

Dolichopodidae (Diptera: Empidoidea) from Xishuangbanna (China, Yunnan province): the Dolichopodinae and the genus *Chaetogonopteron* (I)

by Ding YANG and Patrick GROOTAERT

Abstract

34 species of the medium-sized dolichopodids are reported from rain forests in the Yunnan province. 28 species are described as new to science: *Hercostomus (Gymnopternus) tenuilobus*, *Hercostomus (Hercostomus) absimilis*, *H. (H.) apicularis*, *H. (H.) apiciniger*, *H. (H.) bigeminatus*, *H. (H.) chaeturus*, *H. (H.) digitiformis*, *H. (H.) erectus*, *H. (H.) quadratus*, *H. (H.) xanthodes*, *H. (H.) xishuangbannensis*; *Pseudohercostomus sinensis*; *Paraclius incisus*, *P. longicercus*, *P. menglunensis*, *P. serrulatus*, *P. xanthocercus*; *Chaetogonopteron acutatum*, *C. apicinigrum*, *C. ceratophorum*, *C. concavum*, *C. dorsinigrum*, *C. minutum*, *C. pallantennatum*, *C. pallipilosum*, *C. seriatum*, *C. singulare*, *C. sublaetum*. A key is given for the genera *Hercostomus*, *Paraclius* and *Chaetogonopteron* occurring in the Xishuangbanna area.

Key words: Dolichopodidae, new species, Xishuangbanna, Yunnan, China

Introduction

The Xishuangbanna region possesses a number of quite pristine tropical rain forests, which are considered as being the largest nature reserves of China. Xishuangbanna is located in the Yunnan Province, Southwest China, on the northern border of Laos (Fig. 1). The fauna is very rich and it is said that three quarters of China's fauna occurs here. The fauna is considered to be Oriental but many Palaearctic genera especially of the Hybotidae and Empididae, are present here.

The present paper is the first one in a small series, based on a short collecting trip made by both authors together, halfway the dry season of 1999. We collected mainly in gallery forests covering small brooks and rivers. At this time of the season almost no Sciapodinae were found. Few attention was paid to collect species living on tree trunks, so that the number of Medeterine species is also low. We estimate that we collected about 60 dolichopodid species. Here we report on 34 species belonging to the following genera: *Hercostomus* (12 species), *Pseudohercostomus* (1), *Dolichopus* (1), *Phalacroscoma* (1), *Polymedon* (1), *Paraclius* (6) and *Chaetogonopteron* (12). Among them 28 species are described as new to science. Many other species of the smaller sized dolichopodids are still under study. They belong to the genera *Acropsilus*, *Teuchophorus*, *Systemus*, *Medetera*, *Parame-*

detera, *Diaphorus*, *Trigonocera*, *Chrysotus*, *Cryptophleps*, *Scepastopyga*, *Hercostomoides* and *Thinophilus*.

The only available study dealing with a number of dolichopodids of Xishuangbanna was made by BICKEL

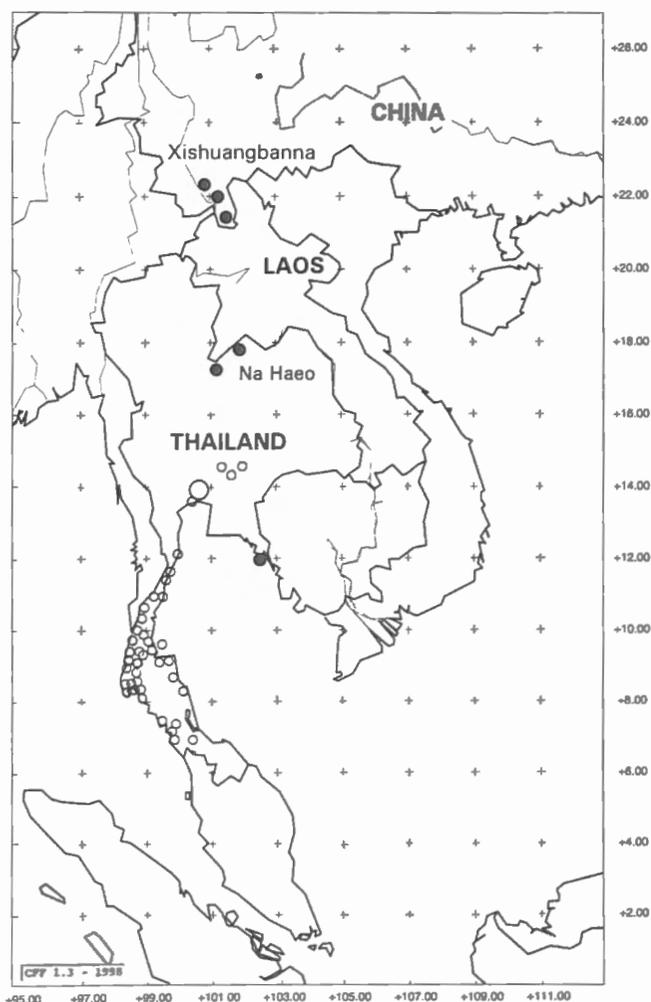


Fig. 1 – Map indicating the position of Xishuangbanna (Yunnan province, South China) and the areas where dolichopodids were collected in rain forests by the second author (P. G.) in 1999 (full circles) and in 1996-1998 (open circles).

Table I. — List of the localities in Xishuangbanna (Yunnan province) sampled for dolichopodids.

Register number	Locality	Date	Biotope	Comments
99058	Jinhong; Mengyang	5.III.1999	rain forest; secondary	
99059	Jinhong; Mengyang	5.III.1999	river; rain forest	pebbles, sunlit; polluted
99060	Jinhong; Mengyang	5.III.1999	river; rain forest	pebbles, mud; shaded
99061	Jinhong; Mengyang	5.III.1999	rain forest; secondary	tree trunks
99062	Jinhong; Mengyang	5.III.1999	rain forest; secondary	herbs, fallen leaves
99063	Jinhong; Mengyang	5.III.1999	river bed;	full sunlight
99064	Menghai	6.III.1999	brook	along road; shaded
99065	Menghai	6.III.1999	bamboo bush	perturbed
99066	Menghai	6.III.1999	brook	through rice field
99067	Menghai	6.III.1999	river bed	large river; sunlit
99068	Menghai	6.III.1999	river bed	vegetation along the river
99069	Menglun	7.III.1999	river bed;	shaded and sunlit zones
99070	Menglun	7.III.1999	sand dunes	in river bed
99071	Menglun	7.III.1999	river; rain forest; primary	shaded and sunlit zones (10.00-14.30)
99072	Menglun	7.III.1999	river bed	large river; sunlit
99073	Menglun	7.III.1999	river; rain forest; primary	same as 99071; 16.00-18.00
99074	Menglun	8.III.1999	river; polluted	green algae; sunlit
99075	Menglun	8.III.1999	river bed	open; shaded
99076	Mengla	8.III.1999	river bed	large river; sunlit
99077	Mengla	8.III.1999	river; rain forest	small river; shaded
99078	Mengla	9.III.1999	river bed	little polluted (cow dung)
99079	Mengla	9.III.1999	river bed	little polluted (cow dung)
99080	Mengla	9.III.1999	river bed	not polluted; border of rain forest
99081	Mengla	9.III.1999	rain forest; primary	
99082	Menglun	9.III.1999	river bed	flooding zone; bush
99083	Menglun	9.III.1999	river bed	large river; sunlit & shaded
99084	Menglun	10.III.1999	rain forest; secondary	Botanical garden
99085	Menglun	10.III.1999	rain forest; primary	
99086	Menglun	10.III.1999	rain forest; primary	
99087	Menglun	10.III.1999	river bed	cf. 99071
99088	Jinhong; Lanchan river	11.III.1999	pool	little polluted
99089	Jinhong; Lanchan river	11.III.1999	river banks; sandy	Lanchan river
99090	Mengyang	11.III.1999	river; rain forest; primary	in primary rain forest
99091	Mengyang	11.III.1999	rain forest; primary	

& WEI (1996). They reported the following 12 species from this region: Sciapodinae: *Condylostylus conspectus* BECKER, 1922, *C. luteicoxa* PARENT, 1929, *Chrysosoma leucopogon* (WIEDEMANN, 1824), *Chr. crinicornis* (WIEDEMANN, 1824), *Plagiozopelma medivittatum* BICKEL & WEI, 1996, *Pl. magniflavum* BICKEL & WEI, 1996, *Amblypsilopus flaviappendiculatum* (DE MEIJERE, 1910), *A. humilis* (BECKER, 1922), *A. pusillus* (MACQUART, 1842), *A. abruptus* (WALKER, 1859); Rhabdiinae: *Rhaphium eburnea* (PARENT, 1927); Dolichopodinae: *Lichtwardtia ziczac* (WIEDEMANN, 1824). Further, WEI (1997) published a paper on the genus *Hercostomus* of the Yunnan province. He found no less than 53 species, 51 being new for science. However, no species at all were reported from Xishuangbanna. Here we found 12 species of *Hercostomus*, but only one was previously described: *Hercostomus (H.) furcutus* WEI, 1997. This is an indication that many more unknown species are to be found in this region. WEI (l.c.) recognised a number of species groups within the genus *Hercostomus (Hercostomus)*. In addition we establish two new groups: the *absimilis* group and the *itamus* group.

Material and methods

Material was collected by net sweeping only. The biotopes sampled were mainly the borders of small brooks and rivers covered by gallery forest. The altitudes at which we collected ranged between 350 and 700 m. Details on the sampling stations can be found in Table I. Most specimens are preserved in alcohol. The holotypes of the new species are all deposited in the Insect Collection of China Agricultural University (CAU) in Beijing. The paratypes collected by Ding YANG are also conserved in the Insect Collection of China Agricultural University (CAU), those by Patrick GROOTAERT in the collection of the Royal Belgian Institute of Natural Sciences (IRSN) in Brussels. The latter specimens are mentioned in the list of examined material with a register number.

Systematic account

Subfamily Dolichopodinae

The genus *Hercostomus*

Key to species of *Hercostomus* from Xishuangbanna

1. Pteropleuron without hairs; R4+5 and M convergent apically: *Hercostomus (Hercostomus)* 2
 - Pteropleuron with some short hairs just in front of postspiracle; R4+5 and M parallel apically; lateral lobe on epandrium rather narrow, with apex curved downward . . . *H. (Gymnopternus) tenuilobus* sp. nov.
2. Thorax largely yellow to brownish yellow; abdomen partly yellow basally 3

- Thorax wholly metallic green; abdomen wholly metallic green 5
- 3. Scape wholly black; 5 dc 4
 - Scape dark yellow ventrally; 6 dc *xishuangbannensis* sp. nov.
- 4. First flagellomere as long as wide (Fig. 15); arista subapical *apiciniger* sp. nov.
 - First flagellomere longer than wide (Fig. 21); arista subdorsal *xanthodes* sp. nov.
- 5. First flagellomere acute apically (Figs 11, 17) ... 6
 - First flagellomere obtuse apically 7
- 6. Metapleuron yellow *chaeturus* sp. nov.
 - Pleura wholly metallic green *digitiformis* sp. nov.
- 7. Arista nearly apical (Fig. 13) 8
 - Arista subapical or dorsal 9
- 8. Scape black with brownish yellow ventral surface; hind coxa blackish *furcutus* WEI, 1997
 - Scape yellow with black dorsal surface; hind coxa yellow *apicularis* sp. nov.
- 9. Antenna wholly black; fore and mid femora without erect ventral hairs 10
 - Scape and pedicel yellow with blackish dorsal surface; fore and mid femora with some erect ventral hairs *erectus* sp. nov.
- 10. Only mid coxa (except tip) blackish 11
 - Mid and hind coxae (except apex) blackish; fore tarsomeres 3-5 weakly thickened, tarsomeres 4-5 white *absimilis* sp. nov.
- 11. Hind femur with brown apex *bigeminatus* sp. nov.
 - Hind femur not darkened apically *quadratus* sp. nov.

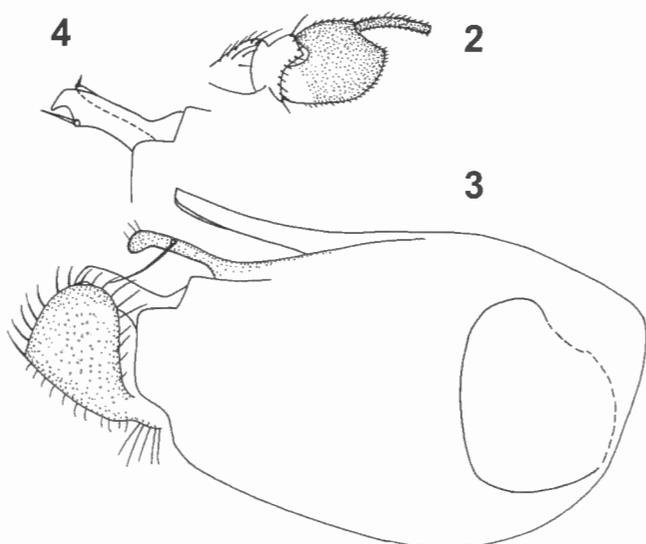
Only one species, *Hercostomus (Gymnopternus) tenuilobus* belongs to the subgenus *Gymnopternus*. The other species belong to the subgenus *Hercostomus s.s.*

1. *Hercostomus (Gymnopternus) tenuilobus* sp. nov. (Figs. 2-4)

Diagnosis. Postocular bristles wholly black. Antenna brownish yellow, first flagellomere dark brown with baso-ventral area brownish yellow. Scutellum with some short hairs. Fore and mid coxae blackish to black. Lateral lobe on epandrium rather narrow and apically curved downward.

Male. Body length 3.3 mm, wing length 3.5 mm.

Head metallic green, with pale grey pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles wholly black, ventral hairs pale yellow. Antenna (Fig. 2) brownish yellow, first flagellomere dark brown with baso-ventral area brownish yellow; first flagellomere rather short (1.2 times as long as wide), apically obtuse; arista (apical segment broken off) dark brown. Proboscis brownish yellow and palpus dark brownish yellow, with black hairs.



Figs. 2-4 – *Hercostomus (Gymnopternus) tenuilobus* sp. nov., male. 2. antenna (lateral view); 3. genitalia, lateral view; 4. surstylus, lateral view.

Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 8-9 irregularly paired acr, short and hair-like, 5 strong dc. Scutellum with pale short hairs on dorsal surface and apical margin. Propleuron pale haired with 1 bristle on lower part.

