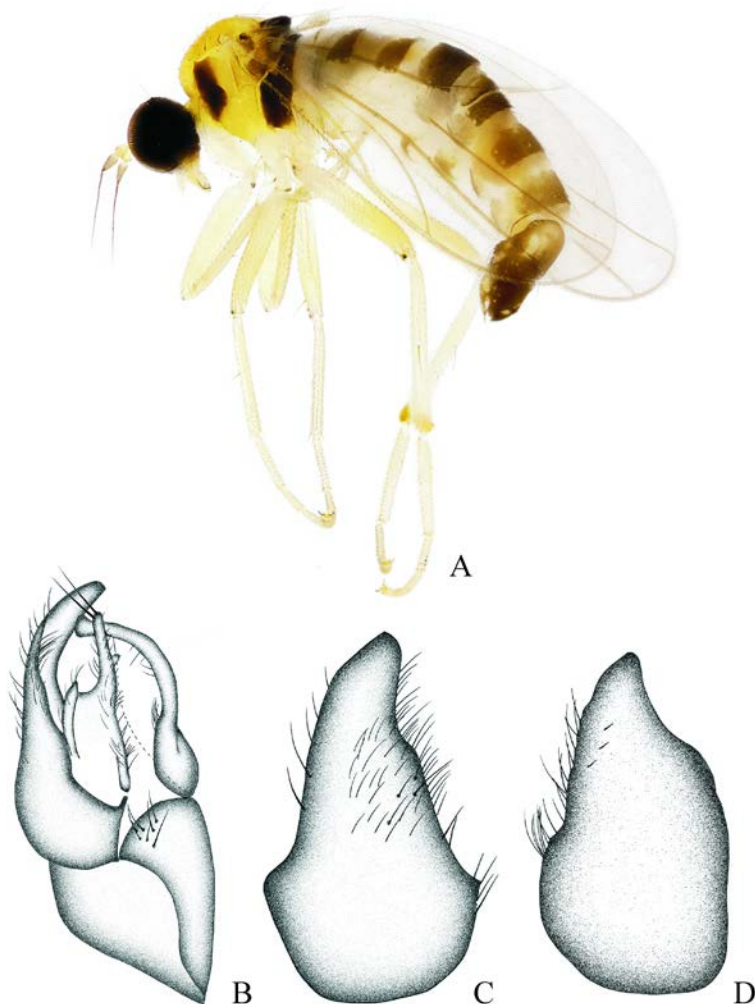


Figure 2. *Elaphropeza conjunctiva* sp. nov. A. Male habitus, lateral view; B. Male genitalia, dorsal view; C. Right epandrial lamella; D. Left surstylus.

Thorax brownish yellow with thin pale gray pollinosity, but mesonotum entirely brownish yellow; scutellum, postnotum and laterotergite black; mesopleuron and sternopleuron with one fused black spot, hypopleuron black except postero-ventral corner, metapleuron black. Setulae and setae on thorax brown to dark brown, setulae on mesoscutum somewhat sparse, biseriate acr separated from dc; h absent, 2 very long npl, 1 very long sa, 1 short psa, 1 very long prsc; scutellum with two pairs of sc (basal pair short, about 1/5 as long as apical pair). Propleuron without bristle upturned just above fore coxa. Legs yellow except hind femur brownish at apical 1/2, fore tibia brownish and all tarsomere 5 brownish. Setulae and setae on legs brownish to brown; fore coxa with anterior setae; mid coxa apically with 2 long anterior setae; hind coxa with 1 outer setae. Fore femur 1.1 times as thick as mid femur, mid and hind femora subequal in thickness. Fore and mid femora each with 1 long thin pv at extreme base; mid femur with 1 preapical anterior seta; hind femur with 4 erect dorsal bristles at base. Fore tibia with 1 ad at middle, apically with 1 av and 1 pv. Mid tibia with 1 ad at middle and one row of short spine-like dark brown ventral setae, apically with 4–5 bristles. Hind tibia with 1 long ad at middle, apically with 1 short dark brown av; apical inner projection weak and obtuse with dense dark brown pubescence. Hind tarsomere 1 with 5–6 short irregular av. Wing nearly hyaline, veins mostly dark brown, crossvein m-cu nearly vertical. Calypter dark brown with dark brown setulae. Halter brownish.

