

New and little known species of Dolichopodidae (Diptera) from China (VIII)

by Ding YANG and Toyohei SAIGUSA

Abstract

9 species are described as new to science: *Chrysotimus guangxiensis*, *C. shennongjianus*, *Guzeriplia beijingensis*, *Hercostomus hubeiensis*, *H. xiaolongmensis*, *Paramedetera jinxiuensis*, *Neurigona qingchengshana*, *Diaphorus hainanensis*, *Diaphorus nanpingensis*.

Key words: Dolichopodidae, new species, China

Introduction

Nine species are described as new science, and 2 species are recorded from China for the first time: *Medetera gothorum* MASUNAGA et SAIGUSA; *Hercostomoides indonesianus* (HOLLIS). We establish one new species group: *Hercostomus baishanzuensis* group. Keys to the species of *Chrysotimus* and *Hercostomus baishanzuensis* group from China are given. The types of new species are mainly deposited in the China Agricultural University (CAU) in Beijing except for some paratypes that are kept in the Royal Belgian Institute of Natural Sciences (IRSN) in Brussels. The abbreviations used here are the same as in the serial paper VII.

Systematic account

Genus *Chrysotimus* LOEW, 1857

Chrysotimus LOEW, 1857. Progr. K. Realsch. Meseritz 1857: 48. Type species: *Chrysotimus pusio* LOEW, 1861 (des. Coquillett, 1910. Proc. U. S. natl. Mus. 37: 524)

Diagnosis. Thorax and abdomen subshining. Hairs and bristles on head and thorax yellow. Eyes distinctly separated; frons rather wide, somewhat narrowing forward; face narrower than frons, slightly narrowing downward. 2 pairs of vt. Antennal scape narrow basally, without dorsal hairs; pedicel with a circle of apical hairs (of which 1 dorsal hair is rather long and bristle-like); first flagellomere rather short, wider than long, obtuse apically; arista mid-apical or upper apical. Mesonotum with mid-posterior area flattened. 4-5 strong dc, acr absent; 1 h, 1 ph

(close to h), 1 ih, 1 su, 2 npl, 1-2 sa, 1 psa; scutellum with 2 pairs of bristles (outer pair short and hair-like). Propleuron with 1 short hair on lower portion. Legs yellow with tarsomere 5 brown. Hind coxa with 1 mid-upper outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia without distinct bristles; fore and hind tibiae each with a comb of brown hairs apically. R4 + 5 and M parallel apically.

The genus *Chrysotimus* has 8 species known from the Palaearctic region (NEGROBOV, 1991), 2 species from the Oriental region (DYTE, 1975). The first species, *C. sinensis*, was reported from China by PARENT (1944). 6 species are known to occur in China so far.

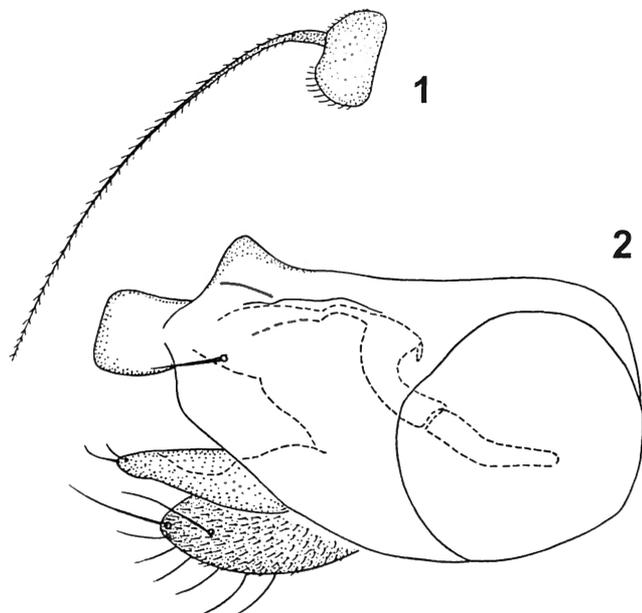
Key to species (males) of *Chrysotimus* from China

- Hind tarsomere 1 with one bundle of black ventral bristles at base 2
Hind tarsomere 1 at most with sparse black ventral bristles at base 3
- Arista dorsal. Zhejiang *dorsalis* YANG
Arista nearly mid-apical. Hubei
..... *shennongjianus* sp. nov.
- Hind tarsomere 1 with black ventral bristles at base . 4
Hind tarsomere 1 without black ventral bristles at base 5
- Antenna wholly black. Zhejiang . *apicicurvatus* YANG
Antennal scape and pedicel yellow. Zhejiang
..... *basiflavus* YANG
- Cercus divided into outer and inner lobes. Guangxi .
..... *guangxiensis* sp. nov.
Cercus single. China *sinensis* PARENT

1. *Chrysotimus guangxiensis* sp. nov. (Figs. 1-2)

Diagnosis. Antenna brown. Palpus brownish yellow. Thoracic pleuron brownish yellow. 5 strong dc, 2 sa. Wing with pale yellow veins.

Male. Body length 1.8 mm, wing length 1.7 mm.



Figs. 1-2 — *Chrysotimus guangxiensis*, sp. nov., male.
1. First flagellomere; 2. genitalia, lateral view.

Head metallic green with pale gray pollen; eyes distinctly separated, face narrowing downward. Hairs and bristles on head wholly yellow. Ocellar tubercle weak, with 2 very long oc and 4 very short posterior hairs; two pairs of vt. Antenna brown; pedicel with a circle of pale apical hairs; first flagellomere rather short, 0.6 times longer than wide; arista nearly upper-apical, brownish yellow, very short pubescent. Proboscis yellow, with pale hairs; palpus brownish yellow, with pale hairs and 2 brown bristles.