Legs yellow; fore and mid coxae blackish to black, hind coxa yellow; tarsi brownish yellow apically. Hairs and bristles on legs black. Fore coxa with 4 strong lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 1 ad, 2 pd and 1 very short av; mid tibia with 3 ad, 2 pd and 1 av; hind tibia with 3 ad, 3 pd and 2 av. Relative lengths of segments of legs LI 3.7: 1.8: 0.8: 0.7: 0.4: 0.3; LII 5.0: 2.2: 1.3: 1.1: 0.8: 0.4; LIII 5.9: 1.7: 2.1: 1.3: 0.9: 0.55.

Wing nearly hyaline; veins dark brown, R4+5 and M parallel apically; CuAx ratio 0.7. Squama yellow with black hairs. Halter pale yellow.

Abdomen metallic green, with pale grey pollen; hairs black. Male genitalia (Figs 3, 4): Epandrium distinctly longer than wide, its lateral lobe rather narrow and apically curved downward; cercus rather large and obtuse apically; hypandrium rather narrow and nearly straight.

Female. Unknown.

Holotype male, Yunnan: Jinhong, Mengyang, 1999. III.5, (99060, leg. P. GROOTAERT).

Distribution. China (Yunnan).

Etymology. The name refers to the narrow epandrial lobe.

Remarks. This new species is somewhat similar to *H. (G.) malthinus* WEI, 1997 from Guizhou, but may be separated

from the latter by the hind tibia having 3 pd and the lateral lobe on the epandrium curved downward. In *H. (G.) malthinus*, the hind tibia has 5 pd and the lateral lobe on the epandrium is curved upward.

Hercostomus (Hercostomus) absimilis group

Diagnosis. Antenna wholly black; first flagellomere rather short and obtuse apically. Epandrium with much expanded lateral lobe and 2 apico-lateral projections; cercus large, apically rather wide.

This group includes the three following species: *H. absimilis*, *H. bigeminatus*, and *H. quadratus*.

2. *Hercostomus (Hercostomus) absimilis* sp. nov. (Figs. 5-6)

Diagnosis. Postocular bristles wholly black. Antenna wholly black; first flagellomere rather short with obtuse apex. Fore tarsomeres 3-5 slightly thickened with tarsomeres 4-5 white. Epandrium with very large lateral lobe and 2 long apico-lateral spines distinctly different in shape; cercus nearly quadrate.

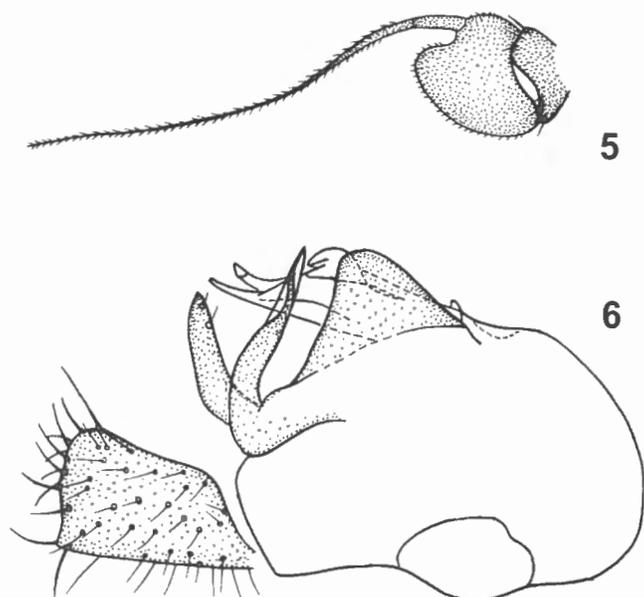
Male. Body length 2.6-2.7 mm, wing length 2.7-2.9 mm. Head metallic green, with pale grey pollen; face as wide as first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 5) entirely black; first flagellomere rather short (as long as wide), obtuse apically; arista black with basal segment 0.15 times as long as apical segment. Proboscis dark yellow and palpus dark brown, with black hairs.

Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 5-6 irregularly paired acr short and hair-like, 6 strong dc. Propleuron black haired with 1 bristle on lower part.

Legs yellow; fore coxa yellow, mid and hind coxae (except at apex) blackish. Hind femur with black tip; tarsi from tip of tarsomere 1 onward dark brown to black; fore tarsomeres 3-5 slightly thickened with tarsomeres 4-5 white. Hairs and bristles on legs black. Fore coxa with 4-5 strong lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 1 ad and 2 pd; mid tibia with 2-3 ad, 2 pd and 1 av; hind tibia with 3-4 ad, 4 pd and 5 av. Relative lengths of segments of legs LI 3.3: 2.1: 1.2: 0.8: 0.5: 0.4; LII 4.4: 2.6: 1.4: 1.1: 0.7: 0.45; LIII 5.4: 1.4: 2.0: 1.2: 0.9: 0.6.

Wing slightly tinged with greyish; veins dark brown, R4+5 and M convergent apically; CuAx ratio 0.6. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs black. Male genitalia (Fig. 6): Epandrium longer than wide, with 2 long apico-lateral spines rather different in shape, its lateral lobe very large; cercus nearly quadrate; hypandrium irregularly furcate.



Figs. 5-6 — *Hercostomus (Hercostomus) absimilis* sp. nov., male. 5. antenna (excluding scape), lateral view; 6. genitalia, lateral view.

Female. Body length 2.6 mm; wing length 3.1 mm. Similar to male, but face wider than first flagellomere.

Holotype male: Yunnan: Jinghong, Mengyang, 1999. III. 11, Ding YANG (CAU). *Paratypes:* Mengyang, 1999. III. 11, 2 males, 1 female (leg. Ding YANG, CAU); Mengyang, 1999. III 5, 10 males (99060), 1 male (99062), 1999. III 11, 1 male; Mengla, 1999. III 8, 1 male (99077).

Distribution. China (Yunnan).

Etymology. The name refers to the 2 apico-lateral spines on epandrium, distinctly different in shape.

Remarks. This new species is similar to *H. bigeminatus* sp. nov. and *H. quadratus* sp. nov. in having a large lateral lobe and 2 apico-lateral spines (or projections) on epandrium. It may be easily separated from them by having mid and hind coxae (except apex) blackish and fore tarsomeres 3-5 weakly thickened with tarsomere 4-5 white. In *H. bigeminatus* and *H. quadratus*, only mid coxa (except at apex) is blackish; fore tarsus is normal.

3. *Hercostomus (Hercostomus) bigeminatus* sp. nov. (Figs. 7-8)

Diagnosis. Postocular bristles wholly black. Antenna wholly black; first flagellomere rather short, with obtuse apex. Epandrium with very large lateral lobe and 2 long apico-lateral spines somewhat similar in shape.

Male. Body length 2.7-3.0 mm, wing length 2.7-2.9 mm. Head metallic green, with pale grey pollen; face narrower than first flagellomere. Hairs and bristles on head black;

postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 7) entirely black; first flagellomere rather short (as long as wide), obtuse apically; arista black, with basal segment 0.25 times as long as apical segment. Proboscis dark yellow and palpus yellow, with black hairs.

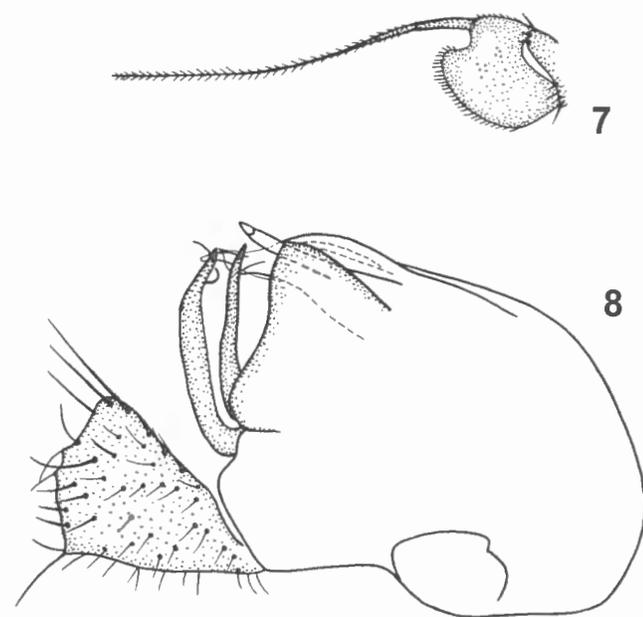
Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 6-7 irregularly paired acr short and hair-like, 6 strong dc. Propleuron black haired with 1 bristle on lower part.

Legs yellow; all coxae yellow, mid coxa tinged with blackish on outer surface. Hind femur with brown tip; fore tarsus yellow, from tip of tarsomere 1 onward brownish, mid and hind tarsi from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black. Fore coxa with 5 lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 1 ad and 2 pd; mid tibia with 3 ad, 2 pd and 1 av; hind tibia with 4 ad, 4 pd and 3 av. Relative lengths of segments of legs LI 3.2: 2.0: 1.1: 0.75: 0.4: 0.4; LII 4.3: 2.4: 1.4: 1.1: 0.75: 0.4; LIII 5.8: 1.5: 1.9: 1.2: 0.9: 0.6.

Wing slightly tinged with greyish; veins brown to dark brown, R4+5 and M convergent apically; CuAx ratio 0.5. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs black. Male genitalia (Fig. 8): Epandrium longer than wide, with 2 long apico-lateral spines somewhat similar in shape, its lateral lobe very large; cercus widest apically and tapering toward base; hypandrium irregularly furcate.

Female. Unknown.



Figs. 7-8 — *Hercostomus (Hercostomus) bigeminatus* sp. nov., male. 7. antenna (excluding scape), lateral view; 8. genitalia, lateral view.

Holotype male: Yunnan: Mengyang (type locality), 1999.III. 11, Ding YANG (CAU).

Paratypes: Yunnan: Mengyang, 1999.III. 11, 6 males, Ding YANG, 5 males (99090); Mengyang, 1999.III. 5, 7 males (99060); Menglun, 1999. III. 7, 16 males, Ding YANG, 7 males (99071), 2 males (99073); Menglun, 1999. III. 10, 5 males, Ding YANG; Mengla, 1999. III. 8, 2 males, Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to the 2 apico-lateral spines on epandrium somewhat similar in shape.

Remarks. This new species is very similar to *H. absimilis* sp. nov., but may be separated from the latter by having only the mid coxa (except at apex) blackish and the two apico-lateral spines on epandrium somewhat similar in shape.

4. *Hercostomus (Hercostomus) quadratus* sp. nov. (Figs. 9-10)

Diagnosis. Antenna wholly black; first flagellomere rather short with obtuse apex. Epandrium with very large lateral lobe and 2 apico-lateral projections different in shape; cercus very large and nearly quadrate.

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

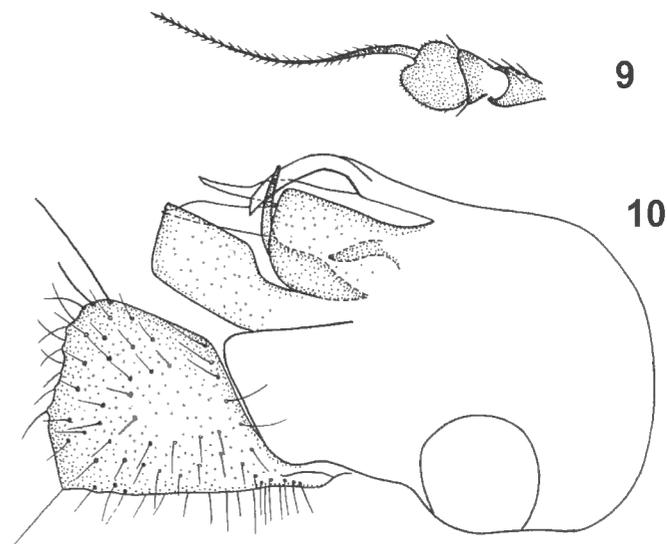
Head metallic green, with pale grey pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna entirely black; first flagellomere rather short (as long as wide), obtuse apically; arista black with basal segment 0.13 times as long as apical segment. Proboscis yellow and palpus dark brown, with black hairs.

Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 5-6 irregularly paired acr short and hair-like, 6 strong dc. Propleuron black haired with 1 bristle on lower part.

Legs [mid and hind tarsomeres 2-5 broken] yellow; fore and hind coxae yellow, mid coxa (except at apex) blackish; hind tibia with brown tip; fore tarsus from tip of tarsomere 1 onward brown to dark brown; hind tarsomere 1 with brown tip; hind tarsomere 1 black. Hairs and bristles on legs black. Fore coxa with 5 lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 1 ad and 2 pd; mid tibia with 3 ad, 2 pd and 1 av; hind tibia with 3 ad, 4 pd and 3 av.

Wing slightly tinged with greyish; veins brown, R4+5 and M convergent apically; CuAx ratio 0.55. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs black. Male genitalia (Fig. 10): Epandrium longer than wide, apically with 1 very large apico-lateral projection



Figs. 9-10 — *Hercostomus (Hercostomus) quadratus* sp. nov., male. 9. antenna, lateral view; 10. genitalia, lateral view.

nearly quadrate apically and 1 curved apico-lateral inner spine, its lateral lobe very large; cercus rather large and nearly quadrate; hypandrium irregularly furcate.

Female. Unknown.

Holotype male: Yunnan: Menglun (type locality), 1999. III. 10, Ding YANG (CAU).

Distribution. China (Yunnan).

Etymology. The name refers to the nearly quadrate cercus.

Remarks. This new species is similar to *H. bigeminatus* sp. nov. and *H. absimilis* sp. nov., but may be separated from them by having the 2 apico-lateral projections on epandrium rather different in shape.

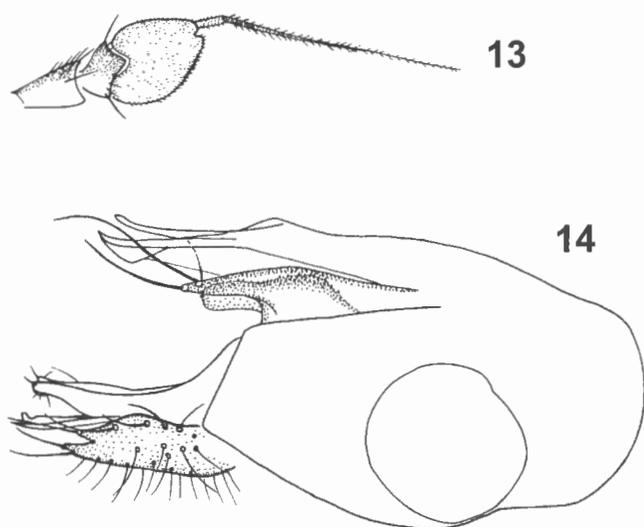
Hercostomus (Hercostomus) digitiformis group

Diagnosis. Antenna wholly black; first flagellomere acute apically. Lateral lobe on epandrium located medially, thin and apically haired; cercus with some denticles; hypandrium much elongated, with a long lateral arm slightly curved and apically acute.