Abdomen strongly curved downward, grayish brown with thin pale gray pollinosity. Tergite 1 membranous, pale yellow with very narrow sclerite interrupted at middle; tergites 2–3 with trapezoid mid-anterior incision pale yellow, tergite 2 interrupted at middle; tergite 4 widest; tergite 5 rather narrow with grayish brown anterior transverse band. Setulae and setae on abdomen dark brown, tergites 4–5 with short thick lateral bristles.

Female. Body length 1.9–3.2 mm, wing length 2.5–2.8 mm. External characteristics similar to male.

Male genitalia. Left surstylus rather large, apically distinctly narrowed. Right epandrial lamella very large; right surstylus somewhat trapezoid. Left cercus very long, slightly bent at middle, with a short finger-like lateral process subapically and long finger-like apex bearing 2 thick terminal bristles; right cercus rather short, nearly finger-like.

Holotype. ♂, **China**, Fujian, Wuyishan, Liaowangtai, 1160 m, 19-IV–27-VII-2021, Malaise trap (CAU). **Paratypes.** 1♀, **China**, Fujian, Wuyishan, Yangludaoban, 890 m, 26-IV–03-V-2021, Malaise trap (CAU); 1♀, **China**, Fujian, Wuyishan, Liaowangtai, 1160 m, 26-IV–03-V-2021, Malaise trap (CAU).

Etymology. The specific epithet is from the Latin *conjunctus* (“connected”), referring to the mesopleuron and sternopleuron having one fused black spot.

Diagnosis. Mesonotum entirely yellow. Mesopleuron and sternopleuron with one fused black spot. Antenna with first flagellomere brown and arista dark brown. Hind femur brownish at apical 1/2. Fore tibia brownish. Hind tibia with 1 long ad.

Remarks. This species is somewhat similar to *E. ruliensis* Yang & Yang from Yunnan, but may be separated from the latter by the scutellum entirely black and left cercus very long with a short finger-like lateral process subapically. In *E. ruliensis*, the scutellum is yellow with the brownish basal margin, and the left cercus is relatively short and thick (Yang & Yang 1990).

3. *Elaphropeza guiensis* (Yang & Yang, 1989)

Drapetis (*Elaphropeza*) *guiensis* Yang & Yang, 1989: 36. Type locality: China: Guizhou.

Specimens examined. 2♂2♀, **China**, Fujian, Wuyishan, Jiuquxi, 204 m, 15-IV-2021, Fangzhou MA (CAU).

Distribution. Fujian (Wuyishan), Guizhou, Guangdong.

Remarks. This species is newly reported from Fujian.

4. *Elaphropeza jiuquxiana* sp. nov. (Fig. 3)

Male. Body length 1.8 mm, wing length 2.0 mm.

Head blackish with pale gray pollinosity. Setulae and setae on head dark brown. Eyes very narrowly separated on face, face linear. Ocellar tubercle with 2 rather long oc (slightly shorter than inner vt) and 2 short posterior setulae; 2 vt curved inward, inner vt distinctly longer than outer one. Antenna brown, first flagellomere and arista dark brown; scape bare, shorter than pedicel; pedicel with circlet of blackish apical setulae; first flagellomere short conical, 2.0 times longer than wide, very short blackish pubescent; arista very long (about 3.7 times longer than 1st flagellomere), dark brown, very short blackish pubescent. Proboscis brownish yellow with blackish setulae; palpus somewhat oval, brownish yellow with blackish setulae and 1 blackish apical seta.

