

Notes on Dolichopodidae (Diptera) from Guangdong, China

by Lili ZHANG, Ding YANG & Patrick GROOTAERT

Abstract

Fifteen species of Dolichopodidae have been identified during a short survey in Guangdong province in early spring 2003. Six species are described as new to science: *Hercostomus (Gymnopternus) guangdongensis* sp. nov., *H. (G.) shimentaiensis* sp. nov., *Chaetogonopteron guangdongense* sp. nov., *C. nanlingense* sp. nov., *Neurigona xui* sp. nov., *Chrysosoma guangdongense* sp. nov.

Key words: Dolichopodidae, new species, Guangdong, China

Introduction

The Guangdong Province is located in South China, and belongs to the Oriental Realm. It has a subtropical and tropical climate. Its fauna is very rich, but the fauna of the family Dolichopodidae from Guangdong is poorly known.

A brief survey of three areas in Guangdong province was made in early spring 2003 (end March): Nanling National Nature Reserve (about 300 km Northwest of Guangzhou), where samples were taken at 500m, 1200 m, 1500m and 2000m; Shimentai National Forest Park (Yingde, about 200 km North of Guangzhou) where samples were taken in a riverbed and in a forest in the mountains and finally we collected in Liuxihe National Forest Park (West of Guangzhou – alt. 300 m).

Apart from the genera *Medetera*, *Thinophilus*, *Diaphorus*, *Teuchophorus* and *Chrysotus* another 8 genera and 15 species are reported from this region. Among them 6 species are described as new to science. The types of new species are deposited in the Insect Collection of China Agricultural University, Beijing (CAU), in addition a number of voucher specimens are conserved in the collections of the Royal Belgian Institute of Natural Sciences in Brussels (RBIN).

Taxonomical report

1. *Dolichopus meridionalis* YANG

Dolichopus meridionalis YANG, 1996. Bull. Inst. R. Sci. Nat. Belg. Ent. 66: 81. Type locality: Yunnan.

Specimens examined. 1 male, 3 females, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 27, Ding. YANG by light trap.

Distribution. China (Henan, Guizhou, Yunnan, Guangdong, Guangxi).

2. *Polymedon inopinatus* PARENT

Polymedon inopinatus PARENT, 1934. Mém. Soc. Natn. Sci. Math. Cherbourg 41: 302. Type locality: Punjab, India.

Specimens examined. 1 male, 3 females, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 27, Ding. YANG; 1 male, 3 females, Shimentai National Forest Park, 2003. III. 29, Ding YANG; 3 males, Shimentai National Forest Park, 2003.III.27, on rocks in riverbed near Station (sample 23013, P. GROOTAERT; RBINS).

Distribution. China (Sichuan, Yunnan, Guangdong); India.

3. *Hercostomus (Gymnopternus) congruens* (BECKER)

Hercostomus congruens (BECKER), 1922. Capita Zool. 1 (4): 29. Type locality: Taiwan.

Specimens examined. 7 males, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 29, Ding YANG; 3 males, Shimentai National Forest Park, 2003.III.27 (sample 23013; P. GROOTAERT, RBINS); 46 males, Shimentai National Forest Park, 2003.III.27, along road in forest (sample 23016; P. GROOTAERT, RBINS); 11 males, Shimentai National Forest Park, 2003.III.29, along road in forest, 2003. III. 25, (sample 23019, P. GROOTAERT, RBINS)

Distribution. China (Shanxi, Henan, Yunnan, Sichuan, Guizhou, Zhejiang, Guangdong, Fujian, Taiwan).

4. *Hercostomus (Gymnopternus) grandis* YANG et YANG

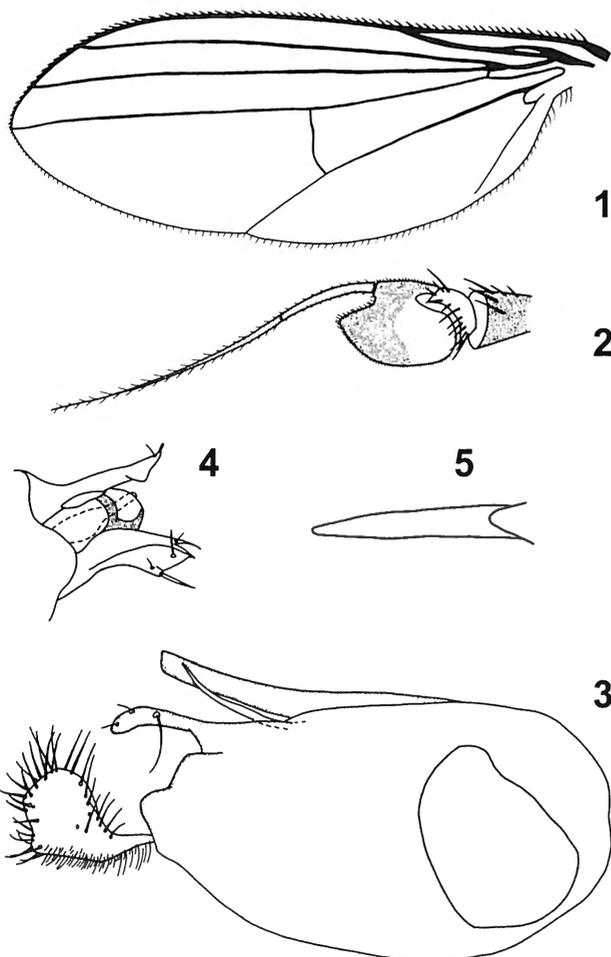
Hercostomus grandis YANG et YANG, 1995. In: Insects of Baishanzu Mountain, Eastern China: 513. Type locality: Zhejiang.