This group includes 2 species: *digitiformis* and *itamus*.

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

Diagnosis. Postocular bristles wholly black. Antenna wholly black; first flagellomere weakly elongated, with acute apex. CuAx ratio 0.9. Cercus large and curved apically with some marginal denticles.



Figs. 13-14 — *Hercostomus (Hercostomus) apicilaris* sp. nov., male. 13. antenna, lateral view; 14. genitalia, lateral view.

longer than wide, apically truncate obliquely, its lateral lobe distinct with 3 bristles apically; cercus with two short apical denticles; hypandrium apically nearly acute.

Female. Unknown.

Holotype male: Yunnan: Menglun (type locality), 1999.III. 7, Ding YANG (CAU).

Paratypes: Menglun, 1999.III. 7, 1 male, Ding YANG; Menglun, 1999, III. 10, 6 males, Ding YANG, 1 male (99087, leg. P. GROOTAERT); Mengla, 1999. III. 8, 1 male, Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to the nearly apical arista.

Remarks. This new species is similar to *H. furcutus* WEI, 1997 from South China, but may be separated from the latter by having the scape yellow with black dorsal surface and the hind coxa yellow. In *H. furcutus*, the scape is black with brownish yellow ventral surface; the hind coxa is blackish.

7. *Hercostomus (Hercostomus) apiciniger* sp. nov.
(Figs. 15-16)

Diagnosis. First flagellomere rather short (nearly as long as wide), apically obtuse. Thorax largely dark brownish yellow; abdomen partly yellow basally. Apex of hind femur black.

Male. Body length 2.4-2.8 mm, wing length 2.2-2.4 mm.

Head metallic green, with pale grey pollen; face slightly narrower than first flagellomere. Hairs and bris-

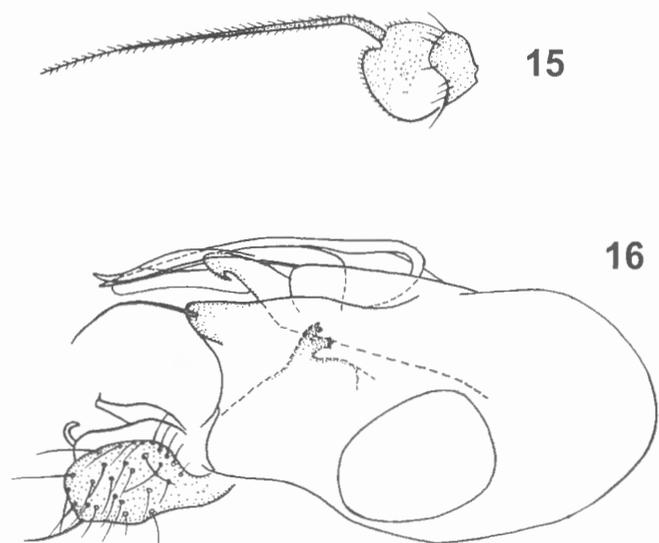
gles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 15) black; first flagellomere with ventro-basal area brownish yellow, rather short (nearly as long as wide), obtuse apically; arista black, with basal segment 0.15 times as long as apical segment. Proboscis and palpus dark brownish yellow, with black hairs.

Thorax metallic green, with pale grey pollen; mesonotum with narrow anterior part and wide lateral part dark brownish yellow (pale lateral part narrower posteriorly); pleura dark brownish yellow, with yellow metapleuron. Hairs and bristles on thorax black; 4-5 irregularly paired acr, short and hair-like, 5 strong dc. Propleuron black haired with 1 black bristle on lower part.

Legs yellow; all coxae yellow; hind femur with black apex; all tarsi from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black. Fore coxa with 4 bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora with 1 preapical bristle. Fore tibia with 1 ad and 2 pd; mid tibia with 3 ad, 2 pd and 1 av; hind tibia with 3 ad, 3 pd and 3 thin av. Relative lengths of segments of legs LI 2.9: 1.3: 0.85: 0.8: 0.5: 0.4; LII 4.0: 2.0: 1.1: 1.0: 0.6: 0.4; LIII 4.8: 1.2: 1.7: 1.1: 0.8: 0.45.

Wing weakly tinged with greyish; veins dark brown, R4+5 and M distinctly convergent apically; CuAx ratio 0.6. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; tergum 1 wholly yellow; terga 2-3 yellow laterally, tergum 4 with posterolateral corner yellow, sterna 1-6 yellow; hypopygium yellow with black basal part. Hairs on abdomen black. Male genitalia (Fig. 16): Epandrium distinctly longer than wide, rather wide apically, its lateral lobe rather short and not distinctly separated from epandrium; cercus somewhat quadrate; hypandrium irregularly branched.



Figs. 15-16 — *Hercostomus (Hercostomus) apiciniger* sp. nov., male. 15. antenna (excluding scape), lateral view; 16. genitalia, lateral view.

Female. Unknown.

Holotype male: Yunnan: Mengla (type locality), 1999.III. 8, Ding YANG (CAU).

Paratypes: Mengla, 1999.III. 8, 1 male, Ding YANG; Menglun, 1999.III. 7, 2 males (99071), 1 male (99073).

Distribution. China (Yunnan).

Etymology. The name refers to the hind femur with black apex.

Remarks. This new species is somewhat similar to *H. xanthodes* sp. nov., but may be separated from the latter by having the first flagellomere as long as wide; arista subapical. In *H. xanthodes*, the first flagellomere is longer than wide; the arista is subdorsal.

8. *Hercostomus (Hercostomus) chaeturus* sp. nov.
(Figs. 17-18)

Diagnosis. Postocular bristles wholly black. Antenna wholly black; first flagellomere somewhat elongated, with acute apex. Metapleuron yellow. CuAx ratio 0.9-1.0. Cercus elongate and band-like with strong bristles apically.

Male. Body length 3.9-4.1 mm, wing length 4.0-4.3 mm.

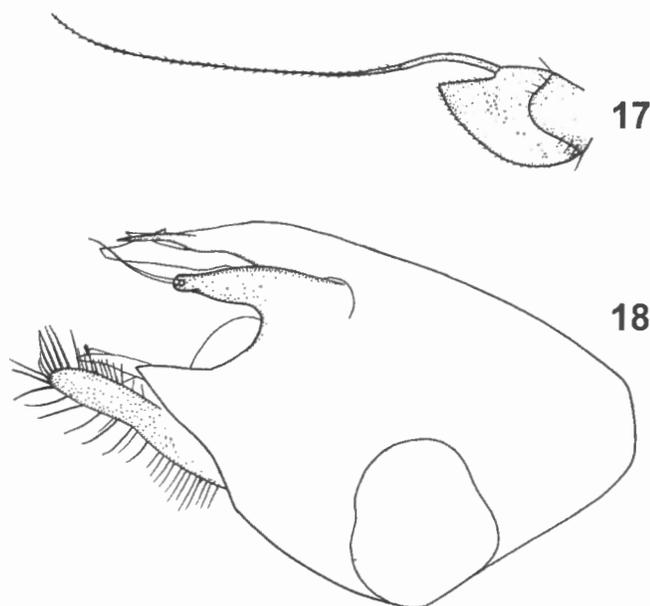
Head metallic green, with pale grey pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 17) entirely black; first flagellomere somewhat elongated (1.5 times longer than wide), acute apically; arista black with basal segment 0.3 times as long as apical segment. Proboscis and palpus yellow, with black hairs.

Thorax metallic green, with pale grey pollen; metapleuron yellow. Hairs and bristles on thorax black; 8-9 irregularly paired acr short and hair-like, 6 strong dc. Propleuron pale haired with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa partly tinged with black on outer surface; hind femur with dark brown tip; hind tibia dark yellow; fore tarsus yellow with tarsomere 5 brown, mid and hind tarsi brown to dark brown. Hairs and bristles on legs black. Fore coxa with 6 lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 1 ad and 2 pd; mid tibia with 3-4 ad, 2-3 pd and 2 av; hind tibia with 3-4 ad, 4 pd, 5 thin or thick av. Relative lengths of segments of legs LI 5.0: 2.3: 1.2: 0.9: 0.4: 0.5; LII 6.8: 3.2: 2.0: 1.4: 1.0: 0.6; LIII 7.8: 2.1: 3.1: 1.8: 1.1: 0.7.

Wing slightly tinged with greyish; veins brown to dark brown, R4+5 and M strongly convergent apically; CuAx ratio 0.9-1.0. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs



Figs. 17-18 — *Hercostomus (Hercostomus) chaeturus* sp. nov., male. 17. antenna (excluding scape), lateral view; 18. genitalia, lateral view.

black. Male genitalia (Fig. 18): Epandrium longer than wide with acute apex, its lateral lobe rather large with 1 strong apical bristle; cercus distinctly elongated and band-like, apically with some strong bristles; hypandrium with an acute narrow lateral arm.

Female. Body length 4.1-4.7 mm; wing length 4.3-4.5 mm. Similar to male, but face wider than first flagellomere.

Holotype male: Yunnan: Menglun (type locality), 1999. III. 7, Ding YANG (CAU).

Paratypes: Menglun, 1999. III. 7, 3 males 5 females, Ding YANG; 2 males, 6 females (99071, leg. P. GROO-TAERT), 3 males, 1 female (99073); 1999. III. 10, 9 males, Ding YANG, 1 male (99087); Mengyang, 1999. III. 11, 4 males 1 female, Ding YANG; Mengla, 1999. III. 8, 1 male, 3 females, Ding YANG; 1 male (99077), 1 male (99079).

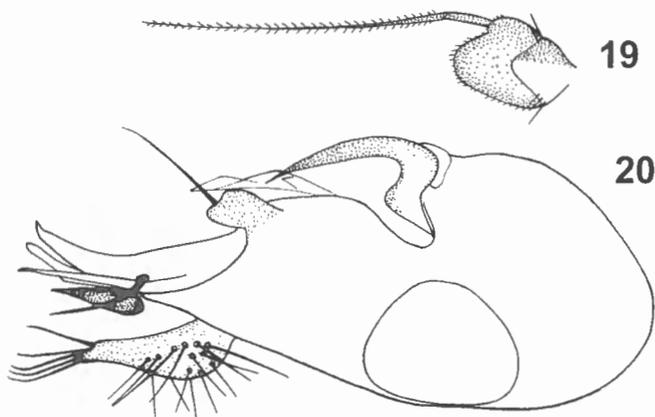
Distribution. China (Yunnan).

Etymology. The name refers to the band-like cercus with strong bristles apically.

Remarks. This species is similar to *H. jinxiuensis* YANG from Guangxi. In *H. jinxiuensis*, the mid and hind coxae are black (YANG, 1997).

9. *Hercostomus (Hercostomus) erectus* sp. nov.
(Figs. 19-20)

Diagnosis. Antennal scape and pedicel yellow with



Figs. 19-20 — *Hercostomus (Hercostomus) erectus* sp. nov., male. 19. antenna (excluding scape), lateral view; 20. genitalia, lateral view.

blackish dorsal surface; first flagellomere wholly black, rather short with obtuse apex. Fore and mid femora with several erect ventral hairs basally.

Male. Body length 2.8-3.1 mm, wing length 2.7-3.0 mm.

Head metallic green, with pale grey pollen; face distinctly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 19): scape and pedicel yellow with blackish dorsal surface; first flagellomere wholly black, rather short (as long as wide), obtuse apically; arista black with basal segment 0.15 times as long as apical segment. Proboscis dark yellow and palpus yellow, with black hairs.

Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 5-6 irregularly paired acr short and hair-like, 6 strong dc. Propleuron black haired with 1 bristle on lower part.

Legs yellow; fore and hind coxae yellow, mid coxa (except narrowly at apex) brown or blackish. Hind femur with dark brown tip; mid tarsus from tip of tarsomere 1 onward dark brown to black; hind tarsus dark brown to black. Hairs and bristles on legs black. Fore coxa with 4 strong lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore and mid femora with several erect ventral hairs basally. Fore tibia with 1 ad and 2 pd; mid tibia with 3 ad, 2 pd and 1 av; hind tibia with 3 ad, 4 pd and 4 thin av. Relative lengths of segments of legs LI 3.4: 1.8: 0.9: 0.8: 0.6: 0.5; LII 4.5: 2.2: 1.3: 1.1: 0.8: 0.6; LIII 5.8: 1.4: 1.9: 1.2: 1.0: 0.7.

Wing slightly tinged with greyish; veins dark brown, R4+5 and M convergent distinctly apically; CuAx ratio 0.5. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs black. Male genitalia (Fig. 20): Epandrium much longer than wide, with acute lower apical corner and obtuse upper apical corner bearing 1 long bristle; cercus with bare apical part (but only apical margin with 5 strong bristles), hypandrium curved and spine-like.

Female. Unknown.

Holotype male: Yunnan: Menglun (type locality), 1999. III. 7, Ding YANG.

Paratypes: Menglun, 1999.III. 10, 7 males, Ding YANG; 2 males (99086), 4 males (99087); 1999.III. 7, 1 males (99071), 1 male (99073); Mengla, 1999.III. 8, 1 male (99077); 1999.III. 9, 2 males (99080).

Distribution. China (Yunnan).

Etymology. The name refers to the fore and mid femora with some erect ventral hairs.

Remarks. This new species is similar to *H. solutus* WEI from Guizhou. In *H. solutus*, the cercus is entirely haired; the hind coxa is mostly dark brown (WEI, 1997).

10. *Hercostomus (Hercostomus) furcutus* WEI

Hercostomus (Hercostomus) furcutus WEI, 1997, J. Guizhou Agric. Coll. 16(2): 48. Type locality: Guizhou.

Material examined: Yunnan: Menglun, 1999. III. 10, 4 males, 2 females, Ding YANG.

Distribution: China (Yunnan, Sichuan, Guizhou).