Thorax pale metallic green and subshiny, with pale gray pollen; pleuron brownish yellow. Hairs and bristles on thorax yellow; 5 strong dc, acr absent; 1 h, 1 ph (close to h), 1 ih, 2 npl, 1 su, 2 sa, 1 psa; scutellum with two pairs of bristles (outer pair very short, hair-like). Propleuron with 1 short pale hair on lower portion. Legs yellow; tarsomere 5 brownish. Hairs and bristles on legs pale; fore coxa with 3 anterior and apical bristles; mid coxa with 1 anterior outer bristle, hind coxae with 1 mid-upper outer bristle. Mid and hind femora each with 1 preapical bristle, hind femur with 1 av apically. Fore tibia without distinct bristles; mid tibia with 2 ad and 2 pd, apically with 3 bristles; hind tibia with 1 ad and 2 pd, apically with 2 bristles. Relative length of tibia and tarsal segments: LI 1.7: 0.9: 0.5: 0.4: 0.3: 0.2; LII 2.0: 1.2: 0.55: 0.45: 0.25: 0.2; LIII 2.35: 1.0: 0.7: 0.45: 0.35: 0.2. Wing hyaline; veins pale yellow, R4+5 and M parallel apically; CuAx ratio 0.3. Squama yellow with brownish yellow hairs. Halter yellow.

Abdomen pale metallic green and subshiny, with pale gray pollen. Hairs and bristles on abdomen blackish. Male genitalia (Fig. 2): Epandrium distinctly longer than wide, with 1 lateral bristle apically; surstylus nearly quadrate; cercus with rather thick inner lobe and narrow outer lobe; hypandrium convex apically.

Female. Unknown.

Holotype male, Guangxi: Jinxiu, Dayaoshan Mountain, 1982. VI. 15, Chi-kun YANG. (CAU)

Distribution. China (Guangxi).

Etymology. The species is named after the type locality Guangxi.

Remarks. The new species is similar to *sinensis* PARENT from China. In *sinensis*, the cercus is single and somewhat slender (PARENT, 1944).

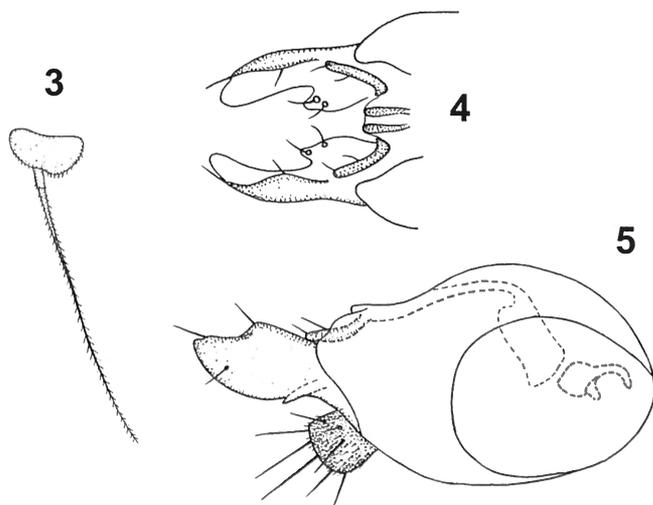
2. *Chrysotimus shennongjianus* sp. nov. (Figs. 3-5)

Diagnosis. Antenna black; arista nearly mid-apical. Palpus black. 4 strong dc, 1 sa. Wing with brown veins. Hind tarsomere 1 with a bundle of black short bristles at base.

Male. Body length 1.5 mm, wing length 1.9 mm.

Head metallic green with pale gray pollen; eyes distinctly separated, face narrowing downward. Hairs and bristles on head wholly yellow. Ocellar tubercle weak, with 2 very long oc and 2 very short posterior hairs; two pairs of vt. Antenna black; pedicel with a circle of pale apical hairs; first flagellomere rather short, 0.55 times longer than wide; arista nearly mid-apical, black, very short pubescent. Proboscis black with black hairs; palpus black, with black hairs and 1 blackish bristle.

Thorax subshiny metallic green with pale gray pollen. Hairs and bristles on thorax yellow; 4 strong dc, acr absent; 1 h, 1 ph (close to h), 1 ih, 1 su, 2 npl, 1 sa, 1 psa; scutellum with two pairs of bristles (outer pair short, hair-like). Propleuron with 1 short hair on lower portion.



Figs. 3-5 — *Chrysotimus shennongjianus*, sp. nov., male.
3. First flagellomere; 4. apical portion of genitalia, ventral view; 5. genitalia, lateral view.

Legs yellow; tarsomere 5 brown. Hairs and bristles on legs blackish; fore coxa with 3 thick lateral and apical bristles; mid coxa with 1 anterior outer bristle, hind coxa with 1 mid-upper outer bristle. Mid and hind femora each with 1 preapical bristle. Fore tibia apically with 2 weak bristles; mid tibia with 2 ad and 2 pd, apically with 3 bristles; hind tibia with 2 ad and 2 pd, apically with 2 bristles. Hind tarsomere 1 with 1 bundle of black short ventral hairs at base. Relative length of tibia and tarsal segments: LI 1.5: 0.8: 0.4: 0.3: 0.15: 0.2; LII 1.8: 1.0: 0.4: 0.3: 0.2: 0.2; LIII 2.4: 0.9: 0.5: 0.4: 0.3: 0.2. Wing hyaline; veins brown, R4+5 and M parallel apically; CuAx ratio 0.25. Squama yellow with brownish yellow hairs. Halter yellow.

Abdomen subshiny metallic green with pale gray pollen. Hairs and bristles on abdomen blackish. Male genitalia (Figs. 4-5): Epandrium distinctly longer than wide; surstylus apically somewhat acute, basally with inner process; cercus rather short and thick; hypandrium small, with finger-like lateral processes.

Female. Unknown.

Holotype male, Hubei: Shennongjia, 1998. VII. 24, Haisheng Zhou. (CAU)

Distribution. China (Hubei).

Etymology. The species is named after the type locality Guangxi.

Remarks. The new species is similar to *dorsalis* YANG from Zhejiang in the hind tarsomere with a bundle of black short ventral bristles at base, but may be separated from the latter by the arista nearly mid-apical. In *dorsalis*, the arista is dorsal.

Genus *Guzeriplia* NEGROBOV, 1968

Guzeriplia NEGROBOV, 1968. *Zool. Zhurn.* 47(3): 471. Type species: *Guzeriplia chlorina* NEGROBOV, 1968 (orig. des.).