Specimen examined. 1 male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 29, Ding YANG.

Distribution. China (Yunnan, Guizhou, Zhejiang, Guangdong).

5. *Hercostomus (Gymnopternus) guangdongensis* sp. nov.
(Figs. 1-5)

Diagnosis. Belonging to *grandis*-group. Antenna brown with pedicel and base of first flagellomere brownish yellow; arista with basal segment 0.4 times as long as apical segment. Fore and mid coxae brown, hind coxa pale brownish yellow. Hind tarsomere 1 shorter than tarsomere 2. Cercus yellow.



Figs. 1-5 — *Hercostomus (Gymnopternus) guangdongensis* sp. nov. 1. wing; 2. antenna; 3. male genitalia, lateral view; 4. apical genital processes; 5. hypandrium, ventral view.

Male. Body length 3.8-4.3 mm, wing length 4.2-4.4 mm.

Head metallic green with pale grey pollen. Face narrower than first flagellomere. Hairs and bristles on head black; postocular bristles wholly black, postero-ventral hairs yellow. Antenna brown with pedicel and base of first flagellomere brownish yellow; first flagellomere 1.3 times longer than wide, angular apically; arista dark brown, distinctly pubescent, with basal segment 0.4 times as long as apical segment. Proboscis dark brown with black hairs; palpus yellow with black hairs.

Thorax metallic green with pale grey pollen. Hairs and bristles on thorax black; 5 strong dc (1st somewhat short); 9-10 irregular paired acr, backward not reaching to 5th dc; scutellum with short marginal hairs. Propleuron with 1 long bristle on lower portion. Legs yellow; fore and mid coxae brown (fore coxa somewhat pale), hind coxa pale brownish yellow; tarsi somewhat darker. Hairs and bristles on legs black. Fore coxa with 2 apical bristles, mid and hind coxa each with 1 outer bristle. Mid and hind femora each with 1 preapical bristle. Fore tibia with 2 pd, apically with 2 short bristles; mid tibia with 2-3 ad, 2 pd and 1 av, apically with 4 bristles; hind tibia with 4 ad, 3 pd and 2 av, apically with 2 bristles. Relative lengths of tibia and 5 tarsomeres LI 1.5 : 0.7 : 0.3 : 0.25 : 0.2 : 0.15; LII 1.8 : 1.05 : 0.55 : 0.5 : 0.3 : 0.2; LIII 2.15 : 0.55 : 0.7 : 0.5 : 0.3 : 0.2. Wing tinged with greyish; veins brown. R_{4+5} and M parallel apically; CuAx ratio 0.7. Squama pale yellow with black hairs. Halter pale yellow.

Abdomen metallic green with pale grey pollen; hairs and bristles black. Male genitalia (Figs. 3-5): Epandrium with curved lateral lobe (its tip somewhat flattened) bearing 2 short apical hairs and 1 longer bristle near middle; cercus yellow, nearly quadrate with obliquely rounded ventral apex, its outer margin with lower portion weakly concave; hypandrium nearly straight.

Female. Unknown.

Holotype male, paratype 1 male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 27, Ding YANG.

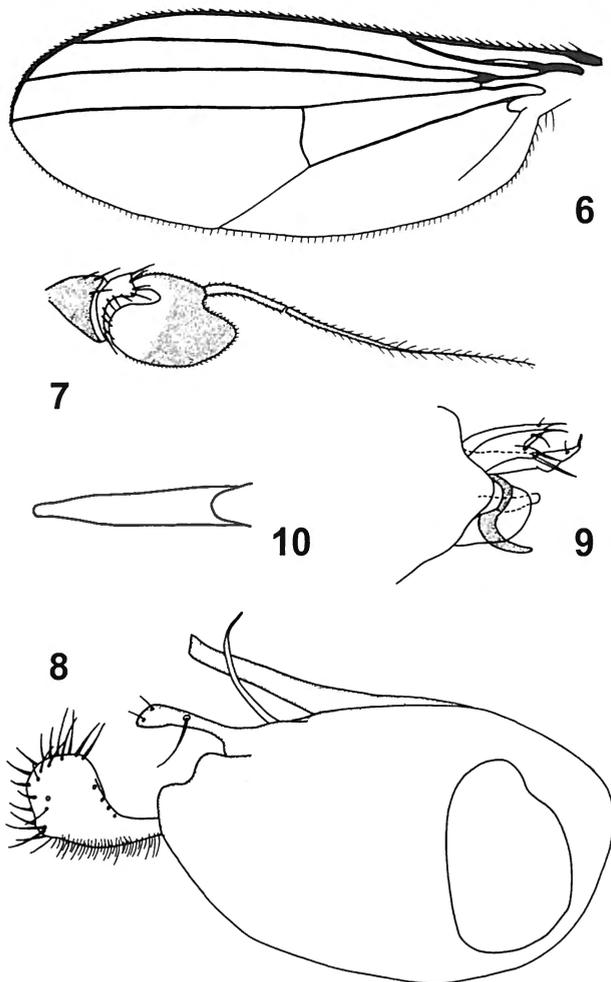
Distribution. China (Guangdong).