11. *Hercostomus (Hercostomus) xanthodes* sp. nov. (Figs. 21-22)

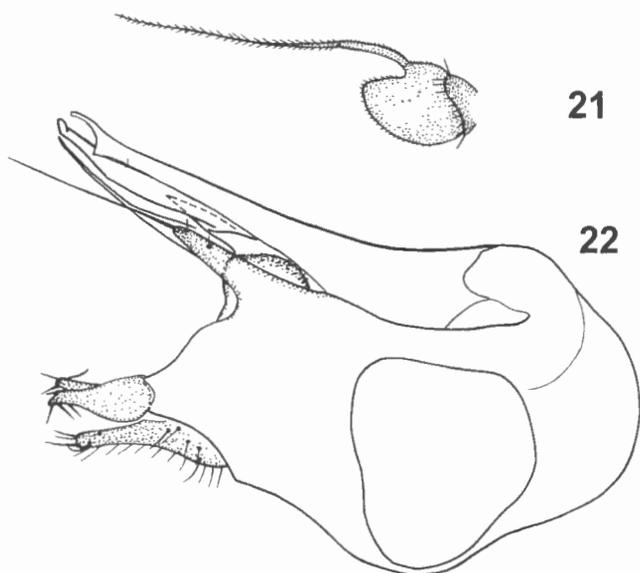
Diagnosis. First flagellomere weakly elongated (1.2 times longer than wide), obtuse apically. Thorax largely yellow; abdomen partly yellow basally.

Male. Body length 2.3-2.8 mm, wing length 2.6-2.8 mm.

Head metallic green, with pale grey pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 21) entirely black; first flagellomere rather short (1.2 times longer than wide), obtuse apically; arista black with basal segment 0.3 times as long as apical segment. Proboscis dark yellow and palpus dark brown, with black hairs.

Thorax yellow; mesonotum metallic green posteriorly; scutellum and postnotum metallic green; pteropleuron, laterotergite, upper and posterior margin of mesopleuron blackish. Hairs and bristles on thorax black; 6-7 irregularly paired acr short and hair-like, 5 strong dc. Propleuron pale haired with 1 black bristle on lower part.

Legs yellow; all coxae yellow; hind femur with brown or dark brown tip; fore tarsus nearly yellow, mid and hind tarsomeres 2-5 brown to dark brown. Hairs and bristles on legs black. Fore coxa with 6 strong or weak lateral and apical bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle.



Figs. 21-22 — *Hercostomus (Hercostomus) xanthodes* sp. nov., male. 21. antenna (excluding scape), lateral view; 22. genitalia, lateral view.

Fore tibia with 1 ad and 2 pd; mid tibia with 3 ad, 2 pd and 2 av; hind tibia with 3 ad, 3 pd and 5 av. Relative lengths of segments of legs LI 3.2: 1.6: 1.0: 0.75: 0.55: 0.5; LII 4.6: 2.1: 1.7: 1.2: 0.9: 0.6; LIII 5.5: 1.2: 2.3: 1.55: 1.1: 0.7. Wing weakly tinged with greyish; veins dark brown, R4+5 and M convergent apically; CuAx ratio 0.5. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; tergum 1 yellow, with narrow median part black, tergum 2 yellow laterally, sterna 1-2 yellow; hairs on abdomen black. Male genitalia (Fig. 22): Epandrium distinctly longer than wide, rather narrow apically, its lateral lobe finger-like, with 1 very long apical bristle; cercus rather narrow and nearly finger-like; hypandrium distinctly elongated and irregularly furcate.

Female. Body length 2.7-2.9 mm, wing length 2.7-3.1 mm. Similar to male, but tergum 3 yellow, with a black median spot, and anterior margin of tergum 4 yellow, sterna 1-3 yellow.

Holotype male: Yunnan: Menglun, 1999.III. 10, Ding YANG (CAU).

Paratypes: Menglun, 1999.III. 10, 2 males, 1 female, Ding YANG; 1999. III. 7, 3 males 2 females Ding YANG; 2 males (99071).

Distribution. China (Yunnan).

Etymology. The name refers to the largely yellow thorax.

Remarks. This new species is very similar to *H. curvativus* YANG et SAIGUSA from Emei Mountain, Sichuan. It may be distinguished from the latter by having the

wholly black antenna and scutellum. In *H. curvativus*, the antennal scape and pedicel are dark brownish yellow; the scutellum has a yellow margin (YANG & SAIGUSA, 1999).

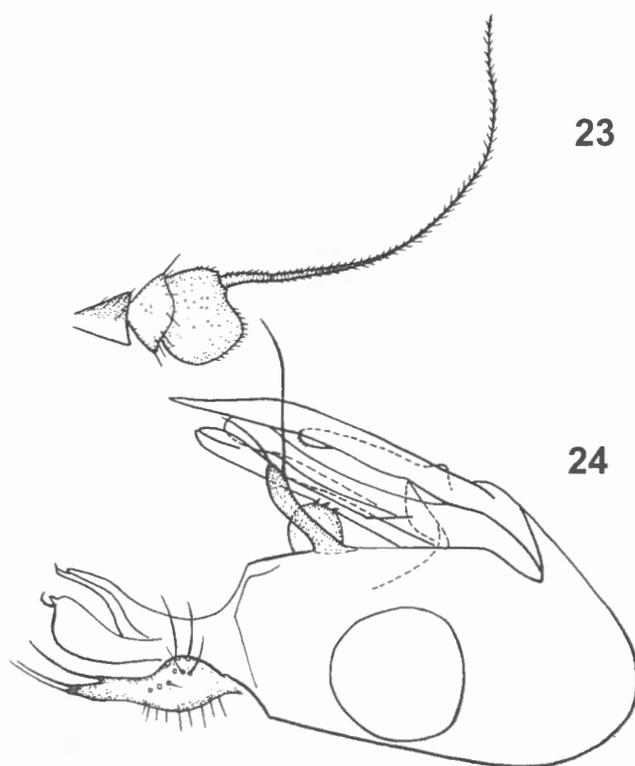
12. *Hercostomus (Hercostomus) xishuangbannensis* sp. nov.
(Figs. 23-24)

Diagnosis. First flagellomere rather short (nearly as long as wide), obtuse apically. Thorax largely dark yellow; abdomen partly yellow basally. Apices of hind femur and tibia blackish or dark brown.

Male. Body length 2.5 mm, wing length 2.4 mm.

Head metallic green, with pale grey pollen; face rather narrow, distinctly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 23) black with scape dark yellow ventrally; first flagellomere rather short (nearly as long as wide), obtuse apically; arista black, with basal segment 0.13 times as long as apical segment. Proboscis dark brownish yellow and palpus dark brown, with black hairs.

Thorax dark yellow with pale grey pollen; mesonotum with a subtriangular median metallic green spot (which is somewhat pale anteriorly); scutellum and metanotum metallic green; pteropleuron and laterotergite blackish. Hairs and bristles on thorax black; 5-6 irregularly paired



Figs. 23-24 — *Hercostomus (Hercostomus) xishuangbannensis* sp. nov., male. 23. antenna, lateral view; 24. genitalia, lateral view.

acr, short and hair-like, 6 strong dc. Propleuron black haired with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a indistinct brown outer spot; apex of hind femur blackish, apex of hind tibia dark brown; mid tarsus from tip of tarsomere 1 onward brown to dark brown, hind tarsus wholly dark brown. Hairs and bristles on legs black. Fore coxa with 4-5 bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora with 1 preapical bristle. Fore tibia with 1 ad and 2 pd; mid tibia with 3 ad and 2 pd; hind tibia with 3 ad, 3 pd and 4 thin av. Relative lengths of segments of legs LI 2.9: 1.3: 0.9: 0.8: 0.4: 0.45; LII 4.0: 2.0: 1.2: 1.1: 0.7: 0.4; LIII 4.9: 1.2: 1.7: 1.1: 0.8: ?.

Wing weakly tinged with greyish; veins dark brown, R4+5 and M convergent apically; CuAx ratio 0.5. Squama dark yellow with black hairs. Halter dark yellow.

Abdomen metallic green, with pale grey pollen; tergum 1 dark yellow, with mid-posterior area dark brown; terga 2-3 yellow laterally, sterna 1-3 yellow; hypopygium largely yellow. Hairs on abdomen black. Male genitalia (Fig. 24): Epandrium distinctly longer than wide, rather wide apically, its lateral lobe weakly curved, with 2 apical bristles; cercus narrowing toward tip, with weak denticles; hypandrium irregularly branched.

Female. Unknown.

Holotype male: Yunnan: Menglun, 1999.III. 7, Ding YANG.

Distribution. China (Yunnan).

Etymology. The new species is named after its region of origin Xishuangbanna.

Remarks. This new species is somewhat similar to *H. apiciniger* sp. nov. and *H. xanthodes* sp. nov., but may be separated from them in following points: antenna blackish with scape dark yellow ventrally, 6 dc; in *H. apiciniger* and *H. xanthodes*, the antenna is wholly black and they have 5 dc.

The genus *Pseudohercostomus*

13. *Pseudohercostomus sinensis* sp. nov. (Figs. 25-27)

Diagnosis. Scape without bristles. R4+5 and M parallel apically. Cercus very long.

Male. Body length 3.7 mm, wing length 4.1 mm.

Head metallic green, with pale grey pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) wholly black. Antenna (Fig. 25) yellow; first flagellomere dark brownish yellow, rather short (nearly as long as wide), obtuse apically; arista blackish, with basal segment 0.12 times as long as apical segment. Proboscis brown and palpus yellow, with black hairs.

Thorax metallic green, with pale grey pollen; postalar area dark brownish yellow; pleura with dark yellow area just above mid coxa, laterotergite dark brownish yellow. Hairs and bristles on thorax black; 6-7 irregularly paired acr short and hair-like, 5 strong dc. Propleuron black haired with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a black outer stripe; fore tarsomere 5 brown, mid and hind tarsi from tip of tarsomere 1 onward brownish to brown. Mid and hind femora rather thick. Hairs and bristles on legs black. Fore coxa with 4 bristles; mid and hind coxae each with 1 outer bristle; mid and hind femora with 1 preapical bristle. Fore tibia with 4 ad and 4 pd; mid tibia with 4 ad, 3 pd and 2 av; hind tibia with 5 ad, 6 pd and 5 thin av. Relative lengths of segments of legs LI 4.6: 2.4: 1.0: 0.8: 0.55: 0.6; LII 7.3: 3.0: 1.8: 1.25: 0.8: 0.75; LIII 8.8: 2.2: 2.8: 1.9: 1.3: 0.9.

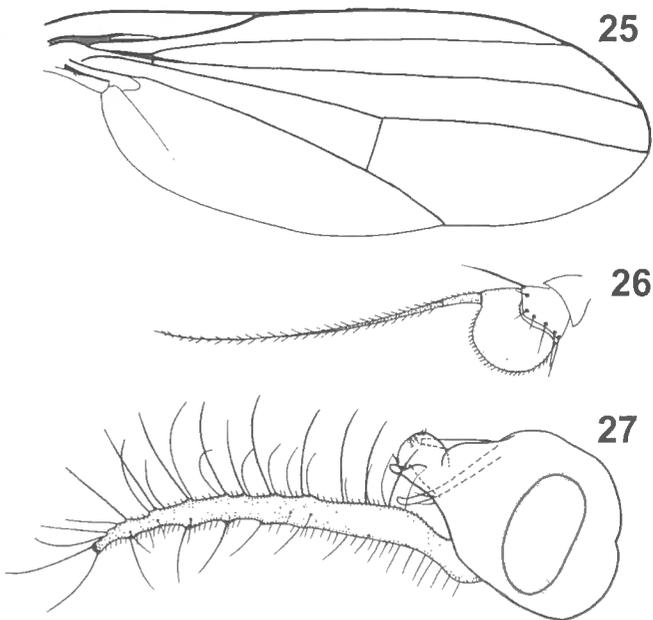
Wing (Fig. 25) greyish; veins dark brown, R4+5 and M parallel apically; CuAx ratio 0.6. Squama dark brown with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen. Hairs on abdomen black. Male genitalia (Fig. 27): Epandrium slightly longer than wide, its surstylus with narrow dorsal lobe and large rounded ventral lobe; cercus much elongated, with long hairs; hypandrium short and narrow.

Female. Unknown.

Holotype male: Yunnan: Menglun (type locality), 1999.III. 7, Ding YANG (CAU)

Distribution. China (Yunnan).



Figs. 25-27 — *Pseudohercostomus sinensis* sp. nov., male. 25. wing; 26. antenna, lateral view; 27. genitalia, lateral view.

Etymology. The new species is named after its country of origin China.

Remarks. This new species is easily separated from other known species of the genus by having R4+5 and M parallel apically and cercus very long (STACKELBERG, 1931; NEGROBOV, 1988).

The genus *Dolichopus*

14. *Dolichopus meridionalis* YANG

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

Type locality: Yunnan.

Material examined. Yunnan: Menghai, 1999. III. 6, 2 males, 1 female, Ding YANG.

Distribution. China (Yunnan, Guizhou, Guangxi).

The genus *Phalacrosona*

15. *Phalacrosona sichuanense* YANG & SAIGUSA

Phalacrosona sichuanense YANG et SAIGUSA, 1999. Bull. Inst. R. Sci. Nat. Belg. Ent. 69. Type locality: Sichuan.

Material examined. Yunnan: Menglun, 1999. III. 7, 1 male, Ding YANG (CAU).

Distribution. China (Yunnan, Sichuan); India.

The genus *Polymedon*

16. *Polymedon inopinatus* PARENT

Polymedon inopinatus PARENT, 1934. Mem. Soc. Natn. Sci. Math. Cherbourg 41: 302.

Type locality: Punjab, India

Material examined. Yunnan: Menglun, 1999. III. 7, 2 males, Ding YANG; 3 males; 1999. III. 10, Ding YANG (CAU).

Distribution. China (Yunnan, Sichuan); India.

The genus *Paraclius*

Key to the species of *Paraclius* from Xishuangbanna

1. Postocular bristles wholly black; antenna wholly black; bristles on pronotum black; cercus without

- marginal denticles 2
- Lower postocular bristles pale yellow; antennal scape brownish yellow [pedicel and first flagellomere missing]; bristles on pronotum yellow; cercus with short marginal denticles *serrulatus* sp. nov.
2. Hind femur wholly yellow 3
- Hind femur with dorsal surface and tip black; wing greyish *menglunensis* sp. nov.
3. Fore tarsus not thickened 4
- Fore tarsomeres 1-3 (except basal part of tarsomere 1) somewhat thickened; cercus rather large and much elongated (nearly as long as epandrium)
..... *longicercus* sp. nov.
4. First flagellomere somewhat acute apically; fore tarsus normal; cercus without any apical incision .. 5
- First flagellomere obtuse apically; fore tarsomere 5 weakly swollen with a row of short ventral spines; cercus with a distinct apical incision
..... *incisus* sp. nov.
5. Apex of hind tibia black; CuAx ratio 0.65
..... *xanthocercus* sp. nov.
- Hind tibia entirely yellow; CuAx ratio 1.1
..... *emeiensis* YANG et SAIGUSA

17. *Paraclius emeiensis* YANG et SAIGUSA

Paraclius emeiensis YANG et SAIGUSA, 1999. Bull. Inst. R. Sci. Nat. Belg. Ent. 69.