Thorax blackish with thin pale gray pollinosity. Setulae on thorax brown, setae dark brown; setulae on mesoscutum uniformly very short and dense, acr not separated from dc; h absent, 2 long npl, sa absent, 1 long psa, 1 very long prsc; scutellum with two pairs of sc (basal pair very short and weak, about 1/4 as long as apical pair). Propleuron without bristle upturned just above fore coxa. Legs yellow, but only tarsomere 5 brownish. Hind tibia with 2 ad on apical half. Setulae and setae on legs brown to dark brown; fore coxa with anterior setae; mid coxa apically with 2 long anterior setae; hind coxa with 1 outer setae. Fore and mid femora 1.1 times as thick as mid femur. Fore and mid femora each with 1 long thin pv at extreme base; mid femur with 1 preapical anterior seta; hind femur with 4 erect dorsal bristles at base. Fore tibia apically with 1 av and 1 pv. Mid tibia with row of short spine-like blackish ventral setae, apically with 1 av and 1 pv. Hind tibia with 2 thick ad on apical half; apical inner projection very short and obtuse with dense dark brown pubescence. Hind tarsomere 1 with 5–6 short irregular av. Wing nearly hyaline veins brownish to brown, crossvein m-cu slightly oblique. Calypter brown with brown setulae. Halter dark brown.

Abdomen apically weakly curved downward, dark brown with thin pale gray pollinosity. Tergite 1 membranous, dark yellow with strip-like sclerite interrupted at middle. Setulae and setae on abdomen dark brown except tergites 3–5 with group of short black spines laterally; tergite 5 with brownish anterior transverse band of densely brown pubescence.

Male genitalia: Left surstylus rather large, distinctly bent, with obtuse tip. Right epandrial lamella very large; right surstylus somewhat quadrate with short acute extreme tip. Left cercus long thick, slightly bent, with a short acute lateral process subapically; right cercus short finger-like.

Female. Unknown.

Holotype. ♂, **China**, Fujian, Wuyishan, Jiuquxi, 204 m, 15-IV-2021, Fangzhou Ma (CAU).

Etymology. The specific epithet refers to the type locality Jiuquxi.

Diagnosis. 2 vt. Antenna brown except first flagellomere and arista dark brown. Thorax blackish. Hairs on mesonotum short and dense. Legs yellow, but only tarsomere 5 brownish. Hind tibia with 2 thick ad on apical half.