Etymology. The specific name refers to the type locality Guangdong.

Remarks. This new species is very similar to *H. (G.) shimentaiensis* sp. nov., but may be separated from the latter by the yellow cercus. The apical genital processes are also different.

6. *Hercostomus (Gymnopternus) shimentaiensis* sp. nov.
(Figs. 6-10)

Diagnosis. Belonging to *grandis*-group. Antenna brown with pedicel and base of first flagellomere brownish yellow; arista with basal segment 0.3 times as long as



Figs. 6-10 — *Hercostomus (Gymnopterus) shimentaiensis* sp. nov. 6. wing; 7. antenna; 8. male genitalia, lateral view; 9. apical genital processes; 10. hypandrium, ventral view.

apical segment. Fore and mid coxae dark brown, hind coxa pale brownish yellow. Hind tarsomere 1 shorter than tarsomere 2. Cercus brown.

Male. Body length 3.8 mm, wing length 3.9 mm.

Head metallic green with pale grey pollen. Face narrower than first flagellomere. Hairs and bristles on head black; postocular bristles wholly black, ventral hairs yellow. Antenna brown with pedicel and base of first flagellomere brownish yellow; first flagellomere 1.4 times longer than wide, angular apically; arista dark brown, distinctly pubescent, with basal segment 0.3 times as long as apical segment. Proboscis dark brown with black hairs; palpus dark brown with black hairs and 1 black apical bristle.

Thorax metallic green with pale grey pollen. Hairs and bristles on thorax black; 5 strong dc (1st somewhat short); 9 paired acr, backward not reaching to 5th dc; scutellum

with short marginal hairs. Propleuron with 1 long bristle on lower portion. Legs yellow; fore and mid coxae dark brown, hind coxa pale brownish yellow; tarsi somewhat darker. Hairs and bristles on legs black. Fore coxa with 2 apical bristles, mid and hind coxa each with 1 outer bristle. Mid and hind femora each with 1 preapical bristle. Fore tibia with 2 pd, apically with 2 short bristles; mid tibia with 3 ad, 2 pd and 1 av, apically with 4 bristles; hind tibia with 4 ad, 3 pd and 2 av, apically with 2 bristles. Relative lengths of tibia and 5 tarsomeres LI 1.25 : 0.6 : 0.25 : 0.25 : 0.18 : 0.18; LII 2.0 : 0.85 : 0.5 : 0.4 : 0.3 : 0.2; LIII 1.8 : 0.55 : 0.75 : 0.5 : 0.35 : 0.2. Wing tinged with greyish; veins brown. R_{4+5} and M parallel apically; CuAx ratio 0.7. Squama pale yellow with black hairs. Halter pale yellow.

Abdomen metallic green with pale grey pollen; hairs and bristles black. Male genitalia (Figs. 8-10): Epandrium with curved lateral lobe (its tip somewhat flattened) bearing 2 short apical hairs and 1 longer bristle near middle; cercus brown, nearly quadrate with widely rounded ventral apex, its outer margin with lower portion weakly concave; hypandrium nearly straight.

Female. Unknown.

Holotype male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 27, Ding YANG (CAU). 1 male, Yingde, Shimentai National Forest Park, 2003. III. 27 (sample 23013; P. GROOTAERT). 8 males, Yingde, Shimentai National Forest Park, 2003. III. 28 (sample 23016, P. GROOTAERT, RBINS). 1 male, Guangdong, Nanling National Nature Reserve, along stream near entrance NP, 2003.III. 26 (sample 2308, P. GROOTAERT, RBINS). **Distribution.** China (Guangdong).

Etymology. The specific name refers to the type locality Shimentai.

Remarks. This new species is very similar to *H. (G.) guangdongensis* sp. nov, but may be separated from the latter by the brown cercus. The apical genital processes are also different.

7. *Hercostomus (Gymnopterus) zonalis* YANG, YANG et LI

Hercostomus zonalis YANG, YANG et LI, 1998. In: Insects of Funiu Mountains region (1): 82. Type locality: Henan (Luangchuang).

Specimen examined. 1 male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 29, Ding YANG. 1 male, Guangdong, Nanling National Nature Reserve, along stream near entrance NP, 2003.III. 26 (sample 23008, P. GROOTAERT, RBINS).

Distribution. China (Shaanxi, Henan, Sichuan, Guangdong).