Type locality: Sichuan.

Material examined: Yunnan: Menglun, 1999. III. 10, 1 male, Ding YANG (CAU).

Distribution. China (Yunnan, Sichuan).

18. *Paraclius incisus* sp. nov. (Figs. 28-29)

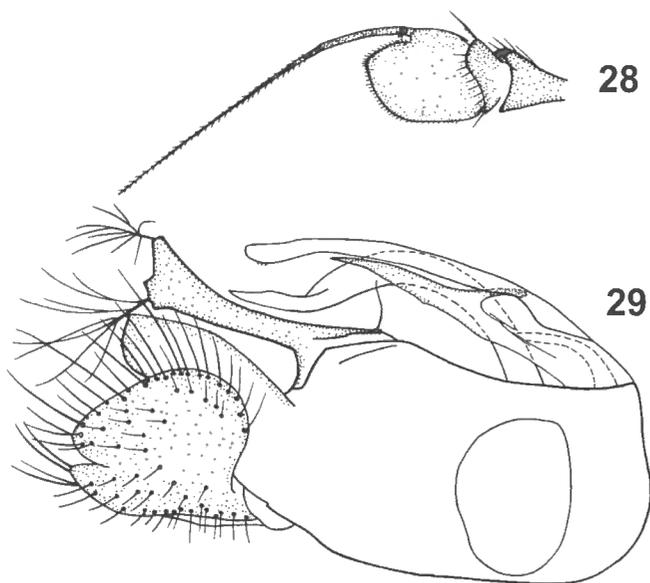
Diagnosis. Antenna wholly black. Fore tarsomere 5 slightly thickened with one row of 5-7 short ventral spines. Cercus with a small apical incision.

Male. Body length 3.5-3.7 mm, wing length 3.9-4.0 mm.

Head metallic green, with pale grey pollen; face distinctly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 28) wholly black; first flagellomere 1.3 times longer than wide, obtuse apically; arista black with basal segment 0.3 times as long as apical segment. Proboscis and palpus yellow, with black hairs.

Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 7-8 irregularly paired acr short and hair-like, 5 strong dc. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid and hind coxae with small blackish area; all tarsi from tip of tarsomere 1



Figs. 28-29 — *Paraclius incisus* sp. nov., male. 28. antenna, lateral view; 29. genitalia, lateral view.

onward brown to dark brown. Hairs and bristles on legs black; fore coxa with 5-6 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle; hind femur with a row of short ad and v. Fore tibia with 3-4 ad, 2 pd and 1 pv; mid tibia with 4 ad, 4 pd and 3 av; hind tibia with 4 ad, 5 pd and 5-6 v. Fore tarsomere 5 slightly thickened, with a row of 5-7 short ventral spines; hind tarsomere 1 with 1 long v at base. Relative lengths of segments of legs LI 4.3: 2.2: 1.1: 0.85: 0.7: 0.85; LII 6.0: 3.2: 2.3: 1.9: 1.3: 0.7; LIII 7.4: 2.3: 3.2: 2.1:?:?.

Wing slightly tinged with greyish; veins dark brown, M curved downward and ending near R4+5; CuAx ratio 1.1. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs and bristles black. Male genitalia (Fig. 29): Epandrium distinctly longer than wide, with a wide apical projection and a narrow lateral projection with 2 branched bristles apically; hypandrium irregularly branched.

Female. Body length 3.8 mm, wing length 4.2 mm. Similar to male, but face wider than first flagellomere and fore tarsus yellow.

Holotype male: Yunnan: Menglun (type locality), 1999. III. 7, Ding YANG (CAU).

Paratypes: Menglun, 1999. III. 7, 1 male, 1 female Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to the cercus bearing an apical incision.

Remarks. This new species is easily separated from other

known species from China by having a cercus with one distinct apical incision.

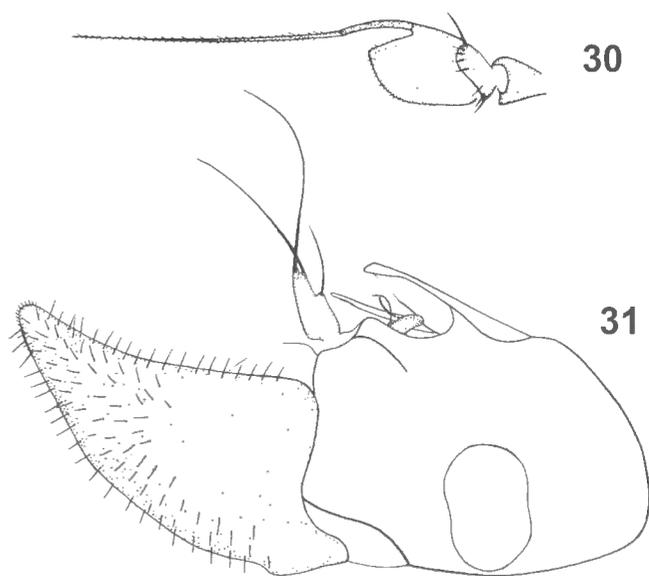
19. *Paraclius longicercus* sp. nov.
(Figs. 30-31)

Diagnosis. Antenna wholly black. Fore tarsus with short thin hairs, tarsomeres 1-3 slightly thickened. Wing grey. Cercus long subtriangular (nearly as long as epandrium).

Male. Body length 4.8-5.1 mm, wing length 4.7-5.0 mm.

Head metallic green, with pale grey pollen; face narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 30) wholly black; first flagellomere 1.4 times longer than wide, obtuse apically; arista black, with basal segment 0.25 times as long as apical segment. Proboscis brownish and palpus black, with black hairs. Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 7-10 irregularly paired acr, short and hair-like, 5 strong dc. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; fore coxa yellow, mid and hind coxae (except apex) tinged with blackish to black on outer surface; fore tarsomeres 3-5 black, mid and hind tarsi from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black; fore coxa with 5-6 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 3 ad and 2 pd; mid tibia with 4 ad, 4 pd and 2 av; hind tibia with 4 ad, 5 pd and 6 av. Hind femur with a row of ad; mid and hind femora basally with 4-5 short v. Fore tarsus with short thin ventral hairs, fore tarsomeres



Figs. 30-31 — *Paraclius longicercus* sp. nov., male. 30. antenna, lateral view; 31. genitalia, lateral view.

4-5 with somewhat long dorsal hairs; fore tarsomeres 1-3 (except basal part of tarsomere 1) somewhat thickened, tarsomere 3 distinctly shortened. Relative lengths of segments of legs LI 5.9: 3.8: 1.9: 1.0: 1.9: 1.1; LII 9.3: 4.7: 4.3: 3.0: 1.9: 0.9; LIII 10.8: 3.8: 5.3: 3.3: 2.0: 0.9.

Wing grey; veins dark brown, M curved downward and ending near R4+5; CuAx ratio 1.3-1.4. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hypopygium very large, curved forward and reaching thorax, black except cercus that has a brownish yellow apex. Hairs and bristles on abdomen black. Male genitalia (Fig. 31): Epandrium longer than wide, rather wide apically, with 2 lateral projections (of which the outer one is larger with 3 long apical bristles, and the inner one is small, with 1 weak basal bristle); cercus much elongated and subtriangular (nearly as long as epandrium); hypandrium rather short.

Female. Unknown.

Holotype male: Menglun (type locality), 1999. III. 10, Ding YANG (CAU).

Paratypes: Menglun, 1999. III. 7, 4 males, Ding YANG; 2 males (99073); 1999. III. 10, 1 male (99087).

Distribution. China (Yunnan).

Etymology. The name refers to the much elongated cercus.

Remarks. This new species is peculiar, and easily separated from other known species from China by having the cercus much elongated.

20. *Paraclius menglunensis* sp. nov.

(Figs. 32-33)

Diagnosis. Antenna wholly black. Mid and hind coxae blackish. Hind femur with dorsal surface and tip black. Wing greyish.

Male. Body length 4.0-4.3 mm, wing length 4.0-4.3 mm.

Head metallic green, with pale grey pollen; face narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 32) wholly black; first flagellomere 1.2 times longer than wide, obtuse apically; arista black with basal segment 0.3 times as long as apical segment. Proboscis dark brown and palpus black, with black hairs.

Thorax metallic green, with pale grey pollen. Hairs and bristles on thorax black; 5-6 irregularly paired acr short and hair-like, 5 strong dc. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; fore coxa yellow, mid and hind coxae (except apex) blackish; hind femur with dorsal surface and tip black, tibia with brown or dark brown tip; fore and

mid tarsi from tip of tarsomere 1 onward brown to dark brown, hind tarsus dark brown to black. Hairs and bristles on legs black; fore coxa with 5 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora with 1 preapical bristle. Fore tibia with 3 ad and 2 pd; mid tibia with 4 ad, 4 pd and 2 av; hind tibia with 5 ad, 4-5 pd and 6 short av. Relative lengths of segments of legs LI 4.8: 3.1: 1.2: 0.9: 0.6: 0.4; LII 7.3: 4.1: 3.0: 2.1: 1.2: 0.5; LIII 9.8: 2.8: 3.8: 2.4: 1.25: 0.8.

Wing greyish; veins dark brown, M curved downward and ending near R4+5; CuAx ratio 1.5. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hairs black. Male genitalia (Fig. 33): Epandrium longer than wide, rather wide apically, with 2 lateral projections acute at least so apically; cercus nearly triangular with short hairs; hypandrium nearly acute apically.

Female. Body length 4.3-4.7 mm, wing length 4.5-4.7 mm. Similar to male, but face slightly wider than first flagellomere.

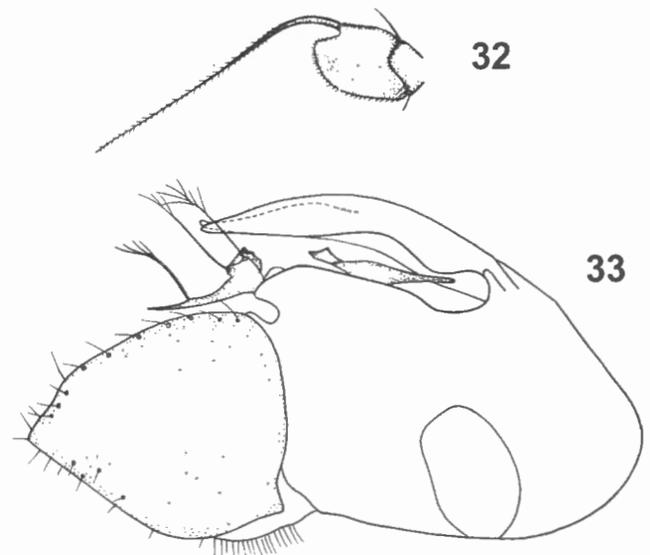
Holotype male: Yunnan: Menglun (type locality), 1999. III. 7, Ding YANG (CAU).

Paratypes: Menglun, 1999. III. 7, 1 male, 6 females, Ding YANG, 1 female (99071), 3 males (99073); 1999. III. 10, 4 males, 5 females, Ding YANG; 1 male, 2 females (99087); Mengla, 1999. III. 10, 1 female (99077).

Distribution. China (Yunnan)

Etymology. The new species is named after its type locality Menglun.

Remarks. This new species is very similar to *P. yunna-*



Figs. 32-33 — *Paraclius menglunensis* sp. nov., male. 32. antenna (excluding scape), lateral view; 33. genitalia, lateral view.

bristles on thorax black; 6-7 irregularly paired acr short and hair-like, 6 strong dc. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa partly tinged with blackish; hind femur wholly yellow, apex of hind tibia black; fore tarsus wholly yellow, mid tarsus from tip of tarsomere 1 onward brown to dark brown, hind tarsus black. Hairs and bristles on legs black; fore coxa with 5 apical and lateral bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 3 ad and 2 pd; mid tibia with 3 ad, 3 pd and 2 av; hind tibia with 4 ad, 5 pd and 7-8 av. Relative lengths of segments of legs LI 3.9: 1.9: 0.8: 0.6: 0.4: 0.55; LII 5.4: 2.6: 2.1: 1.6: 1.1: 0.7; LIII 6.8: 1.9: 3.1: 2.1: 1.3 : 0.75.

Wing weakly tinged with greyish; veins dark brown, M curved downward and ending near R4+5; CuAx ratio 0.65. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; hypopygium blackish to black, except for cercus that is completely yellow. Hairs and bristles on abdomen black. Male genitalia (Fig. 36): Epandrium slightly longer than wide, with a small curved apico-lateral projection bearing 2 branched apical bristles; cercus with long marginal hairs; hypandrium rather thick, irregularly branched.

Female. Unknown.

Holotype male: Yunnan: Jinghong, Mengyang, 1999. III. 11, Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to the yellow cercus.

Remarks. This new species is somewhat similar to *H. incisus* sp. nov., but may be separated from the latter by having the first flagellomere somewhat acute apically and cercus without incision. In *H. incisus*, the first flagellomere is obtuse apically; the cercus has a distinct apical incision.

Subfamily Sympycninae

Key to males of *Chaetogonopteron* from Xishuangbanna

1. Hind tarsomere 1 usually shortened (but not shortened in *dorsinigrum*) 2
 - Hind tarsomeres 1-2 shortened 7
2. Fore tarsus partly shortened (Figs 30, 51, 65) ... 3
 - Fore tarsus normal 5
3. Fore tarsomeres 2-5 shortened; acr biseriate 4
 - Only fore tarsomere 2 shortened (Fig. 38); acr uniseriate; first flagellomere pointed. *acutatum* sp. nov.
4. Fore tarsomere 2 longer than tarsomere 3 (Fig. 65); hind tarsomere 1 shorter than tarsomere 2 *singulare* sp. nov.

- Fore tarsomere 2 as long as tarsomere 3 (Fig. 51); hind tarsomere 1 as long as tarsomere 2 *dorsinigrum* sp. nov.
5. acr uniseriate 6
 - acr biseriate; thorax and abdomen largely yellow *chaeturum* GROOTAERT & MEUFFELS
 6. First flagellomere short subtriangular (Fig. 41); apex of hind femur black; middle and lower postocular bristles pale yellow *apicinigrum* sp. nov.
 - First flagellomere much elongated (Fig. 48); hind femur wholly yellow; postocular bristles wholly black *concauum* sp. nov.
 7. Hind tarsomere 2 without pale worm-like appendage 8
 - Hind tarsomere 2 with a pale worm-like appendage (clidium) (Figs 44, 54, 60, 62) 9
 8. Antenna brownish yellow; abdomen chiefly yellow *pallantennatum* sp. nov.
 - Antenna black with brown first flagellomere; abdomen chiefly black *sublaetum* sp. nov.
 9. Wing without black spot 10
 - Wing with a black apical spot *menglensis* YANG et GROOTAERT
 10. Mid tibia with rowed ventral bristles 11
 - Mid tibia without rowed ventral bristles 12
 11. Eyes contiguous *seriatum* sp. nov.
 - Eyes separated *menglonganum* YANG et GROOTAERT
 12. Fore tarsomere 5 not wholly whitish 13
 - Fore tarsomere 5 wholly whitish *ceratophorum* sp. nov.
 13. Fore tarsomeres 2-5 whitish with dark dorsal surface *pallipilosum* sp. nov.
 - Fore tarsus yellow with tarsomere 5 brown *minutum* sp. nov.