Diagnosis. Thorax and abdomen subshiny. Hairs and bristles on head and thorax yellow. Eyes distinctly separated; frons rather wide, somewhat narrowing forward; face narrower than frons, slightly narrowing downward. Antennal scape rather narrow basally, without dorsal hairs; pedicel with a circle of apical hairs (of which 1 dorsal hair is long and bristle-like); first flagellomere rather short, wider than long, obtuse apically. Arista subapical, with very short basal segment. Mesonotum with mid-posterior area flattened. 5 strong dc, acr biseriate; 1 h, 1 ph (close to h), 1 ih, 1 su, 2 npl, 2 sa, 1 psa; scutellum with 2 pairs of bristles (outer pair short and hair-like). Propleuron with 1 long bristle on lower portion. Hind coxa with 1 mid-upper outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia

without distinct bristles; fore and hind tibiae each with a comb of brown hairs apically. R4+5 and M nearly parallel apically. Male genitalia rather large and mostly exposed, projecting forward under abdomen; cercus divided into two parts.

The genus *Guzeriplia* is Palearctic with 2 known species (NEGROBOV, 1991). It is very similar to *Chrysotimus* in the head and thorax with yellow hairs and bristles. It may be distinguished from the latter by having acr. In *Chrysotimus*, the acr are absent. No species were reported from China before.

3. *Guzeriplia beijingensis* sp. nov.

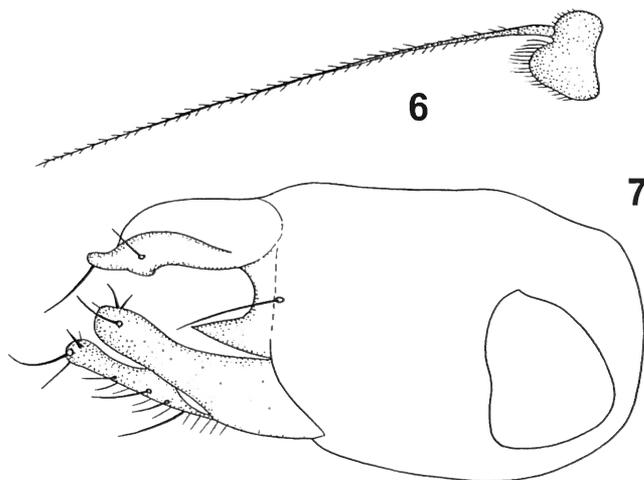
(Figs. 6-7)

Diagnosis. Antenna black. Palpus yellow. Surstylus apically narrow and obtuse.

Male. Body length 2.1-2.3 mm, wing length 2.1-2.2 mm.

Head metallic green with pale gray pollen; eyes distinctly separated, face narrowing downward. Hairs and bristles on head yellow. Ocellar tubercle weak, with 2 very long oc and 2 very short posterior hairs; two pairs of vt. Antenna black; pedicel with a circle of yellow apical hairs; first flagellomere short, 0.8 times longer than wide, with long fine pale hairs; arista subapical, black, very short pubescent. Proboscis dark brown, with blackish hairs; palpus yellow, with yellow hairs and 1 yellow bristle.

Thorax subshiny metallic green with pale gray pollen. Hairs and bristles on thorax yellow; 5 strong dc, 5-6 irregularly paired acr short and hair-like; 1 h and 1 short hair, 1 ph (close to h), 1 ih, 2 npl, 1 su, 2 sa, 1 psa; scutellum with two pairs of bristles (outer pair very short, hair-like). Propleuron with 1 short hair and 1 long bristle on lower portion. Legs yellow; mid and hind coxae dark basally; tarsomere 5 brown. Hairs and bristles on legs



Figs. 6-7 — *Guzeriplia beijingensis*, sp. nov., male.
6. First flagellomere; 7. genitalia, lateral view.

pale; fore coxa with 4 anterior and apical bristles; mid coxa with 1 anterior outer bristle, hind coxae with 1 mid-upper outer bristle. Mid and hind femur each with 1 preapical bristle, hind femur apically with 2 long av. Fore tibia without distinct bristles, apically with 3 weak short bristles; mid tibia with 2 ad and 2 pd, apically with 4 bristles; hind tibia with 2 ad and 2 pd, apically with 3 bristles. Relative length of tibia and tarsal segments: LI 2.0: 1.2: 0.5: 0.4: 0.2: 0.2; LII 2.6: 1.3: 0.6: 0.4: 0.25: 0.2; LIII 2.7: 0.9: 0.65: 0.4: 0.3: 0.2. Wing hyaline; veins dark brown, R4+5 and M little convergent apically; CuAx ratio 0.23. Squama yellow with pale hairs. Halter yellow.

Abdomen subshining metallic green with pale gray pollen. Hairs and bristles on abdomen yellow. Male genitalia (Fig. 7): Epandrium broad, apically with acute median process and with 1 long lateral bristle; surstylus apically narrow and obtuse; cercus with narrow inner lobe and somewhat thick outer lobe.

Female. Unknown.

Holotype male, paratype 1 male, Beijing: Xiaolongmen, 1999. VII. 22-25, Xueyou Hu. (CAU)

Distribution. China (Beijing).

Etymology. The species is named after the type locality Beijing.

Remarks. The new species is similar to *viridana* NEGROBOV from Russia. In *viridana*, the surstylus is acute apically (NEGROBOV, 1978).

Hercostomus (Hercostomus) baishanzuensis - group

Diagnosis. Postocular bristles wholly black. Antenna wholly black. Legs at least with coxae, trochanter and femora darker. Fore tibia with 1 short or long apv. Male genitalia: epandrium with 1 long and 1 short lateral processes; cercus with short marginal denticles; hypandrium with 1 inner denticle at middle.

The *baishanzuensis* - group includes following 5 species: *baishanzuensis* YANG et YANG, *hubeiensis* sp. nov., *hunanensis* YANG, *serratus* YANG et SAIGUSA, *xinjianganus* YANG.

Key to species of *baishanzuensis* - group from China

1. First flagellomere very acute apically 2
 - First flagellomere obtuse apically with distinctly oblique outer margin 3
2. acr present; arista with long basal segment. Hunan, Sichuan *hunanensis* YANG
 - acr absent; arista with very short basal segment (0.2 times as long as apical segment)
 - Zhejiang, Sichuan, Guangxi
 - *baishanzuensis* YANG et YANG

3. Legs partly yellow; arista with basal segment rather long (0.4 times as long as apical segment) 4
 - Legs wholly black; arista with very short basal segment (0.2 times as long as apical segment). Xinjiang *xinjianganus* YANG
4. Fore tibia with 1 short apv (as long as 1/4 of fore tarsomere 1); cercus nearly triangular. Sichuan *serratus* YANG et SAIGUSA
 - Fore tibia with 1 long apv (as long as 1/2 of fore tarsomere 1); cercus nearly quadrate. Hubei
 - *hubeiensis* sp. nov.