8. *Campsicnemus yunnanensis* YANG et SAIGUSA

Campsicnemus yunnanensis YANG et SAIGUSA, 2001, Bull. Inst. R. Sci. Nat. Belg. Ent. 71: 175. Type locality: Yunnan.

Specimens examined. 1 male, 1 female, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 28, Ding YANG, 1 male, 1 female (sample 23015, P. GROOTAERT, RBINS); 4 males, 2 females, Guangdong: Ruyuan, Nanling National Nature Reserve, 2003. III. 24, Ding YANG by light trap, idem, 1 male (P. GROOTAERT, RBINS); 2 males, Guangdong: Ruyuan, Nanling National Nature Reserve, 2003. III. 25, Ding YANG. 1 male, 1 female, Nanling National Nature Reserve, 2003. III. 26, along road near powerplant (sample 23011, P. GROOTAERT, RBINS);

Distribution. China (Yunnan, Guangdong).

9. *Diaphorus mandarinus* WIEDEMANN

Diaphorus mandarinus WIEDEMANN, 1830. Aussereurop. zweif. Insekt., 2: 212. Type locality: China.

Specimen examined. 1 male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 29, Ding YANG.

Distribution. China (Yunnan, Zhejiang, Guangdong, Hainan, Fujian); Oriental region.

10. *Chaetogonopteron concavum* YANG et GROOTAERT

Chaetogonopteron concavum YANG et GROOTAERT, 1999. Bull. Inst. R. Sci. Nat. Belg. Ent. 69: 271. Type locality: Yunnan.

Specimen examined. 1 male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 29, Ding YANG.

Distribution. China (Yunnan, Guangdong).

11. *Chaetogonopteron luteicinctum* (PARENT)

Sympycnus luteicinctus PARENT, 1926. Encycl. Ent. (B?) Dipt., 3: 134. Type locality: Zi-Ka-Wei [= nr Shanghai] (China).

Specimen examined. 11 males, 23 females, Guangdong: Ruyuan, Nanling National Nature Reserve, 2003. III. 24, Ding YANG; 1 male, 4 females, Nanling National Nature Reserve, 2003. III. 26 (sample 2309, P. GROOTAERT, RBINS); 10 males, 8 females, Nanling National Nature Reserve, alt. 1000m, 2003. III. 24 (sample 23002; P. GROOTAERT, RBINS); 2 males, 4 females, Nanling National Nature Reserve, alt. 1500m, 2003. III. 25 (sample 23005; P. GROOTAERT, RBINS); 44 males, 21 females,

Guangdong, Shimentai National Forest Park, 2003. III. 28 (sample 23016, P. GROOTAERT, RBINS); 19 males, 4 females, Shimentai National Forest Park, along road in forest (sample 23019, P. GROOTAERT, RBINS).

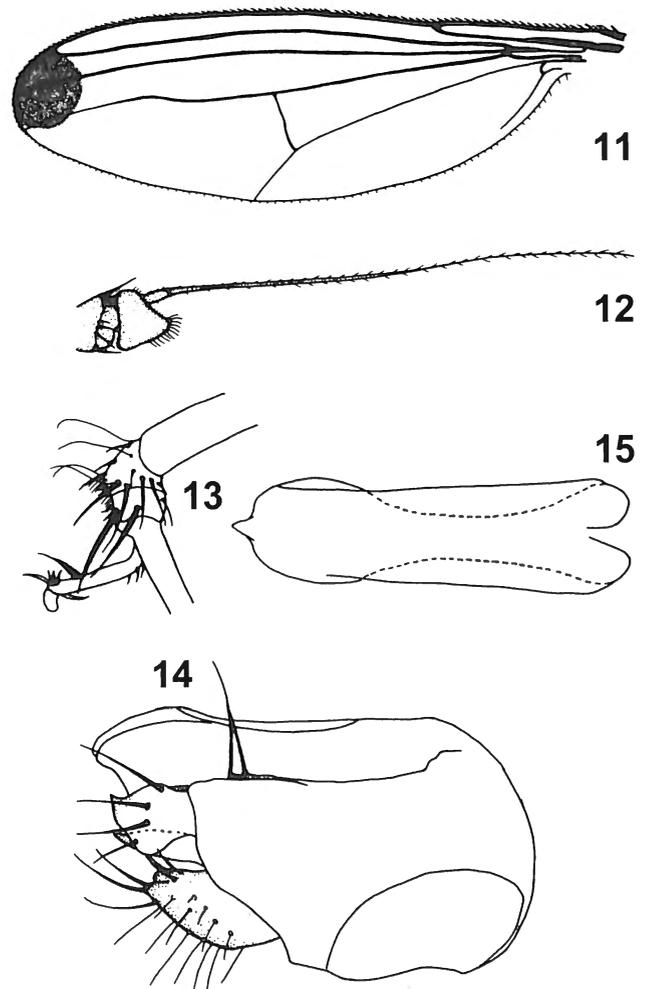
Distribution. China (Henan, Zhejiang, Shanghai, Guangdong, Fujian).