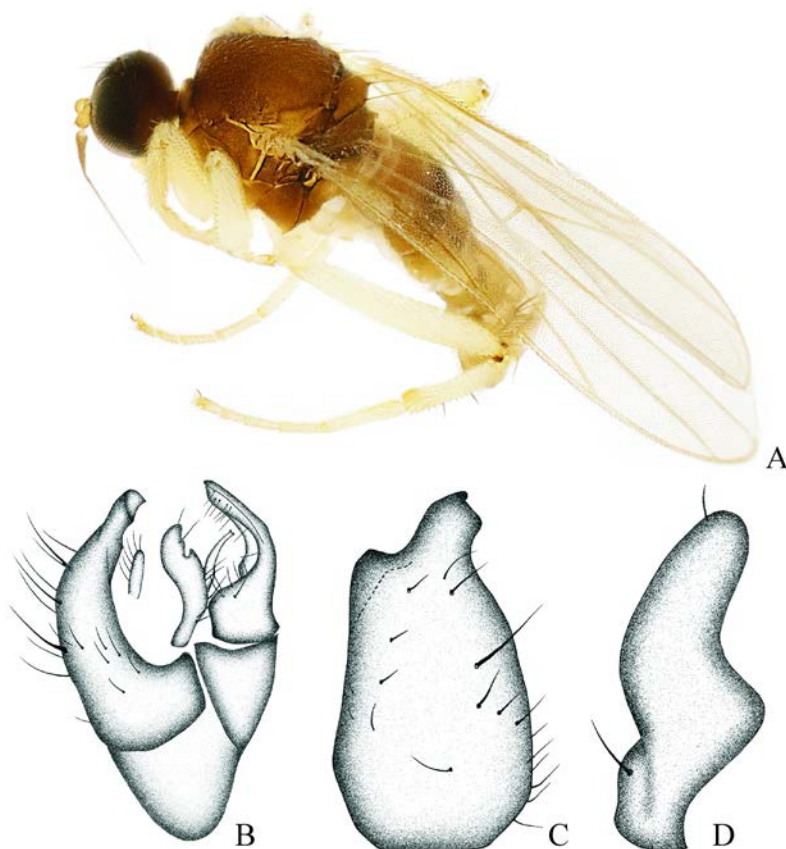


Figure 3. *Elaphropeza jiuquxiana* sp. nov. A. Male habitus, lateral view; B. Male genitalia, dorsal view; C. Right epandrial lamella; D. Left surstylus.

Remarks. This species is similar to *E. henanensis* Saigusa & Yang from Henan, but may be separated from the latter by the hind femur entirely yellow. In *E. henanensis*, the apical half of the hind femur is blackish (Yang *et al.* 2010).

5. *Elaphropeza plumata* Yang, Merz & Grootaert, 2006

Elaphropeza plumata Yang, Merz & Grootaert, 2006: 575. Type locality: China: Guangdong, Zijing.

Specimen examined. 1♂, China, Fujian, Wuyishan, Jiuquxi, 204 m, 15-IV-2021, Fangzhou MA (CAU).

Distribution. China (Fujian: Wuyishan; Taiwan; Guangdong).

Remarks. This species is newly reported from Fujian.

6. *Elaphropeza quadrata* sp. nov. (Fig. 4)

Male. Body length 2.7–2.8 mm, wing length 2.5–2.8 mm.

Head black with pale gray pollinosity. Setulae and setae on head brownish. Eyes very narrowly separated on face, face linear. Ocellar tubercle with 2 very long oc (slightly shorter than inner vt) and 2 short posterior setulae; 2 very long vt curved inward, outer vt shorter than inner vt. Antenna dark yellow except arista dark brown; scape bare, shorter than pedicel;

pedicel with cirlet of blackish apical setulae; first flagellomere short conical, 1.6 times longer than wide, very short blackish pubescent; arista very long (5.0 times longer than 1st flagellomere), dark brown, very short blackish pubescent. Proboscis dark yellow with brown setulae; palpus somewhat oval, dark yellow with brown setulae and 1 brown apical seta.

Thorax brownish yellow with thin pale gray pollinosity, but mesonotum entirely brownish yellow; scutellum black, postnotum black with yellow narrow lateral portion and two yellow posterior spots. Hypopleuron black with ventral 2/5 yellow. Setulae and setae on thorax brown to dark brown, setulae on mesoscutum somewhat sparse, biseriate acr separated from dc; h absent, 2 very long npl, 1 very long sa, 1 short psa, 1 very long prsc; scutellum with two pairs of sc (basal pair short, about 1/5 as long as apical pair). Propleuron without bristle upturned just above fore coxa. Legs yellow to dark yellow except tarsomere 5 brownish yellow. Setulae and setae on legs brownish to brown; fore coxa with anterior setae; mid coxa apically with 2 long anterior setae; hind coxa with 1 outer setae. Fore femur 1.1 times as thick as mid femur, mid and hind femora subequal in thickness. Fore and mid femora each with 1 long thin pv at extreme base; mid femur with 1 preapical anterior seta; hind femur with 4 erect dorsal bristles at base. Fore tibia with 1 ad at middle, apically with 1 av and 1 pv. Mid tibia with 1 ad at middle and one row of short spine-like dark brown ventral setae, apically with 4–5 bristles. Hind tibia with 2 ad at middle, apically with 1 short dark brown av; apical inner projection weak and obtuse with dense dark brown pubescence. Hind tarsomere 1 with 5–6 short irregular av. Wing nearly hyaline, veins brown, crossvein m-cu nearly vertical. Calypter dark brown with dark brown setulae. Halter brown.