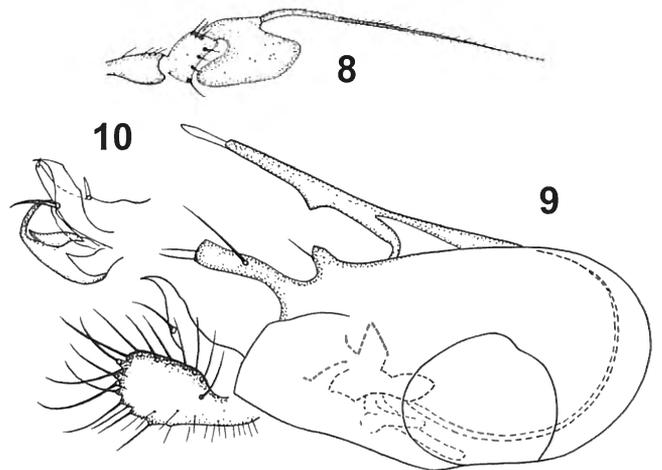
4. *Hercostomus (Hercostomus) hubeiensis* sp. nov. (Figs. 8-10)

Diagnosis. Postocular bristles wholly black. First flagellomere 1.4 times longer than wide, obtuse apically. 3-4 irregularly paired acr. Fore tibia with long apv. R4+5 and M weakly convergent. Cercus nearly quadrate with short marginal denticles.

Male. Body length 2.1 mm, wing length 2.1 mm.

Head metallic green with pale gray pollen; eyes distinctly separated, face nearly as wide as first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna black; first flagellomere 1.4 times longer than wide, obtuse apically; arista black, very short pubescent, with basal segment 0.4 times as long as apical segment. Proboscis brown, with black hairs; palpus blackish, with black hairs and 1 black bristle.

Thorax metallic green with pale gray pollen. Hairs and bristles on thorax black; 6 strong dc, 3-4 irregularly paired acr located in front of third anterior dc, short and hair-like; scutellum with two pairs of bristles (outer pair very short, hair-like). Propleuron black haired, with 1 black bristle on lower portion. Legs yellow; all coxae



Figs. 8-10 — *Hercostomus (Hercostomus) hubeiensis*, sp. nov., male.
8. Antenna; 9. genitalia, lateral view; 10. apical genital processes, lateral view.

blackish; all femora dark brownish yellow; tarsi from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black; fore coxa with 7 weak or strong anterior and apical bristles; mid and hind coxae with 1 outer bristle; mid and hind femur with 1 preapical bristle. Fore tibia with 1-2 pd and 1 pv, apically with 2 weak bristles and 1 apv (nearly as long as 1/2 of fore tarsomere 1); mid tibia with 3 ad, 2 pd and 1 av, apically with 4 bristles; hind tibia with 2 ad, 3 pd and 1 av, apically with 2 bristles and 1 preapical dorsal bristle. Relative length of tibia and tarsal segments: LI 1.7: 0.8: 0.4: 0.35: 0.3: 0.2; LII 2.5: 1.1: 0.7: 0.6: 0.4: 0.3; LIII 2.7: 0.75: 1.0: 0.7: 0.5: 0.35. Wing nearly hyaline; veins blackish, R4+5 and M weakly convergent apically; CuAx ratio 0.4. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green with pale gray pollen. Hairs and bristles on abdomen black. Male genitalia (Figs. 9-10): Epandrium distinctly longer than wide, its lateral lobe rather long and basally with 1 short inner process; cercus nearly quadrate, with short marginal denticles; hypandrium long with acute inner denticle at middle.

Female. Unknown.

Holotype male, Hubei: Shennongjia, 1998. VII. 24, Haisheng Zhou. (CAU)

Distribution. China (Hubei).

Etymology. The species is named after the type locality Hubei.

Remarks. The new species is similar to *serratus* YANG et SAIGUSA from Sichuan, but may be separated from the latter by the fore tibia with long apv (as long as 1/2 of fore tarsomere 1) and cercus nearly quadrate. In *serratus*, the fore tibia has rather short apv (as long as 1/4 of fore tarsomere 1), the cercus is nearly triangular (YANG & SAIGUSA, 1999).

5. *Hercostomus (Hercostomus) xiaolongmensis* sp. nov. (Figs. 11-12)

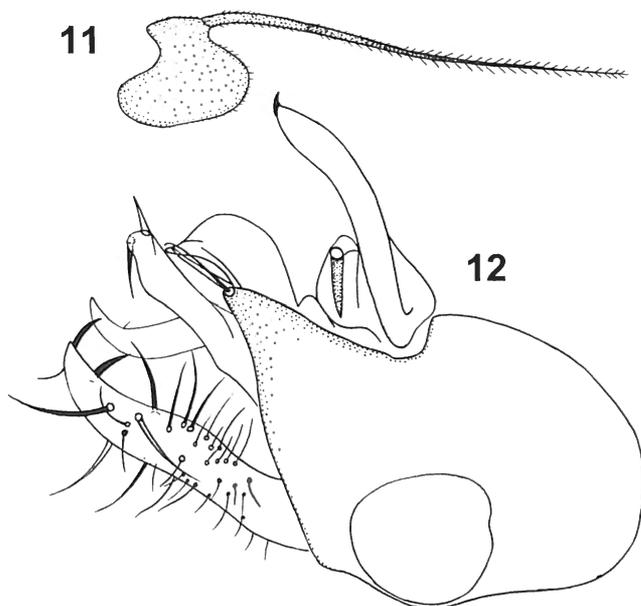
Diagnosis. Postocular bristles wholly black. First flagellomere as long as wide, obtuse apically. Thoracic pleuron brownish yellow with upper half dark. Abdomen partly yellow basally. Epandrium obliquely acute apically.

Male. Body length 3.7-4.0 mm, wing length 4.7-4.9 mm.