12. *Chaetogonopteron guangdongense* sp. nov. (Figs. 11-15)

Diagnosis. Wing with a small black apical spot. CuAx ratio 1.0.

Male. Body length 4.4 mm, wing length 5.2 mm.

Head metallic green with grey pollen. Eyes contiguous on face. Ocellar tubercle distinct, with 2 strong oc and 4 posterior hairs. Hairs and bristles on head black; middle



Figs. 11-15 — *Chaetogonopteron guangdongense* sp. nov. 11. wing; 12. antenna; 13. hind tarsomeres 1-2; 14. male genitalia, lateral view; 15. hypandrium, ventral view.

and lower postocular bristles (including postero-ventral hairs) pale. Antenna yellow; first flagellomere brown, as long as wide; arista nearly dorsal with very short basal segment. Proboscis pale yellow with black hairs; palpus pale yellow with black hairs.

Thorax yellow with grey pollen; mesonotum metallic green except anterior and lateral portions, scutellum metallic green except posterior margin, postnotum metallic green except lateral margin. Pteropleuron with black antero-upper corner; laterotergite with blackish postero-upper corner. Hairs and bristles on thorax black; 5 dc, acr absent; scutellum with 1 pair of strong bristles. Propleuron with 1 black bristle on upper portion and 1 long pale hair on lower portion. Legs yellow; all coxae yellow; mid coxa with a black dot on postero-upper corner; all tarsi with tarsomere 5 dark brown. Hind tarsomeres 1-2 shortened. Hairs and bristles on legs black; fore coxa with 5 apical bristles, mid and hind coxae with 1 outer bristle. Fore tibia apically with 1 long curved av and 1 pv; mid tibia apically with 3 bristles; hind tibia with one row of v and one row of 15-16 av (which are long sparse near base of tibia and short dense near apex of tibia). Hind tarsomere 1 with 5 bristles and 4 long thin ventral hairs. Relative lengths of tibia and 5 tarsomeres LI 1.8 : 1.6 : 0.8 : 0.5 : 0.2 : 0.15; LII 3.6 : 1.8 : 0.7 : 0.6 : 0.3 : 0.1; LIII 3.9 : 0.05 : 0.15 : 1.3 : 0.8 : 0.1. Wing hyaline with a black apical spot; veins brown, M_{1+2} bent and apically parallel with R_{4+5} . CuAx ratio 1.0. Squama dark brown, with black hairs. Halter yellow.

Abdomen pale metallic green with grey pollen; tergites 1-3 with brownish yellow lateral portion; venter yellow. Hairs and bristles on abdomen black. Male genitalia (Figs. 14-15): Epandrium longer than wide, with 2 weak lateral process each bearing 1 long bristle; surstylus with narrow dorsal lobe weakly curved apically and wide ventral lobe acute and curved apically; cercus short and thick, with weak apical incision; hypandrium nearly uniformly thick with an acute tip in ventral view.

Female. Unknown.

Holotype male, Guangdong: Ruyuan, Nanling National Nature Reserve, 2003. III. 26, Ding YANG.

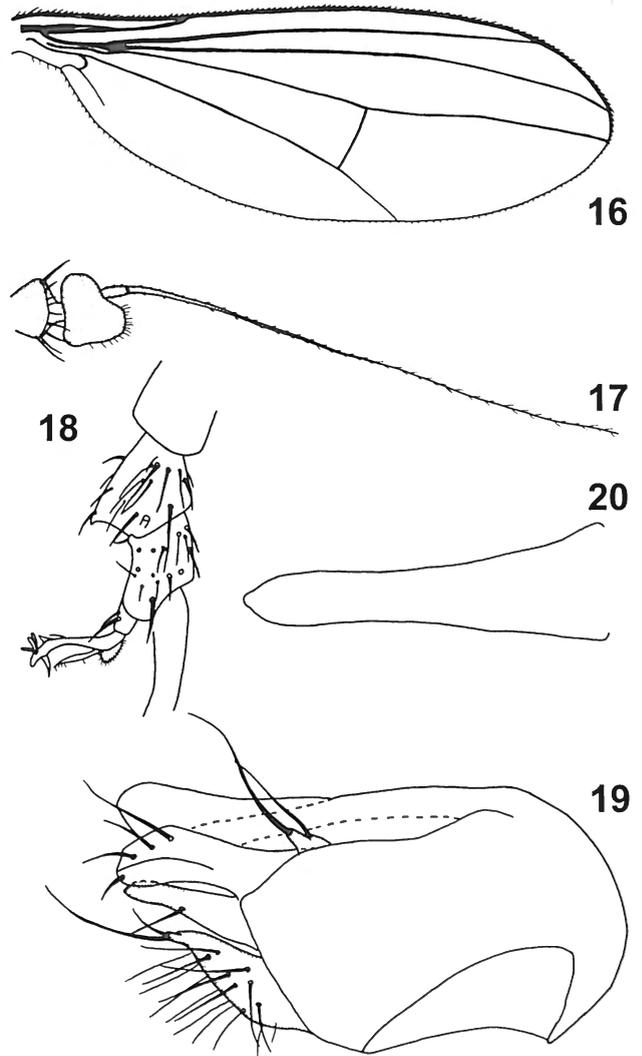
Distribution. China (Guangdong).