Abdomen straight, apically weakly curved downward, dark yellow to brownish yellow with thin pale gray pollinosity except tergite 4 grayish brown and tergite 5 brown. Tergite 1 wholly membranous, pale yellow; tergites 2–3 membranous, pale yellow with subtriangular lateral sclerites interrupted at middle; tergite 4 widest; tergite 5 rather narrow with grayish brown anterior transverse band. Setulae and setae on abdomen dark brown, tergite 4 with short spine-like black lateral bristles.

Male genitalia. Left surstylus short, nearly quadrate. Right epandrial lamella rather large; right surstylus short, subtriangular. Left cercus very long, slightly bent, basally slightly thickened, apically finger-like; right cercus long finger-like, apically slightly curved.

Female. Body length 2.2–2.4 mm, wing length 2.4–2.6 mm. External characteristics similar to male.

Holotype. ♂, **China**, Fujian, Wuyishan, Yiliping, 700 m, 25-V-01-VI-201, Malaise trap (CAU). **Paratypes.** 1♂, China, Fujian, Wuyishan, Fangbanchang, 954 m, 25-V-01-VI-201, Malaise trap (CAU); 1♀, China, Fujian, Wuyishan, Xiaonandingkeng, 1000 m, 17-V-25-V-2021, Malaise trap (CAU); 1♀, China, Fujian, Wuyishan, Wulichang, 825 m, 08-VI-15-VI-2021, Malaise trap (CAU). 2♂4♀, China, Fujian, Wuyishan, Liaowangtai, 1160 m, 26-IV-03-V-2021, Malaise trap (CAU).

Etymology. The specific epithet is from the Latin *quadratus* (“squared”), referring to the quadrate left surstylus.

Diagnosis. Antenna dark yellow except arista dark brown. First flagellomere 1.6 times longer than wide. Postnotum black with yellow narrow lateral portion and two yellow posterior spots. Hypopleuron black with ventral 2/5 yellow. Abdominal tergite 4 with short spine-like lateral bristles. Hind tibia with 2 ad.

Remarks. This species is similar to *E. flaviscutum* Wang, Zhang & Yang from Taiwan, but may be separated from the latter by the postnotum black with yellow narrow lateral portion and two yellow posterior spots. In *E. flaviscutum*, the postnotum is entirely blackish (Wang *et al.* 2012).