Head metallic green with pale gray pollen; eyes distinctly separated, face narrowing downward and narrower than first flagellomere. Hairs and bristles on head black; postocular bristles black, lower occiput with pale hairs medially. Antenna black; first flagellomere as long as wide, obtuse apically; arista black, very short pubescent, with basal segment 0.3 times as long as apical segment. Proboscis blackish, with black hairs; palpus black, with black hairs and 1 black bristle.

Thorax metallic green with pale gray pollen; humerus dark yellow; pleuron dark brown on upper half, brownish yellow on lower half, except metapleuron yellow. Hairs and bristles on thorax black; 6 strong dc, 9-10 irregularly paired acr short and hair-like; scutellum with two pairs of bristles (outer pair very short, hair-like). Propleuron black haired, with 1 black bristle on lower portion. Legs yellow; all coxae yellow, mid coxa with a narrow median stripe dark brown; tarsi from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black; fore coxa with 6-7 weak or strong apical bristles; mid and hind coxae with 1 outer bristle; mid and hind femur with 1 preapical bristle. Fore tibia with 2 pd, apically with 1 bristle; mid tibia with 3 ad, 2 pd and 2-3 av, apically with 4 bristles; hind tibia with 3-4 ad, 3-5 pd and 4 av, apically with 2 bristles. Fore tarsomere 1 with 1 brown v at base; mid tarsomere 1 with 1 v at base and 3 av at middle portion; hind tarsomere 1 with 2 strong v. Relative length of tibia and tarsal segments: LI 4.8: 3.0: 1.9: 1.2: 1.1: 0.8; LII 7.6: 4.0: 2.2: 1.8: 1.2: 0.8; LIII 9.0: 2.9: 3.1: 2.1: 1.3: 1.0. Wing slightly tinged grayish; veins blackish, R4+5 and M distinctly convergent apically; CuAx ratio 0.45. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green with pale gray pollen; tergite 1 blackish (or dark brownish yellow with black apical margin), tergites 2-3 yellow with black apical margin. Hairs and bristles on abdomen black. Male genitalia (Fig. 12): Epandrium obliquely acute apically, with 1 distal bristle; cercus distinctly elongated and slightly curved, nearly acute apically, and with some strong bristles; hypandrium irregularly furcate.



Figs. 11-12 — *Hercostomus (Hercostomus) xiaolongmensis*, sp. nov., male.
11. First flagellomere; 12. genitalia, lateral view.

Female. Body length 3.3-4.5 mm, wing length 4.7-5.1 mm. Similar to male, but face wider than first flagellomere, tergites 3-4 (except dark margin) brownish to brownish yellow.

Holotype male, paratypes 3 males 5 females, Beijing: Xiaolongmen, 1999. VII. 22-25, Xueyou Hu. (CAU & IRSN)

Distribution. China (Beijing).

Etymology. The species is named after the type locality Beijing.

Remarks. The new species is easily separated from other known species of the genus from China by the epandrium apically obliquely acute with 1 distal bristle.

6. *Medetera gotohorum* MASUNAGA et SAIGUSA

Medetera gotohorum MASUNAGA et SAIGUSA, 1998. Ent. Sci. 1(4): 615. Type locality: Honshu (Japan).

Specimens examined. 2 males 1 female, Sichuan: Qingchengshan Mountain (1000-1200 m), 1998. VIII. 21, Toyohei SAIGUSA.

Distribution. China (Sichuan); Japan.

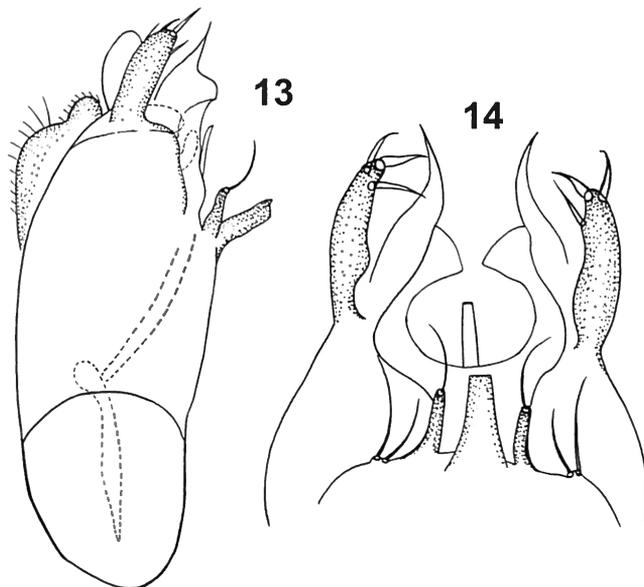
7. *Paramedetera jinxiuensis* sp. nov. (Figs. 13-14)

Diagnosis. Head with yellow hairs and bristles; thorax with blackish hairs and bristles except dc yellow. 2 anterior dc rather short. Hypandrium with narrow median process.

Male. Body length 1.7 mm, wing length 1.7 mm.

Head dark metallic green with gray pollen; eyes distinctly separated. Hairs and bristles on head yellow; postocular bristles (including ventral hairs) wholly yellow. Ocellar tubercle weak, with 2 long oc and 2 very short posterior hairs; one pair of vt. Antenna black; first flagellomere as long as wide, nearly oval; arista latero-apical, blackish, with very short basal segment. Proboscis blackish, with blackish hairs; palpus black, with blackish hairs and 1 brown bristle.

Thorax dark metallic green with gray pollen. Hairs and bristles on thorax blackish except dc yellow; 4 dc (2 anterior dc rather short), acr absent; 1 h, 1 ph (close to suture), 1 su (short), 2 npl, 2 sa, 1 psa; scutellum with one pair of bristles. Propleuron with 1 bristle on lower portion. Legs dark yellow with coxae, trochanters and femora brown. Hairs and bristles on legs blackish; mid coxa with 1 anterior outer bristle, hind coxa with 1 outer bristle at middle; tibiae without distinct bristles. Relative length of tibia and tarsal segments: LI 2.2: 1.1: 0.6: 0.4: 0.3: 0.3; LII 2.6: 1.5: 0.75: 0.6: 0.3: 0.3; LIII 2.7: 1.0: 1.1: 0.6: 0.4: 0.3. Wing hyaline; veins brownish yellow, R4+5 and M



Figs. 13-14 — *Paramedetera jinxiuensis*, sp. nov., male.
13. Genitalia, lateral view; 14. apical portion of genitalia, ventral view.

little convergent apically; CuAx ratio 0.3. Squama dark yellow with pale hairs. Halter yellow.