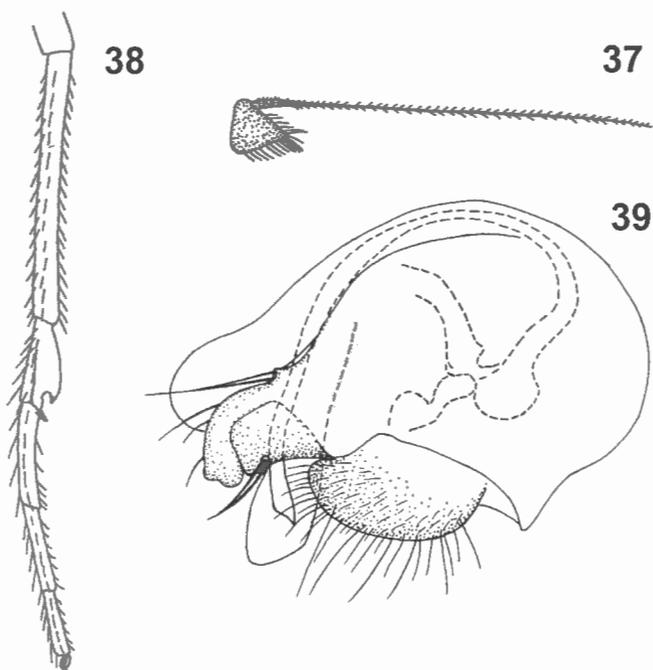
23. *Chaetogonopteron acutatum* sp. nov. (Figs. 37-39)

Diagnosis. Lower postocular bristles pale yellow. First flagellomere acute apically. Fore tarsomere 2 shortened and expanded; only hind tarsomere 1 shortened.

Male. Body length 2.0-2.3 mm, wing length 1.7-2.0 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; lower postocular bristles (including ventral hairs) pale yellow. Antenna (Fig. 37) black; first flagellomere dark brown, short triangular and acute apically; arista blackish with basal segment rather short. Proboscis brownish with black hairs; palpus dark brown with some black hairs and 1 black short apical bristle.

Thorax metallic green, with pale grey pollen; meta-pleuron yellow except upper part (and posterior margin) blackish. Hairs and bristles on thorax black; 5-6 uniseriate acr short and hair-like, 4 strong dc. Propleuron with 1 pale or black hair on upper part and 1 pale or black short bristle on lower part.



Figs. 37-39 — *Chaetogonopteron acutatatum* sp. nov., male. 37. antenna (excluding scape and pedicel), lateral view; 38. fore tarsus, lateral view; 39. genitalia, lateral view.

Legs yellow; all coxa yellow, mid coxa with blackish anterior stripe and black dot on postero-upper corner; tarsomeres 3-5 brownish yellow. Hairs and bristles on legs black; fore coxa with 3 bristles, hind coxa with 1 outer bristle. Fore tibia with a row of 5 short ad on apical half; mid tibia with 3 ad, 1 pd, 1 av; hind tibia with 3 ad, 2 pd and 2 av. Fore tarsomere 2 shortened and expanded, apically with ventral incision (Fig. 38); tarsomere 3 with 1 ventral spine at base. Only hind tarsomere 1 shortened, hind tarsomeres 1-4 with a row of thin erect hairs. Relative lengths of segments of legs LI 2.4: 1.9: 0.4: 0.8: 0.6: 0.6; LII 4.3: 2.0: 1.0: 0.8: 0.5: 0.3; LIII 4.9: 1.0: 1.2: 0.9: 0.6: 0.3.

Wing nearly hyaline; veins brownish, R4+5 and M nearly parallel apically, M more or less straight; CuAx ratio 0.4. Squama yellow with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; terga 2-3 brownish yellow to yellow, tergum 2 with anterior margin or antero-lateral area black, tergum 3 with narrow or wide lateral part and posterior margin black; sterna 1-3 yellow; hypandrium brownish yellow with black surstylus. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 39): Surstylus with wide dorsal lobe (bearing 1 bristle) and narrow curved ventral lobe (bearing 2 long bristles and 2 short bristles); cercus wide basally and obtuse apically; hypandrium rather thick and rounded apically.

Female. Unknown.

Holotype male: Yunnan: Mengyang (type locality) 1999.III. 11 (99091, leg. Patrick GROOTAERT, CAU).

Paratypes: Mengyang, 1999.III. 11, 2 males (99091).

Distribution. China (Yunnan).

Etymology. The name refers to the acute tip of the first flagellomere.

Remarks. This new species is similar to *Ch. singulare* and *Ch. dorsinigrum*, but can be easily separated from them by having only the fore tarsomere 2 shortened and acr uniseriate. In *Ch. singulare* and *Ch. dorsinigrum*, the fore tarsomeres 2-5 are shortened and the acr are biseriate.

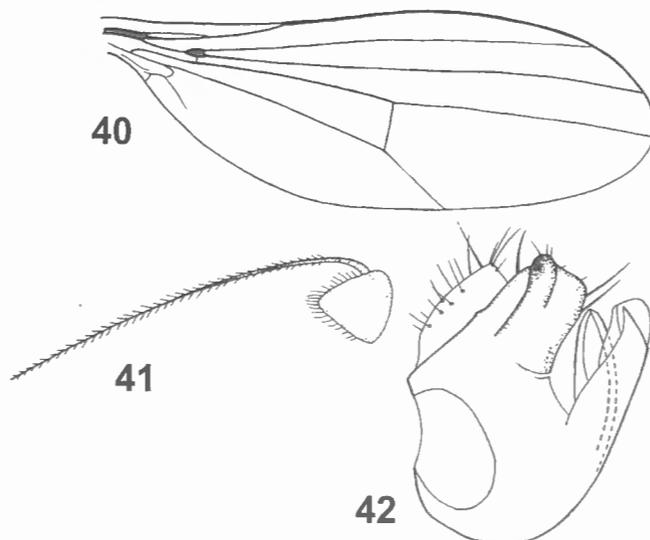
24. *Chaetogonopteron apicinigrum* sp. nov.
(Figs. 40-42)

Diagnosis. Only hind tarsomere 1 shortened. Middle and lower postocular bristles pale. acr uniseriate. Thorax metallic green, with only metapleuron partly yellow. Abdomen partly yellow basally. Apex of hind femur black.

Male. Body length 2.4 mm, wing length 2.6 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale. Antenna (Fig. 41) black; first flagellomere short subtriangular; arista black with basal segment rather short. Proboscis dark brown with chiefly black hairs, palpus dark brown with chiefly pale hairs.

Thorax metallic green, with pale grey pollen; metapleuron blackish with short lower part yellow. Hairs and



Figs. 40-42 — *Chaetogonopteron apicinigrum* sp. nov., male. 40. wing; 41. antenna (excluding scape and pedicel), lateral view; 42. genitalia, lateral view.

bristles on thorax black; 10 uniseriate acr short and hair-like, 6 strong dc. Propleuron pale haired.

Legs yellow; all coxae yellow, mid coxa with basal margin and anterior stripe black; apex of hind femur black; fore tarsomere 5 brownish, mid tarsus from tip of tarsomere 1 brown to dark brown onward; hind tarsus dark brown. Hairs and bristles on legs black; fore coxa with 4 bristles, hind coxa with 1 outer bristle. Fore tibia with a row of 5 short ad; mid tibia with 3 ad, 1 pd and 1 av; hind tibia with 1 ad, 2 pd, 1 av (at middle) and 2 pv (on apical part). Hind tarsomeres 1-3 with one row of v, tarsomere 1 with 1 pv near tip. Relative lengths of segments of legs LI 2.5: 1.5: 0.8: 0.4: 0.3: 0.3; LII 4.4: 2.0: 1.1: 0.9: 0.5: 0.3; LIII 5.2: 1.1: 1.3: 1.1: 0.7: 0.35.

Wing (Fig. 40) hyaline, weakly tinged with grey; veins dark brown, R4+5 and M nearly parallel apically, M more or less straight; CuAx ratio 0.6. Squama yellow with blackish hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; tergum 1 blackish, tergum 2 wholly yellow, tergum 3 with narrow postero-lateral area yellow; sterna 1-3 yellow. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 42): Epandrium nearly as long as wide, its surstylus with narrow dorsal lobe (which is invisible apically in lateral view) bearing 1 bristle and rather wide ventral lobe bearing 2 long bristles and some short hairs; cercus wide apically; hypandrium rather thick and slightly curved.

Female. Similar to male.

Holotype male: Yunnan: Mengyang (type locality), 1999. III. 5, Ding YANG (CAU).

Paratypes: Menghai, 1999. III. 6, 4 males, 8 females (99064); 5 males, 11 females (99066); Mengla, 1999. III. 8, 1 male (99079), 1 male (99080).

Distribution. China (Yunnan).

Etymology. The name refers to the hind femur with black apex.

Remarks. This new species is somewhat similar to *Ch. singulare* sp. nov. in the body coloration, but may be distinguished from the latter by having 6 dc and uniseriate acr.

25. *Chaetogonopteron ceratophorum* sp. nov.
(Figs. 43-45)

Diagnosis. Middle and lower postocular bristles pale yellow. Thorax metallic green, with pleuron partly yellow. Fore tarsus with tip of tarsomere 1 and entire tarsomeres 3-4 black, and tarsomere 5 whitish. Fore femur with 3-4 v on basal part, tibia with a row of v.

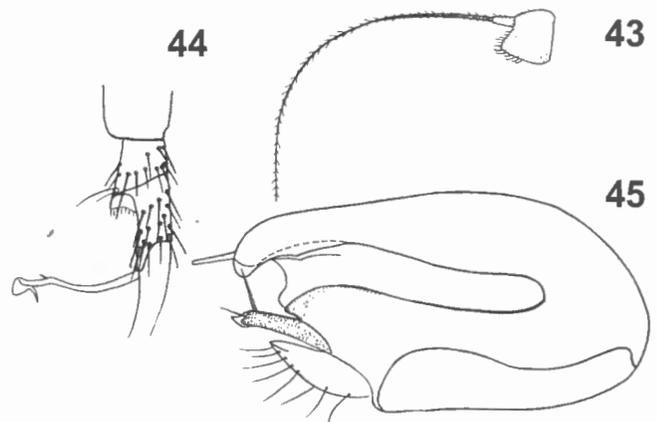
Male. Body length 2.4 mm, wing length 2.6 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale yellow. Antenna (Fig. 43) black; first flagellomere brownish, short subtriangular; arista dark brown with basal segment rather short. Proboscis brownish yellow with black hairs; palpus yellow with black hairs and 1 black apical bristle.

Thorax metallic green, with pale grey pollen; pleuron blackish above, dark yellow to yellow below except sternopleuron that bears a black anterior spot; scutellum with posterior margin broadly yellow. Hairs and bristles on thorax black; 5-6 uniseriate acr short and hair-like, 5 strong dc.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner; apex of hind tibia blackish; fore tarsus with tip of tarsomere 1 and entire tarsomeres 3-4 black, and tarsomere 5 whitish; mid tarsomeres 3-5 dark brown; hind tarsomeres 1-3 brown, tarsomeres 4-5 dark brown. Hairs and bristles on legs black; fore coxa with 4 apical bristles, hind coxa with 1 outer bristle. Fore femur with 3-4 v on basal part, tibia with a row of 6 v, tarsomere 1 with a row of 6-7 pv; mid tibia with 2 ad, 1 pd and 3 v; hind tibia with 2 ad, 1 pd, 1 v. Relative lengths of segments of legs LI 3.3: 1.8: 1.3: 0.85: 0.4: 0.4; LII 5.2: 2.8: 1.35: 1.1: 0.7: 0.3; LIII 6.0: 0.4: 0.5: 1.9: 1.2: 0.45. Wing hyaline; veins black, R4+5 and M more or less parallel apically, M distinctly bent; CuAx ratio 0.5. Squama yellow with black hairs. Halter yellow, with knob dark yellow.

Abdomen metallic green, with pale grey pollen; tergum 2 with yellow lateral area (except anterior margin); sterna 1-6 brownish yellow. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles at posterior margin. Male genitalia (Fig. 45): Epandrium much longer than wide, its surstylus with separated dorsal lobe nearly rod-like; cercus acute apically; hypandrium somewhat narrow and curved apically.



Figs. 43-45 — *Chaetogonopteron ceratophorum* sp. nov., male. 43. antenna (excluding scape and pedicel), lateral view; 44. hind tarsomeres 1-2, lateral view; 45. genitalia, lateral view.

Female. Unknown.

Holotype male: Yunnan: Menglun (type locality), 1999. III. 7, Ding YANG (CAU).

Paratypes: Menglun, 1999. III. 7, 10 males, Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to the cercus being somewhat acute apically.

Remarks. This species is similar to *Ch. albipes nepalensis* HOLLIS from Nepal, but differs from the latter in the following characters: 5 dc, only fore tarsomere 5 whitish; in *Ch. albipes nepalensis*: 6 dc, fore tarsomeres 4-5 whitish (HOLLIS, 1964).

26. *Chaetogonopteron chaeturum*
GROOTAERT & MEUFFELS, 1999
(Figs. 46-47)

Diagnosis. Eyes narrowly separated on face. Only hind tarsomere 1 shortened. Thorax and abdomen mainly yellow.