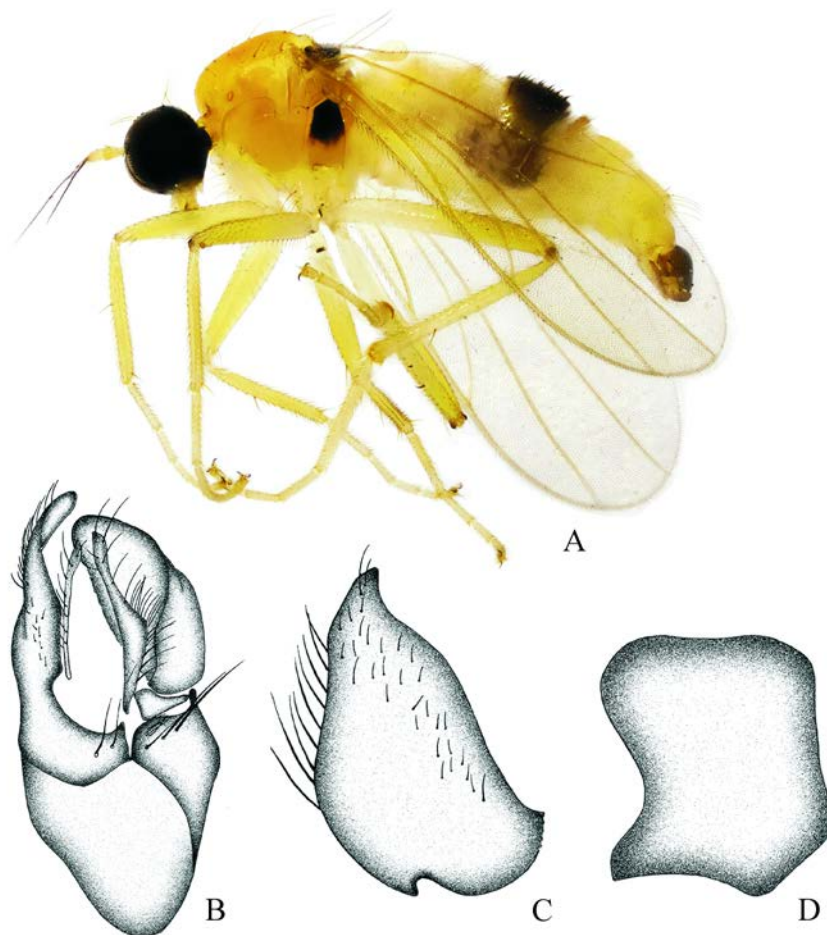


Figure 4. *Elaphropeza quadrata* sp. nov. A. Male habitus, lateral view; B. Male genitalia, dorsal view; C. Right epandrial lamella; D. Left surstylus.

7. *Elaphropeza wuyishana* sp. nov. (Fig. 5)

Male. Body length 2.1–2.2 mm, wing length 2.65–2.7 mm.

Head black with pale gray pollinosity. Setulae on head brownish, setae brown. Eyes very narrowly separated on face, face linear. Ocellar tubercle with 2 very long oc and 2 short posterior setulae; 2 vt curved inward, outer vt slightly shorter than inner vt. Antenna brownish yellow; scape bare, shorter than pedicel; pedicel with circlet of blackish apical setulae; first flagellomere short conical, 2.0 times longer than wide, very short blackish pubescent; arista very long (3.8 times longer than 1st flagellomere), dark brown, very short blackish pubescent. Proboscis brownish yellow with brown setulae; palpus oval, dark yellow with brown setulae and 1 brown apical seta.