Abdomen dark metallic green with gray pollen. Hairs and bristles on abdomen black. Male genitalia (Figs. 13-14): Epandrium distinctly longer than wide; surstylus slightly narrow and nearly straight; cercus obtuse apically; hypandrium with narrow median process and thin finger-like lateral processes; aedeagus with two large lateral arms bearing dorsal process slightly curved and acute apically.

Female. Unknown.

Holotype male, Guangxi: Jinxiu, Dayaoshan Mountain, 1982. VI. 15, Chi-kun YANG. (CAU)

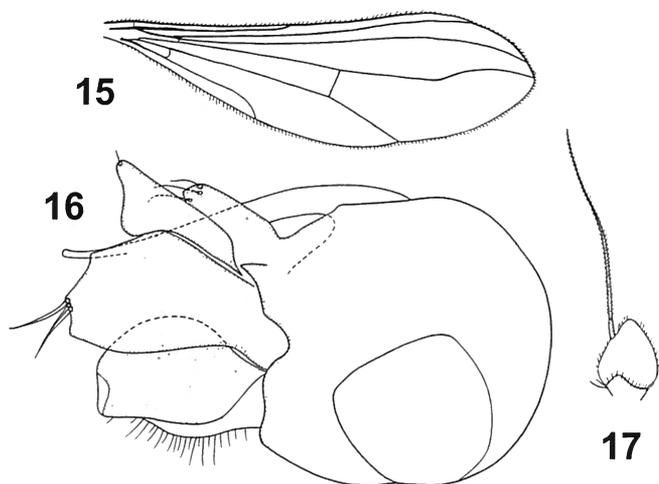
Distribution. China (Guangxi).

Etymology. The species is named after the type locality Jinxiu.

Remarks. The new species is similar to *medialis* YANG et SAIGUSA from Sichuan and Henan in the shape of hypandrium, but may be separated from the latter by the anterior 2 dc rather short. In *medialis*, the anterior 2 dc are strong and long (YANG & SAIGUSA, 2000).

8. *Neurigona qingchengshana* sp. nov. (Figs. 15-17)

Diagnosis. Eyes contiguous on face. Wing rather narrow basally, with indistinct anal lobe. Fore and mid tarsomere 1 distinctly elongated (fore tarsomere 1 as long as fore tibia, mid tarsomere 1 distinctly longer than mid tibia).



Figs. 15-17 — *Neurigona qingchengshana*, sp. nov., male.
15. Wing; 16. genitalia, lateral view; 17. antenna (excluding scape), lateral view.

Male. Body length 4.0 mm, wing length 3.3 mm.

Head metallic green with pale gray pollen; eyes contiguous on face (for a distance about as long as 1/3 of face). Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) wholly pale yellow. Ocellar tubercle weak, with 2 very long oc and 2 very short posterior hairs; two pairs of vt (inner bristle short). Antenna yellow; first flagellomere brownish yellow, 1.1 times longer than wide, somewhat acute apically; arista subapical, black, very short pubescent. Proboscis yellow, with yellow hairs; palpus pale yellow, with sparse black hairs and 2 short black bristles.

Thorax yellow with pale gray pollen; pteropleuron and laterotergite with a black dot at anterior upper corner. Hairs and bristles on thorax black; 5 dc (3 anterior dc short, 2 posterior dc long); 12-13 irregularly paired ac short and hair-like; 1 h and 2 very short hairs, 1 ph, 1 short ih, 2 npl subequal in length, 1 short su, 2 sa (anterior sa short), 1 psa; scutellum with two pairs of bristles (outer pair very short, hair-like). Propleuron with 1 short pale hair and 1 long pale bristle on lower portion. Legs yellow; tarsomeres 2-5 brownish. Hairs and bristles on legs black; fore coxa with pale hairs except apex with some black hairs, and with 6 chiefly yellow bristles at apical margin; hind coxae with 1 outer bristle at base. Mid tibia with 1 ad, 2 pd, and 1 v (at middle); hind tibia with 3 ad, 4 pd and 5-6 v. Relative length of tibia and tarsal segments: LI 4.7: 4.7: 2.7: 1.9: 1.6: 0.85; LII 5.0: 6.9: 2.5: 1.5: 1.1: 0.5; LIII 8.2: 3.7: 3.3: 1.7: 1.2: 0.5. Wing hyaline; veins blackish, M1+2 distinctly but slowly bent apically and convergent with R4+5; CuAx ratio 0.3. Squama yellow with yellow hairs. Halter yellow.

Abdomen yellow with pale gray pollen; tergites 2-5 with a large black basal spot. Hairs and bristles on abdomen black. Male genitalia (Fig. 16): Epandrium short and nearly as long as wide, with two lateral lobes: outer lobe thick near apex and with 1 short apical hair, inner lobe

short with 3 apical hairs; surstylus with short broad dorsal lobe and long broad ventral lobe.

Female. Unknown.

Holotype male, Sichuan: Qingchengshan Mountain (850-1000 m), 1998. VIII. 21, Toyohei SAIGUSA. (CAU)

Distribution. China (Sichuan).

Etymology. The species is named after the type locality Qingcheng Mountain.

Remarks. The new species is similar to *shennongjiana* YANG from Hubei, but may be separated from the latter by the yellow metanotum and fore femur without av. In *shennongjiana*, the metanotum is black; the fore femur has a row of yellow av (YANG, 1999).

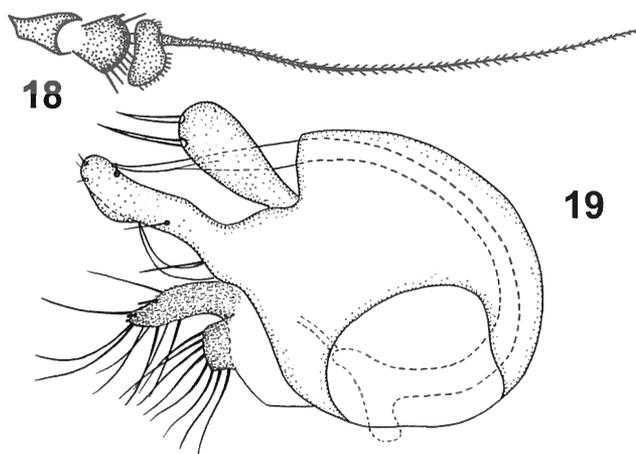
9. *Diaphorus hainanensis* sp. nov.