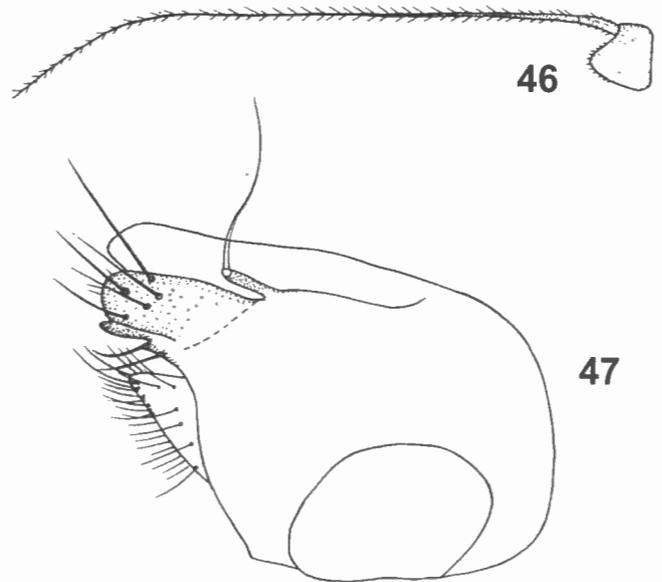
Male. Body length 2.7-3.7 mm, wing length 3.3-4.6 mm.

Head metallic green, with pale grey pollen; eyes very narrowly separated on face. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 46) black; first flagellomere brownish, short subtriangular; arista dark brown, with basal segment rather short. Proboscis and palpus brownish yellow with black hairs, palpus with 2 black bristles.

Thorax yellow; mesonotum metallic green, with wide anterior part and wide lateral part yellow; scutellum wholly yellow or with a small black basal spot; metanotum with black median part, pteropleuron with a black dot, laterotergite with dark brown anterior margin. Hairs and bristles on thorax black; 9-10 irregularly paired ac short and hair-like, 5 strong dc; scutellum with short marginal hairs. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner and a small blackish anterior stripe; all tarsi with tarsomere 5 brown or dark brown. Hairs and bristles on legs black; fore coxa with 6 bristles, hind coxa with 1 outer bristle. Mid tibia with 3 ad, 2 pd, 2 av and 1 pv; hind tibia with 2 ad, 5 pd and 3 av; only hind tarsomere 1 shortened with short v, hind tarsomeres 2-3 with a row of short v. Relative lengths of segments of legs LI 3.6: 2.5: 1.3: 1.0: 0.7: 0.4; LII 6.2: 2.8: 1.8: 1.3: 0.8: 0.45; LIII 6.8: 1.1: 1.8: 1.5: 1.0: 0.45.

Wing weakly tinged with greyish; veins dark brown, R4+5 and M nearly parallel apically, M nearly straight; CuAx ratio 0.7. Squama yellow with dark brown margin, and with black hairs. Halter yellow.



Figs. 46-47 — *Chaetogonopteron chaeturum* GROOTAERT & MEUFFELS, male. 46. antenna (excluding scape and pedicel), lateral view; 47. genitalia, lateral view.

Abdomen dark yellow to yellow (sometimes wholly yellow); tergum 1 wholly yellow, tergum 2 dark brown with yellow lateral part, terga 3-6 dark brown; hypopygium yellow with black surstylus. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 47): Epandrium longer than wide; surstylus with finger-like dorsal lobe bearing 2 bristles and wide ventral lobe with 5 strong bristles and some short hairs, basally with a finger-like projection bearing 1 long apical bristle; cercus narrow apically; hypandrium rather thick and nearly straight. Sternum 8 with a pair of black bristles.

Female. Body length 2.9-3.1 mm, wing length 3.3-3.4 mm. Similar to male.

Material examined: Mengyang, 1999. III. 11, 40 males, 67 females, Ding YANG; Mengyang, 1999. III. 5, 29 males, 40 females Ding YANG. Further records: 2 males, 5 females (99059); 57 males, 71 females (99060); 2 males (99062); 4 males, 1 female (99071); 3 males (99077); 6 males, 7 females (99084); 1 male (99087); 32 males, 46 females (99090); 3 females (99091).

Distribution. China (Yunnan); Thailand.

Remarks. This species is very common in Xishuangbanna, and recorded from China for the first time. It is the most common species in Thailand where it was reported from the south as well as the north. There it occurs in a wide variety of habitats and thus it is considered as an eurytope species. It is often the single *Chaetogonopteron* species when the habitats are perturbed by human activity.

27. *Chaetogonopteron concavum* sp. nov.
(Figs. 48-49)

Diagnosis. Only hind tarsomere 1 shortened. Thorax mostly yellow. Antenna yellow with first flagellomere blackish and much elongated.

Male. Body length 2.1 mm, wing length 2.5 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 48) yellow with first flagellomere blackish and much elongated; arista dark brown with basal segment rather short. Proboscis dark brownish yellow, and palpus dark yellow with black hairs, palpus with 2 black bristles.

Thorax yellow; mesonotum with a narrow subtriangular median, metallic green spot (which does not reach the anterior margin); scutellum yellow with a very small black basal spot; metanotum with blackish median part; upper margin of both pteropleuron and laterotergite blackish or black. Hairs and bristles on thorax black; 10-12 uniseriate acr short and hair-like, 6 strong dc (of which the first dc is weak). Propleuron black haired, without distinct bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner and a black stripe. Hairs and bristles on legs black; fore coxa with 6 bristles, hind coxa with 1 outer bristle. Mid tibia with 3 ad, 2 pd and 1 av; hind tibia with 2 ad, 3 pd, 1-2 av and 1 pv. Relative lengths of segments of legs LI 2.9: 1.8: 0.6: 0.6: 0.3: 0.4; LII 4.8: 2.1: 1.0:?:?:?:; LIII 5.4: 1.0: 1.3: 0.9: 0.6:?:

Wing weakly tinged with greyish; veins dark brown, R4+5 and M nearly parallel apically, M straight; CuAx

ratio 0.6. Squama yellow with dark brown margin, and with black hairs. Halter dark yellow.

Abdomen brownish black; terga 2-3 with yellow lateral part, tergum 4 with small brownish yellow lateral area; sternum 1-4 yellow; hypandrium black. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 49): Epandrium longer than wide, somewhat narrow apically, its surstylus with narrow dorsal lobe bearing 1 bristle and very wide ventral lobe (which is somewhat concave) bearing 4 long marginal bristles and some short hairs; cercus rather short; hypandrium thick and curved.

Female. Body length 1.9 mm, wing length 2.5 mm. Similar to male, but eyes widely separated on face, first flagellomere dark brownish yellow, sternum 1-5 yellow.

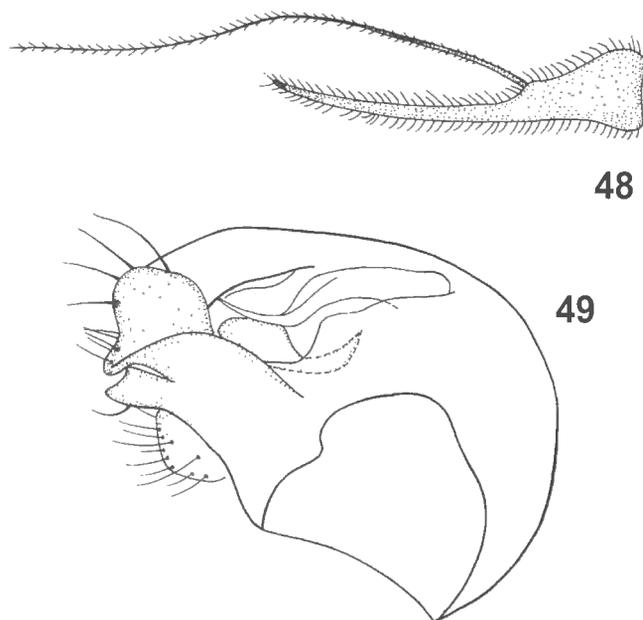
Holotype male: Yunnan: Menglun (type locality), 1999. III. 7, Ding YANG (CAU).

Paratypes: Menglun, 1999. III. 7, 1 female, Ding YANG; Mengyang, 1999. III. 5, 1 male, 5 females (99060); 1999. III. 10, 3 males (99090); Mengla, 1999. III. 8, 1 male (99080).

Distribution. China (Yunnan).

Etymology. The name refers to the somewhat concave ventral lobe of the surstylus.

Remarks. This species is similar to *Ch. aechmophorum* (MEUFFELS & GROOTAERT) from Papua New Guinea, but may be separated from the latter by having the antenna yellow with first flagellomere blackish. In *Ch. aechmophorum*, the antenna is wholly yellow (MEUFFELS & GROOTAERT, 1986).



Figs. 48-49 — *Chaetogonopteron concavum* sp. nov., male. 48. antenna (excluding scape and pedicel), lateral view; 49. genitalia, lateral view.

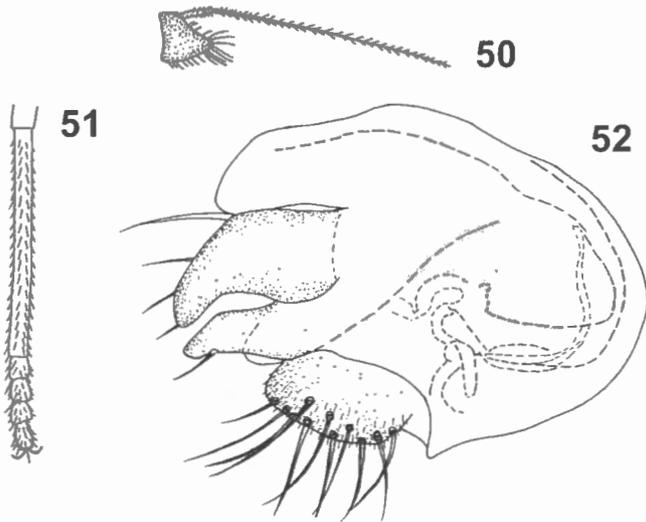
28. *Chaetogonopteron dorsinigrum* sp. nov.
(Figs. 50-52)

Diagnosis. Middle and lower postocular bristles pale yellow. Hind femur wholly brownish black; tibia white except for hind tibia that has dorsal surface brownish black. Fore tarsomere 1 elongated (longer than distinctly shortened tarsomeres 2-5 together) (Fig. 51); hind tarsomere 1 not shortened (as long as tarsomere 2).

Male. Body length 2.1 mm, wing length 2.0 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale yellow. Antenna (Fig. 50) black; first flagellomere short subtriangular; arista black with basal segment rather short. Proboscis and palpus dark brown, with black hairs.

Thorax metallic green, with pale grey pollen; meta-pleuron yellow except upper part and posterior margin, that are blackish. Hairs and bristles on thorax black; 6-7



Figs. 50-52 — *Chaetogonopteron dorsinigrum* sp. nov., male. 50. antenna (excluding scape and pedicel), lateral view; 51. fore tarsus, dorsal view; 52. genitalia, lateral view.

irregularly paired acr short and hair-like, 4 strong dc. Propleuron with 5 pale hairs on upper part and 3 pale hairs on lower part (without distinct bristle).

Legs (mid tarsus and hind tarsomeres 4-5 broken off) yellow; fore coxa yellow, mid coxa with anterior margin and posterior upper corner black, hind coxa partly brownish; hind femur wholly brownish black; tibiae white, except hind tibia, that has dorsal surface brownish black; fore tarsomeres 2-4 brownish yellow, tarsomere 5 dark brown. Hairs and bristles on legs black; fore coxa with 2 bristles, hind coxa with 1 outer bristle. Fore tibia with a row of 5 short ad on apical half; mid tibia with 3 ad and 1 pd; hind tibia with 3 ad, 2 pd and 1 av. Fore tarsomere 1 elongated (longer than distinctly shortened tarsomeres 2-5 together, Fig. 51); hind tarsomere 1 not shortened (as long as tarsomere 2), with a row of 3 long v, tarsomeres 2-3 with a row of short v but tarsomere 2 apically with a group of 3 long outer bristles. Relative lengths of segments of legs LI 2.7: 1.7: 0.2: 0.2: 0.2: 0.25; LII 4.8:?:?:?:?:?:; LIII 5.7: 1.1: 1.1: 0.7:?:?:.

Wing hyaline, weakly tinged with grey; veins dark brown, R4+5 and M parallel apically, M somewhat bent; CuAx ratio 0.3. Squama yellow with dark brown margin, with black hairs. Halter pale yellow.

Abdomen metallic green, with pale grey pollen; tergum 2 with large lateral area yellow, tergum 3 with posterolateral area brownish yellow; sterna 1-2 yellow, sternum 3 brownish yellow. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 52): Epandrium longer than wide, its surstylus with dorsal lobe somewhat acute apically and bearing 1 bristle, ventral lobe rather wide basally and nearly acute apically (bearing 4 bristles); cercus wide and rounded apically; hypandrium very thick.

Female. Unknown.

Holotype male: Yunnan: Menglun (type locality), 1999.III. 3, (99082, leg. Patrick GROOTAERT, CAU).

Distribution. China (Yunnan).

Etymology. The name refers to the white hind tibia, with brownish black dorsal margin.

Remarks. This new species is very similar to *Ch. camp-sicnemoides* (MEUFFELS & GROOTAERT) and *Ch. singulare* sp. nov., but can be separated from them by the hind femur being wholly brownish black and hind tibia white with dorsal surface brownish black.

29. *Chaetogonopteron minutum* sp. nov.
(Figs. 53-55)

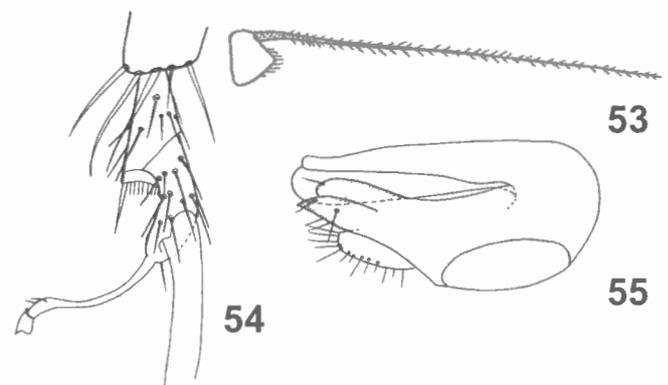
Diagnosis. Small-sized. Thorax metallic green, with pleura yellow to dark yellow. Middle and lower postocular bristles pale. acr uniseriate.

Male. Body length 1.7 mm, wing length 2.0 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale. Antenna (Fig. 53) black with first flagellomere yellow; first flagellomere short subtriangular; arista brownish, with basal segment rather short. Proboscis and palpus dark yellow with black hairs.

Thorax metallic green, with pale grey pollen; pleura dark yellow to yellow with mesopleuron blackish; pteropleuron with a black dot. Hairs and bristles on thorax black; 10 uniseriate acr short and hair-like, 5 strong dc (1 hair present at anterior inner side of 5th dc). Propleuron pale haired, with 1 long hair on lower part.