Etymology. The specific name refers to the type locality Guangdong.

Remarks. The new species is similar to *C. maculatum* (PARENT) from Taiwan, but may be separated from *maculatum* by the wing with a rather small apical spot. In *maculatum*, the wing has a very large apical spot (PARENT, 1932).

13. *Chaetogonopteron nanlingense* sp. nov. (Figs. 16-20)

Diagnosis. First flagellomere obtuse apically. acr absent. CuAx ratio 0.9.



Figs. 16-20 — *Chaetogonopteron nanlingense* sp. nov. 16. wing; 17. antenna; 18. hind tarsomeres 1-2; 19. male genitalia, lateral view; 20. hypandrium, ventral view.

Male. Body length 4.7 mm, wing length 4.7 mm.

Head metallic green with grey pollen. Eyes contiguous on face. Ocellar tubercle distinct, with 2 strong oc and 2 posterior hairs. Hairs and bristles on head black; middle and lower postocular bristles (including postero-ventral hairs) pale. Antenna yellow, except first flagellomere brownish; arista nearly dorsal with very short basal segment. Proboscis brownish with black hairs; palpus dark yellow with black hairs.

Thorax yellow with grey pollen; mesonotum metallic green except anterior and lateral portions; scutellum metallic green except posterior margin; postnotum metallic green except lateral margin. Pteropleuron with black antero-upper corner; laterotergite with blackish postero-upper corner. Hairs and bristles on thorax black; 5 dc, acr absent; scutellum with 1 pair of strong bristles. Propleuron with 1 short black hair on upper portion and 1 long

pale hair on lower portion. Legs yellow; coxae yellow, mid coxa with 1 black dot on postero-upper corner; mid and hind femora with brown extreme tips; fore tarsomeres 4-5, mid and hind tarsomere 5 brown. Hind tarsomeres 1-2 shortened. Hairs and bristles on legs black; fore coxa with 6 apical bristles and some pale hairs on antero-basal portion, mid and hind coxae with 1 outer bristle. Mid tibia with 2 ad, 1 pd, one row of av (which are long basally and short dense apically) and another row of 7-8 rather long av apically; hind tibia with 4 ad, 4 d, one row of pd and one row of av, apically with 2 bristles. Fore tarsomere 1 with one row of erect av, fore tarsomere 2 with one row of slightly curved hair-like av. Mid tarsomere 1 basally with 3 long strong av (of which the basal bristle is bent) and one group of long thin antero-ventral hairs, medially with 2 strong av. Relative lengths of tibia and 5 tarsomeres LI 1.8 : 1.5 : 0.6 : 0.5 : 0.15 : 0.15; LII 2.7 : 1.4 : 0.9 : 0.5 : 0.3 : 0.15; LIII 3.3 : 0.1 : 0.1 : 1.0 : 0.5 : 0.1. Wing hyaline; veins brownish yellow; R_{4+5} and M weakly convergent apically. CuAx ratio 0.9. Squama black with black hairs. Halter dark yellow.

Abdomen yellow; tergites 1-5 brown with brownish yellow lateral portion. Hairs and bristles on abdomen black. Male genitalia (Figs. 19-20): Epandrium longer than wide, with 2 bristles on single lateral process; surstylus with nearly straight narrow dorsal lobe and thick ventral lobe bearing 4 apical bristles; cercus rather narrow apically; hypandrium more or less tapering toward tip in ventral view.

Female. Unknown.

Holotype male, Guangdong: Ruyuan, Nanling National Nature Reserve, 2003. III. 26, Ding YANG.

Distribution. China (Guangdong).

Etymology. The specific name refers to the type locality Nanling.

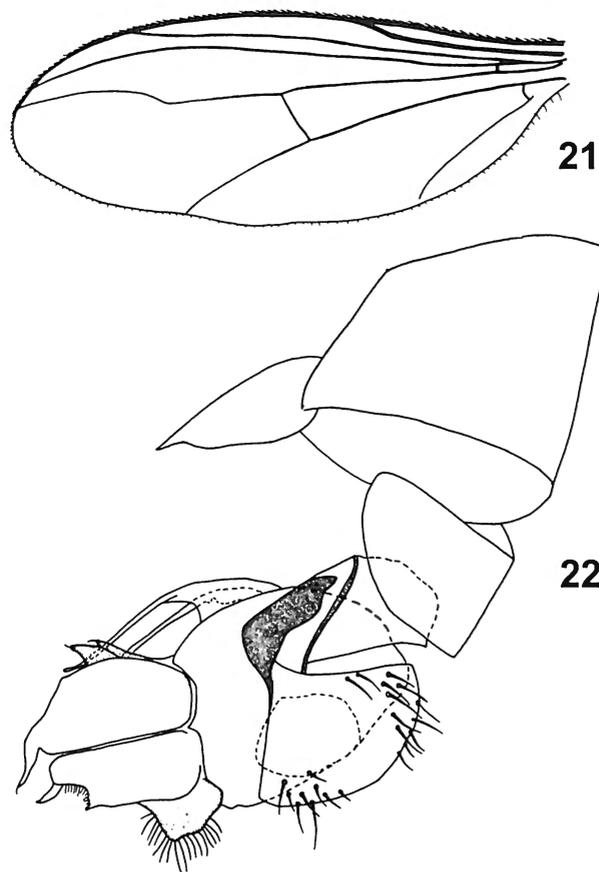
Remarks. The new species is very similar to *C. seriatum* YANG et GROOTAERT from Yunnan and *C. aruense* (Hollis) from Nepal, but may be separated from them by the absent acr.