(Figs. 18-19)

Diagnosis. Eyes nearly contiguous. Palpus yellow. Fore leg without claws; mid and hind legs with 2 short claws. Legs yellow; hind femur black with basal 1/4 yellow; apical 1/3 of hind tibia and entire hind tarsus black.

Male. Body length 5.0 mm, wing length 4.7 mm.

Head metallic green with pale gray pollen; eyes nearly contiguous on frons. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale. Ocellar tubercle with 2 long oc and 2 very short posterior hair; 1 short vt. Antennal scape and pedicel yellow; first flagellomere dark brown, 0.6 times wider than long; arista black, very short pubescent, with basal segment rather short. Proboscis dark brown, with black hairs; palpus yellow, with black hairs and 1 black bristle.



Figs. 18-19 — *Diaphorus hainanensis*, sp. nov., male.
18. Antenna; 19. genitalia, lateral view.

Thorax metallic green with pale gray pollen. Hairs and bristles on thorax black; 5 strong dc, 8 irregularly paired acr short and hair-like; 1 h and 2 short hairs, 1 ph, 1 ih, 1 su, 2 npl, 2 sa, 1 psa; scutellum with two pairs of bristles (outer pair as long as 1/3 of inner pair). Propleuron with 3 pale hairs on upper portion, 1 black hair and 1 long black bristle on lower portion. Legs yellow; fore coxa yellow, mid and hind coxae black; hind femur black with basal 1/4 yellow; apical 1/3 of hind tibia and entire hind tarsus black; fore and mid tarsi from tip of tarsomere 1 onward brownish to dark brown. Hairs and bristles on legs black; fore coxa with 5 anterior and apical bristles; mid coxa with 2 anterior outer bristles, hind coxa with 1 outer bristle at base. Fore femur with a row of short anterior ventral hairs and long posterior ventral hairs and a row of posterior hairs; mid femur apically with 2 av, hind femur apically with 2 av. Fore tibia with 1 ad and 3 pd, apically with 3 bristles; mid tibia with 3 ad, 2 pd and 2 av, apically with 4 bristles; hind tibia with 2 ad and 4-5 pd, apically with 4 bristles. Fore leg without claws, with elongated pulvilli slightly longer than tarsomere 5; mid and hind legs with 2 short claws and 2 small pulvilli. Relative length of legs LI 4.7: 2.4: 0.8: 0.5: 0.4: 0.4; LII 5.2: 2.9: 1.5: 1.0: 0.4: 0.6; LIII 6.7: 1.8: 1.9: 1.2: 0.7: 0.5. Wing slightly tinged with grayish; veins blackish, R4+5 and M parallel apically; CuAx ratio 0.5. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green with pale gray pollen; tergite 1 yellow except apical margin, tergite 2 with dark yellow transverse median band. Hairs and bristles on abdomen black; sternite 8 with 4 strong bristles. Male genitalia (Figs. 19): Epandrium with lateral lobe large and wide with 2 strong apical bristles; surstylus thick and weakly bent, apically extended dorsally with short hairs; cercus rather large with some strong marginal bristles, basally with quadrate dorsal lobe with 8 strong marginal bristles.

Female. Unknown.

Holotype male, Hainan: Xinglong, 1974. XII. 21, Chi-kun YANG. (CAU)

Distribution. China (Hainan).

Etymology. The species is named after the type locality Hainan.

Remarks. The new species is similar to *detectus* from the oriental region. In *detectus*, the antenna is reddish yellow (BECKER, 1922).

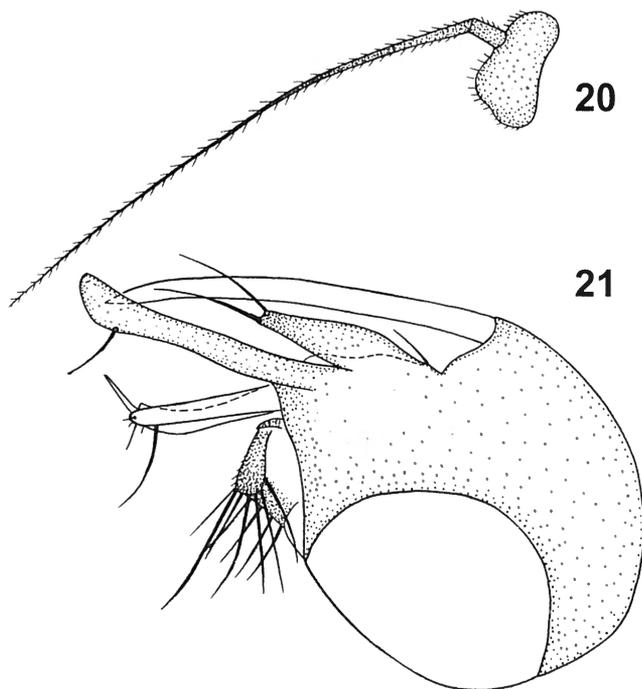
10. *Diaphorus nanpingensis* sp. nov. (Figs. 20-21)

Diagnosis. Eyes nearly contiguous on frons. Legs black, with elongated claws and pulvilli; fore and mid legs each with 1 claw, hind leg with 2 claws.

Male. Body length 4.0 mm, wing length 4.5 mm.

Head metallic green with pale gray pollen; eyes nearly contiguous on frons. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale. Ocellar tubercle with 2 long oc and 2 very short posterior hairs; 1 short vt. Antenna black; first flagellomere 0.6 times wider than long; arista black, very short pubescent, with basal segment rather short. Proboscis blackish, with black hairs; palpus blackish, with black hairs, apically with 1 long black bristle and 2 long black hairs.