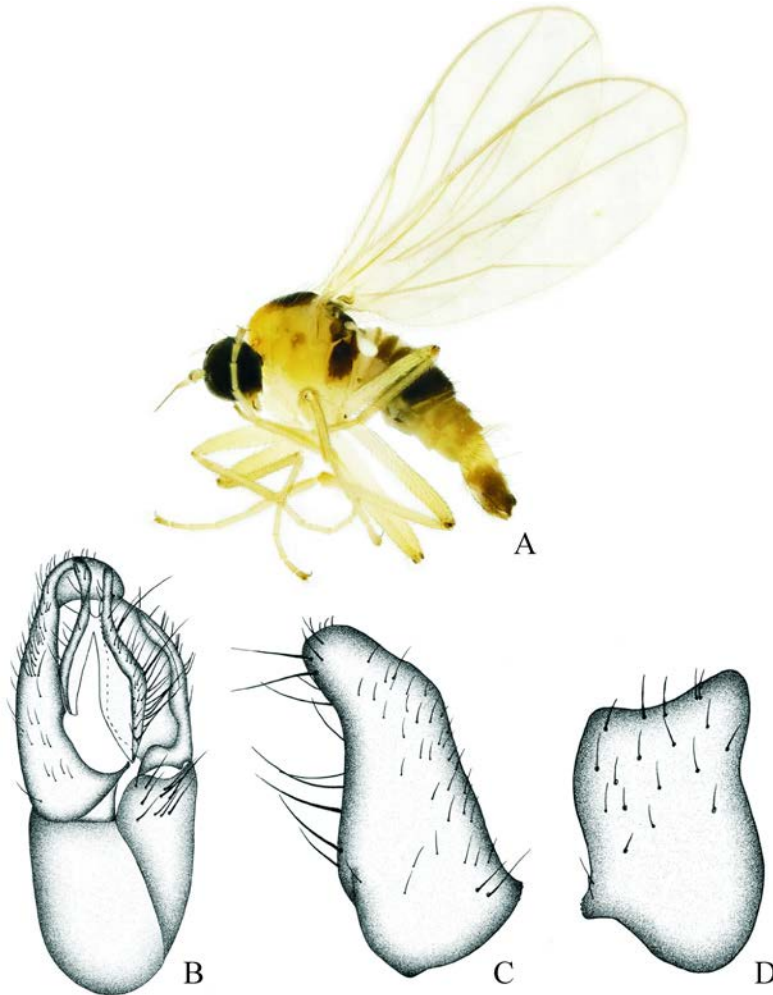


Figure 5. *Elaphropeza wuyishana* **sp. nov.** A. Male habitus, lateral view; B. Male genitalia, dorsal view; C. Right epandrial lamella; D. Left surstylus.

Thorax brownish yellow with thin pale gray pollinosity, but posterior 2/3 of mesonotum black, scutellum and postnotum black; laterotergite brown, hypopleuron black except ventral margin, and metapleuron dark brown or blackish. Setulae and setae on thorax brown, setulae on mesoscutum somewhat sparse, biseriate acr separated from dc; h absent, 2 npl, 1 sa, 1 psa, 1 long prsc; scutellum with two pairs of sc (basal pair short, about 1/4 as long as apical pair). Propleuron without long bristle upturned just above fore coxa. Legs dark yellow except tarsomere 5 dark brown. Setulae and setae on legs brownish to brown; fore coxa with anterior setae; mid coxa apically with 2 long anterior setae; hind coxa with 1 outer setae. Fore femur 1.1 times as thick as mid femur, mid and hind femora subequal in thickness. Fore and mid femora each with 1 long thin pv at extreme base; mid femur with 1 preapical anterior seta; hind femur with 4 erect dorsal bristles at base. Fore tibia apically with 1 av and 1 pv. Mid tibia with row of short spine-like dark brown ventral setae, apically with 4–5 bristles. Hind tibia with 1 ad at middle, apically with 1 short dark brown av; apical inner projection weak

and obtuse with dense dark brown pubescence. Hind tarsomere 1 with 5 short irregular av. Wing nearly hyaline, veins brown, crossvein m-cu nearly vertical. Calypter brown with dark brown setulae. Halter brown.

Abdomen apically weakly curved downward, dark brownish yellow with pale gray pollinosity except tergites 1–5 grayish brown and hypopygium partly grayish brown. Tergite 1 linear, interrupted at middle; tergites 2–3 with two subtriangular lateral sclerites; tergite 4 very wide, tergite 5 very narrow with grayish brown anterior transverse band. Setulae and setae on abdomen dark brown, tergites 4–5 with short spine-like black lateral bristles; tergites 6–7 with very long bristles at posterior margin.

Male genitalia. Left surstylus nearly trapezoid. Right epandrial lamella large lobate; right surstylus curved, apically obtuse. Left cercus very long, narrow, distinctly bent; right cercus long narrow, slightly bent.

Female. Body length 2.3–2.4 mm, wing length 2.6–3.0 mm. External characteristics similar to male.

Holotype. ♂, **China**, Fujian, Wuyishan, Xiaonandingkeng, 1000 m, 03-V-10-V-2021, Malaise trap (CAU). **Paratypes.** 3♂2♀, same data as holotype (CAU).

Etymology. The specific epithet refers to the type locality Wuyishan.