14. *Neurigona xui* sp. nov.
(Figs. 21-22)

Diagnosis. Thorax wholly dull metallic green. Abdomen mostly metallic green. Abdominal segment 5 with ventral projection. Hind femur brown, tibia dark brown and tarsus black.

Male. Body length 6.7 mm, wing length 5.7 mm.

Head dark metallic green with grey pollen. Eyes contiguous on face. Hairs and bristles on head yellow; postocular bristles (including postero-ventral hairs) yellow. Antenna yellow [first flagellomere broken off]. Proboscis



Figs. 21-22 — *Neurigona xui* sp. nov. 21. wing; 22. male genitalia, lateral view.

yellow with pale hairs; palpus pale yellow with pale hairs and 1 pale apical bristle.

Thorax dull metallic green with grey pollen; metapleuron yellow. Hairs and bristles on thorax black; 6 dc, 11 paired acr; scutellum with 1 pair of strong bristles. Pronotum with pale yellow bristles. Propleuron with 1 pale long bristle on lower portion. Legs yellow; fore and hind coxae yellow, mid coxa brownish yellow; mid femur brownish, hind femur brown; hind tibia dark brown; mid tarsus dark brown, hind tarsus black. Hairs and bristles on legs black; fore coxa with 2 apical bristles. Hind tibia distinctly elongated (about 1.7 times longer than fore tibia), with 4 short pd and 4 short pv. Fore tarsomere 5 basally with ventral surface thickened. Mid tarsomere 1 nearly as long as mid tibia, with 7 short v. Relative lengths of tibia and 5 tarsomeres LI 3.2 : 2.5 : 1.2 : 1.0 : 0.7 : 0.35; LII 3.9 : 3.8 : 1.4 : 0.9 : 0.4 : 0.3; LIII 5.8 : 2.1 : 2.0 : 1.1 : 0.5 : 0.3. Wing slightly tinged with brownish; veins brown, M bent apically and convergent with R_{4+5} ; CuAx ratio 0.3. Squama brown, with yellow hairs. Halter pale yellow.

Abdomen dull metallic green; segments 1-3 yellow, tergites 2-3 with 1 large black spot. Hairs and bristles on abdomen black; sternites 1-4 with chiefly yellowish hairs; cercus with yellowish hairs. Male genitalia (Fig. 22): Epandrium with 1 thick lateral process and 1 thin finger-like lateral process apically, each bearing 1 short hair;

surstylus with nearly quadrate dorsal lobe incised apically with 1 apico-lateral process, slightly thick ventral lobe apically with 1 curved finger-like process bearing 1 short apical hair; hypandrium slender.

Female. Unknown.

Holotype male, Guangdong: Ruyuan, Nanling National Nature Reserve, 2003. III. 26, Lili. ZHANG.

Distribution. China (Guangdong).

Etymology. The specific name is named after Prof. ZAIFU XU.

Remarks. The new species is somewhat similar to *N. euchroma* Negrobov from Uzbekistan, but may be separated from the latter by the dark hind leg. In *euchroma*, the hind leg is largely yellow (Negrobov, 1988).

15. *Chrysosoma guangdongense* sp. nov. (Fig. 23)

Diagnosis. Antenna black; first flagellomere 1.2 times longer than wide. Legs yellow with black coxae and trochanters; coxae with pale hairs and bristles; fore femur with one row of short hair-like av and pv on basal half.

Male. Body length 6.5 mm, wing length 6.9 mm.

Head metallic green with pale grey pollen; vertex distinctly excavated. Hairs and bristles on head black; middle and lower postocular bristles (including postero-ventral hairs) pale. Frons with 1 pale anterior hair on postero-lateral slope. Antenna black; pedicel with 1 long dorsal bristle and 1 slightly short ventral bristle; first flagellomere short conical, 1.2 times longer than wide; arista apical, bare, black, longer than width of head and slightly shorter than head + thorax. Proboscis black basally and dark yellow apically with black hairs; palpus black with pale hairs and 2 black apical bristles.