Thorax metallic green with pale gray pollen. Hairs and bristles on thorax black; 5 strong dc, 7-8 irregularly paired acr short and hair-like; 1 h and 2 short hairs, 1 ph, 1 ih, 1 su, 2 npl, 2 sa, 1 psa; scutellum with two pairs of bristles (outer pair as long as 1/3 of inner pair). Propleuron with 1 long hair and 1 short hair on upper portion, 1 long hair and 1 long bristle on lower portion. Legs black. Hairs and bristles on legs black; fore coxa with 7 anterior and apical bristles; mid coxa with 2 anterior outer bristles, hind coxae with 1 outer bristle at base. Fore and mid femora each with a row of long posterior ventral hairs; hind femur with a row of 4 long v. Fore tibia apically with 3 bristles; mid tibia with 1 ad and 3 pd, apically with 4 bristles; hind tibia with 2 ad and 4 pd, apically with 4 bristles. Legs with elongated claws and pulvilli; fore and mid legs each with 1 claw; hind legs with 2 claws. Relative length of tibia and tarsal segments: LI 3.3: 2.0: 0.8: 0.65: 0.5: 0.5; LII 4.2: 2.2: 1.1: 0.7: 0.4: 0.5; LIII 5.2: 1.65: 1.3: 0.8: 0.6: 0.5. Wing hyaline; veins dark brown, R4+5 and M nearly parallel apically; CuAx ratio 0.4. Squama dark yellow with black hairs. Halter yellow.



Figs. 20-21 — *Diaphorus nanpingensis* sp. nov., male.
20. First flagellomere; 21. genitalia, lateral view.

Abdomen metallic green with pale gray pollen. Hairs and bristles on abdomen black; sternite 8 with 4 strong bristles. Male genitalia (Fig. 21): Epandrium with lateral lobe slightly narrow apically (with 2 long bristles); surstylus rather long and nearly straight, with 1 long sub-apical bristle; cercus small with some strong marginal bristles, with weak dorsal lobe.

Female. Unknown.

Holotype male, Sichuan: Nanping, 1987. VII. 15, Xiaochun Zhang. (CAU)

Distribution. China (Sichuan).

Etymology. The species is named after the type locality Nanping.

Remarks. The new species is similar to *parenti* STACKELBERG from China and Russia, but may be separated from the latter by having the abdominal tergite 5 normal without long hairs. In *parenti*, the abdominal tergite 5 has a bundle of long hairs on postero-lateral corner (YANG & GROOTAERT, 1999).

References

- BECKER, T. 1922. Dipterologische Studien, Dolichopodidae der Indo-Australischen Region. *Capita Zoologica*. 1(4): 1-247.
- DYTE, D. E. 1975. Family Dolichopodidae. In DELFINADO, M. D. & HARDY, D. E. (eds.): A catalog of the Diptera of the Oriental region. 2: 212-258. Honolulu.
- MASUNAGA, K. & SAIGUSA, T. 1998. A taxonomic study of the genus *Medetera* Fischer von Waldheim of Japan (Diptera: Dolichopodidae). *Entomological Science*. 1(4): 611-621.
- MEUFFELS, H. J. G. & GROOTAERT, P. 1997. A remarkable new sympycninae genus *Hercostomoides* from South Asia, with remarks on the genus *Telmaturgus* (Diptera, Dolichopodidae). *Studia Dipterologica*. 4(2): 473-478.
- NEGROBOV, O. P. 1968. A new genus and species of the Dolichopodidae (Diptera). *Zoologicheskij Zhurnal* 47(3): 470-473.
- NEGROBOV, O. P. 1978. Species of the group *Chrysotimus* FALLÉN (Dolichopodidae, Diptera) in the fauna of the USSR. *Zoologicheskij Zhurnal* 57(9): 1375-1381.
- NEGROBOV, O. P. 1991. Family Dolichopodidae. In SOOS, A. & PAPP, L. (eds.): Catalogue of Palearctic Diptera. 7: 11-139. Akademiai Kiado, Budapest.
- PARENT, O. 1925. Etude sur les espèces paléarctiques du genre *Diaphorus* MACQUART (Dipteres Dolichopodides). *Annales de la Société scientifique de Bruxelles*. 44: 221-294.
- PARENT, O. 1944. Dipteres Dolichopodidae recueillis en Chine du Nord, en Mongolie et en Mandchourie par le R. P. E. Licent. *Revue Française d'Entomologie*. 10(4): 121-131.

11. *Hercostomoides indonesianus* (HOLLIS)

Telmaturgus indonesianus HOLLIS, 1964. *Beaufortia* 10: 264. Type locality: Indonesia (Java).

Specimen examined. 1 male, Zhejiang: Anji, Longwangshan (1500 m), 1996. V. 13, Hong Wu.

Distribution. China (Zhejiang) Thailand, Vietnam, Philippine, Borneo, Indonesia.

For redescriptions, see MEUFFELS & GROOTAERT (1997)

Acknowledgments

Our sincere thanks are due to Prof. H. SHIMA and Assoc. Prof. O. YATA (Kyushu University, Fukuoka), Mr. K. MASUNAGA (Lake Biwa Museum, Shiga), and Dr. P. GROOTAERT (Royal Belgian Institute of Natural Sciences, Brussels) for their kind help in many ways. The first author is supported by the Japan Society for the Promotion of Science under Postdoctoral Fellowships for Foreign Researchers.

YANG, D. 1999. New and little known species of Dolichopodidae from China (IV). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Entomologie*. 69: 197-214.

YANG, D. & GROOTAERT, P. 1999. New and little known species of Dolichopodidae from China (V). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Entomologie*. 69: 215-232.

YANG, D. & SAIGUSA, T. 1999. New and little known species of Dolichopodidae from China (VI): Diptera from Emei Mountain (1). *Bulletin de l'Institut Royal des Sciences Naturelles de Belgique Entomologie*. 69: 233-250.

YANG, D. & SAIGUSA, T. 2000. New species of Dolichopodidae (Diptera: Empidoidea) from Henan. *Insects of Funiu Mountain*, Vol. 2.

Ding YANG *
Biosystematics Laboratory
Graduate School of Social and Cultural Studies
Kyushu University
Ropponmatsu, Fukuoka, 810-8560 Japan

Toyohei SAIGUSA
7-1-402, Baikoen 2-Chome
Fukuoka, 810-0035 Japan

(* Permanent address: Department of Entomology
China Agricultural University
Beijing 100094, China)