Diagnosis. Antenna brownish yellow, arista dark brown; first flagellomere 2.0 times longer than wide. Mesonotum black at posterior 3/5. Wing nearly hyaline. Hind tibia with 1 ad at middle.

Remarks. This species is similar to *E. postnigra* Yang & Yang from Yunnan, but may be separated from the latter by the black posterior 3/5 of the mesonotum, black hypopleuron with the yellow lower margin and dark brown arista. In *E. postnigra*, the posterior portion of the mesonotum is brownish, the upper portion of the hypopleuron is brownish, and the arista is brownish yellow (Yang & Yang 1990).

Acknowledgements

We are grateful to Dr. Lingfei PENG (Fuzhou) for his help during the study. This research was supported by the Wuyishan National Park Biological Resources Background Investigation Project and the National Natural Science Foundation of China (31970444).

References

- Chvála M. 1975. The Tachydromiinae (Dipt. Empididae) of Fennoscandia and Denmark. I. *Fauna Entomologica Scandinavica*, 3: 1–336.
- Grootaert P. 2019. Species turnover between the northern and southern part of the South China Sea in the *Elaphropeza* Macquart mangrove fly communities of Hong Kong and Singapore (Insecta: Diptera: Hybotidae). *European Journal of Taxonomy*, 554: 1–27.
- Grootaert P & Shamshev IV. 2012. The fast-running flies (Diptera, Hybotidae, Tachydromiinae) of Singapore and adjacent regions. *European Journal of Taxonomy*, 5: 1–162.
- Grootaert P & Shamshev IV. 2015. New species of fast-running flies (Diptera: Empidoidea, Hybotidae, Tachydromiinae) from mangroves in Singapore. *Raffles Bulletin of Zoology*, 63: 583–609.
- Shamshev IV & Grootaert P. 2007. Revision of the genus *Elaphropeza* Macquart (Diptera: Hybotidae) from

- the Oriental Region, with a special attention to the fauna of Singapore. *Zootaxa*, 1488: 1–164.
- Wang JJ, Zhang LL & Yang D. 2012. Two new species and one newly recorded species of *Elaphropeza* Macquart from Taiwan (Diptera, Empididae, Tachydromiinae). *ZooKeys*, 203: 15–25.
- Yang D & Gaimari SD. 2005. Review of the species of *Elaphropeza* Macquart (Diptera: Empidoidea: Tachydromiinae) from the Chinese mainland. *Proceedings of the Entomological Society of Washington*, 107(1): 49–54.
- Yang D, Merz B & Grootaert P. 2006. Revision of *Elaphropeza* Macquart from Guangdong, China (Diptera, Hybotidae, Tachydromiinae). *Revue Suisse de Zoologie*, 113(3): 569–578.
- Yang D, Wang MQ, Zhu YJ & Zhang LL. 2010. *Diptera: Empidoidea. Insect Fauna of Henan*. Science Press, Beijing, 418 pp.
- Yang D & Yang CK. 1989. Four new species of dance flies from Guizhou Province (Diptera: Empididae). *Guizhou Science*, 7(1): 36–40.
- Yang D & Yang CK. 1990. Eleven new species of the subfamily Tachydromiinae from Yunnan (Diptera: Empididae). *Zoological Research*, 11(1): 63–72.
- Yang D & Yang CK. 1992. Diptera: Empididae. In: Chen S (Ed.), *Insects of the Hengduan Mountains Region*, 2. Science Press, Beijing, pp. 1089–1097.
- Yang D, Zhang KY, Yao G & Zhang JH. 2007. *World Catalog of Empididae (Insecta: Diptera)*. China Agricultural University Press, Beijing, 599 pp.
- Yang D, Zhang LL & Zhang KY. 2018. *Species Catalog of China. Vol. 2. Animals, Insecta (VI), Diptera (2), Orthorrhaphous Brachycera*. Science Press, Beijing, 387 pp.