Thorax shiny metallic green with pale grey pollen. Hairs and bristles on thorax black; 3 strong posterior dc and 2 pale short hairs anteriorly, 3 irregularly paired acr short and hair-like; 1 pale hair-like h, 1 pale hair-like su, anterior sa short and hair-like; basal scutellar bristles absent. Propleuron pale haired. Legs yellow; coxae and trochanters black; hind femur and tibia with extreme tips blackish; tarsi dark brown. Hairs and bristles on legs black; coxae with pale hairs and bristles; fore coxa with 4 apical bristles; femora with pale ventral hairs basally, fore femur with one row of short hair-like av and pv on basal half. Fore tibia with 2 short thin ad and 3 slightly long thin pv, apically with 2 bristles; mid tibia with 1 pd basally, apically with 3 bristles; hind tibia with 7 pd and 3 av, apically with 3 bristles. Hind tarsomere 1 with 1 v at extreme base. Relative lengths of tibia and 5 tarsomeres LI 3.5 : 3.0 : 0.95 : 0.7 : 0.5 : 0.3; LII 6.6 : 3.0 : 1.3 : 0.55 : 0.4 : 0.25; LIII 7.3 : 3.0 : 1.3 : 0.8 : 0.5 : 0.35. Wing hyaline; veins brown, m-cu weakly bent; M_2 without

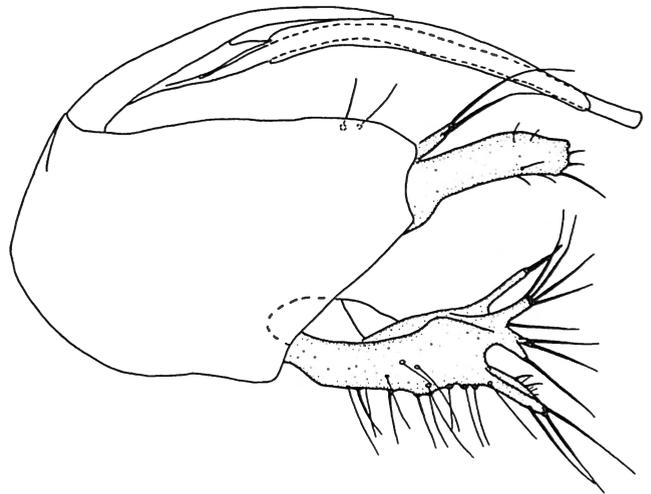


Fig. 23 — *Chrysosoma guangdongense* sp. nov. male genitalia, lateral view.

distinct basal portion. CuAx ratio 2.1. Squama yellow with blackish margin, with pale hairs. Halter yellow.

Abdomen subshiny metallic green with pale pollen. Hairs and bristles on abdomen black; tergites 1-3 with pale lateral hairs; sternites 1-4 with pale hairs. Male genitalia (Fig. 13): Epandrium apically with 2 long bristles on a finger-like lateral process; surstylus thick and nearly straight, with weak apical incision with 1 long and 2 short bristles on apical margin; cercus long band-like, apically furcated into several finger-like processes bearing apical bristles.

Female. Unknown.

Holotype male, Guangdong: Yingde, Shimentai National Forest Park, 2003. III. 28, Ding YANG.

Distribution. Chian (Guangdong).

Etymology. The specific name refers to the type locality Guangdong.

Remarks. The species is somewhat similar to *C. cyaneuliscutum* Bickel and Wei from Guizhou in the coloration of legs, but may be separated from the latter by the fore femur with short ventral hairs on basal half and fore tarsomere 1 not flattened. In *C. cyaneuliscutum*, the fore femur has some very long ventral bristles, and the fore tarsomere 1 is slightly flattened in basal three-quarters (Bickel & Wei, 1996).

Acknowledgements

We thank Prof. ZAIFU XU (South China Agricultural University, Guangzhou) for his heartily hospitality when leading the survey in Guangdong province. The research was supported by National Natural Science Foundation of China (No. 30225009).

References

- BICKEL, D. & WEI, L. 1996. Dolichopodidae (Diptera) from southwestern China-Part?. *Oriental Insects*, 30: 251-277.
- HOLLIS, D. 1964. On the Diptera of Nepal (Stratiomyidae, Therevidae and Dolichopodidae). *Bulletin of the British Museum (Natural History) Entomology*, 15(5): 83-116.
- NEGROBOV, 1988. Revision of species of the genus *Neurigona* Rond. (Diptera, Dolichopodidae) of Palaearctic.?. *Entomologicheskoe Obozrenie*, 67 (2): 405-416.
- PARENT, O. 1932. Sur quelques Diptères Dolichopodides, la plupart appartenant à la collection L. Oldenberg. Notes et descriptions. (Dipt.) *Stettiner Entomologische Zeitung* 93: 220-241.
- YANG, D. & GROOTAERT, P. 1999. Dolichopodidae (Diptera: Empidoidea) from Xishuangbanna (China, Yunnan province): the Dolichopodidae and the genus *Chaetogonopteron* (?). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique. Entomologie*, 69: 251-277.

Lili ZHANG & Ding YANG
Department of Entomology
China Agricultural University
Haidian, Beijing 100094, China
YANGding@mail.cau.edu.cn

Patrick GROOTAERT
Department of Entomology
Royal Belgian Institute of Natural Sciences
Vautierstraat 29, B-1000 Brussels, Belgium
Patrick.GROOTAERT@naturalsciences.be