Legs yellow; all coxae yellow, mid coxa with a black anterior stripe, and a black dot on posterior upper corner; tarsomere 5 on all legs brown. Hairs and bristles on legs black; fore coxa with 4 bristles, hind coxa with 1



Figs. 53-55 — *Chaetogonopteron minutum* sp. nov., male. 53. antenna (excluding scape and pedicel), lateral view; 54. hind tarsomeres 1-2, lateral view; 55. genitalia, lateral view.

outer bristle. Fore femur with 2 rows of v basally; mid tibia with 2 ad, 2 pd and 1 av; hind tibia with 2 d and 1 pv. Hind tarsomeres 1-2: Fig. 54. Relative lengths of segments of legs LI 2.3: 1.7: 0.8: 0.65: 0.3: 0.3; LII 4.1: 2.3: 1.2: 0.85: 0.55: 0.3; LIII 4.85: 0.35: 0.35: 1.8: 0.8: 0.3.

Wing hyaline; veins brown, R4+5 and M parallel apically, M very weakly bent; CuAx ratio 0.5. Squama yellow with dark brown margin, with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; tergum 1 blackish, tergum 2 yellow with mid-posterior area blackish; sterna 1-2 yellow. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 55): Epandrium distinctly longer than wide and rather narrow apically, its surstylus with acute dorsal lobe, bearing 4 short bristles, and obtuse ventral lobe shorter than dorsal lobe (bearing 1 short bristle); cercus wide apically; hypandrium narrowing apically.

Female. Unknown.

Holotype male: Yunnan: Jinghong, Mengyang (type locality), 1999. III. 5, Ding YANG (CAU).

Paratypes: Mengyang, 1999. III. 5, 2 males (99062); 1999. III. 11, 1 male (99090).

Distribution. China (Yunnan).

Etymology. The name refers to the small-sized body.

Remarks. This new species is somewhat similar to *Ch. strenuum* (BECKER) from Sri Lanka. In *Ch. strenuum*, the fore femur bears 3-4 long ventral hairs; the hind tarsomere 1 bears 1 distinct bristle at middle (BECKER, 1922).

30. *Chaetogonopteron pallantennatum* sp. nov.

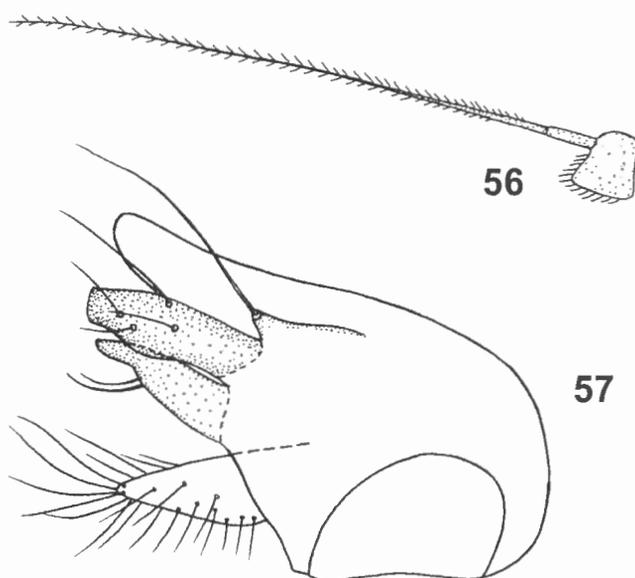
(Figs. 56-57)

Diagnosis. Hind tarsomeres 1-2 shortened, tarsomere 2 without worm-like appendage (clidium). Thorax and abdomen mostly yellow. Middle and lower postocular bristles brownish yellow. Antenna brownish yellow or dark brownish yellow.

Male. Body length 2.5-2.6 mm, wing length 2.6-2.7 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) brownish yellow. Antenna (Fig. 56) brownish yellow; first flagellomere short subtriangular; arista dark brown with basal segment rather short. Proboscis and palpus yellow with black hairs, palpus with 2 black bristles.

Thorax yellow; mesonotum metallic green, with wide



Figs. 56-57 *Chaetogonopteron pallantennatum* sp. nov., male. 56. antenna (excluding scape and pedicel), lateral view; 57. genitalia, lateral view.

anterior part and wide lateral part yellow; scutellum yellow with a small black basal spot that is somewhat indistinct; metanotum with a black median spot (which does not reach the posterior margin), pteropleuron with a black dot, laterotergite with a blackish dot. Hairs and bristles on thorax black; 11-12 irregularly paired acr short and hair-like, 5 strong dc. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner; all tarsi with tarsomere 5 brownish or brown. Hairs and bristles on legs black; fore coxa with 5-6 bristles, hind coxa with 1 outer bristle. Mid tibia with 3 ad, 2 pd, 2 av and 1 pv; hind tibia with 1 ad and 2 pd; hind tarsomere 1 with a row of pv, tarsomeres 3-4 with a row of v. Relative lengths of segments of legs LI 2.9: 1.9: 0.85: 0.75: 0.4: 0.3; LII 4.8: 2.4: 1.2: 1.0: 0.7: 0.3; LIII 5.0: 0.6: 0.9: 1.2: 0.9: 0.4. Hind tarsomeres 1-2 distinctly shortened, tarsomere 2 without worm-like appendage.

Wing weakly tinged with greyish; veins dark brown, R4+5 and M nearly parallel apically, M very weakly bent; CuAx ratio 0.5. Squama yellow with dark brown margin, and with black hairs. Halter dark yellow.

Abdomen yellow; tergum 1 wholly yellow, terga 2-4 metallic green, with anterior margin and lateral part of tergum 1 and lateral part of terga 3-4 yellow; terga 5-6 brownish yellow; hypopygium yellow with black surstylus. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 57): Epandrium slightly longer than wide, surstylus with narrow dorsal lobe bearing 2 bristles and wide ventral lobe bearing 4 distinct bristles, basally with a short finger-like projection bearing 1 long apical bristle; cercus narrowing toward tip; hypandrium rather thick and nearly straight.

Female. Body length 2.5-2.7 mm, wing length 2.7-2.8 mm. Similar to male, but eyes narrowly separated on face.

Holotype male: Yunnan: Jinghong, Mengyang, 1999. III. 11, Ding YANG (CAU).

Paratypes: Mengyang, 1999. III. 11, 2 females, Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to the somewhat pale antenna.

Remarks. This new species is similar to *Ch. laetum* (BECKER) from the Oriental region, but may be separated from the latter by having a brownish yellow antenna and abdomen chiefly yellow. In *Ch. laetum*, the antenna is chiefly black and the abdomen is chiefly brown (BECKER, 1922; HOLLIS, 1964).

31. *Chaetogonopteron pallipilosum* sp. nov. (Figs. 58-61)

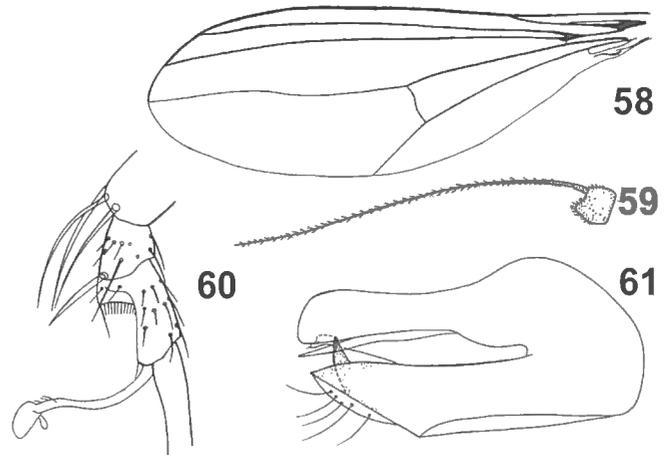
Diagnosis. Fore tarsomere 1 brown, tarsomeres 2-5 whitish with blackish dorsal margin and one row of white dorsal bristles.

Male. Body length 2.8-3.1 mm, wing length 3.2-3.3 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 59) black; first flagellomere brownish and short subtriangular; arista black with basal segment rather short. Proboscis brownish yellow with black hairs; palpus dark brown with black hairs and 2 distinct black bristles.

Thorax metallic green, with pale grey pollen; pleura brownish yellow, but mesopleuron and anterior upper area of sternopleuron blackish, pteropleuron with a black dot. Hairs and bristles on thorax black; 9-10 paired ac short and hair-like, 5 strong dc; scutellum with some short marginal hairs.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner; fore and hind femora brown dorsally; fore tibia white with dark brown ventral surface, fore tarsomere 1 brown and tarsomeres 2-5 white with blackish dorsal margin; hind tibia and tarsus dark brown. Hairs and bristles on legs black; fore coxa with 4 bristles, hind coxa with 1 outer bristle. Fore tibia with 2 rather long v at tip; mid tibia with 3 ad, 1 pd and 2 av; hind tibia with 2 ad and 1 pd, at tip with 4 bristles (of which 3 v are distinctly long); fore tarsomeres 1-3 with rowed v, tarsomere 1 with rowed d (of which apical 3 d are longer), tarsomeres 2-5 with one row of white dorsals. Hind tarsomeres 1-2 distinctly shortened, tarsomere 2 with a pale worm-like appendage (Fig. 60). Relative



Figs. 58-61 — *Chaetogonopteron pallipilosum* sp. nov., male. 58. wing; 59. antenna (excluding scape and pedicel), lateral view; 60. hind tarsomeres 1-2, lateral view; 61. genitalia, lateral view.

lengths of segments of legs LI 4.0 : 2.4 : 1.5 : 1.7 : 1.25 : 0.75; LII 6.4 : 4.1 : 1.9 : 1.4 : 0.8 : 0.4; LIII 7.0 : 0.45 : 0.45 : 2.9 : 1.6 : 0.5.

Wing (Fig. 58) hyaline, weakly tinged with greyish; veins dark brown, R4+5 and M parallel apically, M somewhat bent; CuAx ratio 0.55. Squama yellow with dark brown margin and black hairs. Halter yellow with brown knob.

Abdomen metallic green, with pale grey pollen; tergum 2 yellow with mid-posterior area black (sometimes reaching anterior margin), sterna 1-2 yellow. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 61): Epandrium much longer than wide, its surstylus with acute dorsal and ventral lobes (dorsal lobe strongly curved inward); hypandrium rather thick with concave ventral margin.

Female. Unknown.

Holotype male: Yunnan: Jinghong, Mengyang (type locality), 1999. III. 5, Ding YANG (CAU).

Paratypes: Mengyang, 1999. III. 5, 4 males, Ding YANG; Menglun, 1999. III. 7, 4 males, Ding YANG; 1999. III. 10, 16 males, Ding YANG; Mengla, 1999. III. 8, 6 males, Ding YANG. Following paratypes were also recorded: 2 males (99059), 3 males (99060), 8 males (99071), 3 males (99073), 1 male (99077), 1 male (99079), 2 males (99087), 3 males (99090).

Distribution. China (Yunnan).

Etymology. The name refers to the pale bristles on the fore tarsus.

Remarks. This new species is somewhat similar to *Ch. ceratophorum* sp. nov., but differs from the latter in

having the fore tarsomeres 2-5 whitish with dark dorsal surface. In *Ch. ceratophorum*, only the fore tarsomere 5 is wholly whitish.

32. *Chaetogonopteron seriatum* sp. nov.
(Figs. 62-63)

Diagnosis. Middle and lower postocular bristles pale. Thorax and abdomen chiefly yellow. Antenna yellow with first flagellomere black.

Male. Body length 3.3 mm, wing length 3.5 mm.

Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale. Antenna yellow; first flagellomere black and short subtriangular; arista black with basal segment rather short. Proboscis brownish yellow and palpus brownish yellow, with black hairs.

Thorax yellow; mesonotum with a wide metallic green middle band; scutellum with wide lateral corner and narrow posterior margin yellow; pteropleuron with a black dot, laterotergite with a blackish spot. Hairs and bristles on thorax black; 11-12 paired acr short and hair-like, 6 strong dc. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner; fore tarsomere 5 brown. Hairs and bristles on legs black; fore coxa with 6 bristles, hind coxa with 1 outer bristle. Fore tarsomere 1 elongated (longer than tarsomeres 2-5 together), fore tarsomeres 1-2 with short bristle-like ventral hairs, fore tarsomere 1 with 1 brownish yellow long v at basal 1/3; mid tibia with 3 ad, 1 pd and 2 rows of av (outer row being short and reaching the tip while inner row long and absent apically); mid tarsomere 1 basally with 2 somewhat curved v, medially with 1 straight v; hind tibia with 3 ad and a row of bristle-like ventral hairs. Hind tarsomeres 1-2: Fig. 62. Relative lengths of segments of legs LI 4.0: 4.0: 1.2: 1.2: 0.6: 0.3; LII 6.2: 3.0: 2.2: 1.6: 0.85: 0.3; LIII 7.8: 0.6: 0.6: 2.9: 1.5: 0.3.

Wing hyaline; veins dark brown, R4+5 and M parallel

apically; CuAx ratio 1.0. Squama yellow with dark brown margin, and with black hairs. Halter yellow.

Abdomen chiefly yellow; terga 1-4 metallic green except lateral area yellow; tergum 5 with anterior and posterior margin blackish medially; tergum 6 wholly yellow. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 63): Epandrium much longer than wide, its surstylus with finger-like dorsal lobe (bearing 1 bristle) and wide ventral lobe (which are separated distinctly from dorsal lobe), basally with 2 long bristles on short denticles; cercus somewhat narrow apically; hypandrium rather thick, with thin acute inner denticle.

Female. Unknown.

Holotype male: Yunnan: Jinghong, Mengyang (type locality), 1999. III. 5, Ding YANG.

Distribution. China (Yunnan).

Etymology. The name refers to rows of bristles on the mid tibia.

Remarks. This new species is very similar to *Ch. arunense* (HOLLIS) from Nepal, but may be separated from the latter by the mid tibia with two rows of different anteroventrals.

33. *Chaetogonopteron singulare* sp. nov.
(Figs. 64-66)

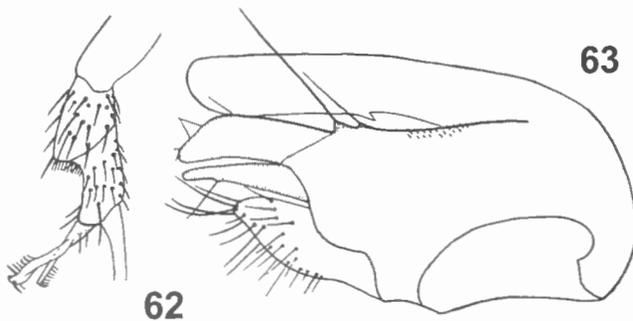
Diagnosis. Middle and lower postocular bristles pale yellow. Thorax and abdomen largely metallic green. Only hind tarsomere 1 shortened.

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

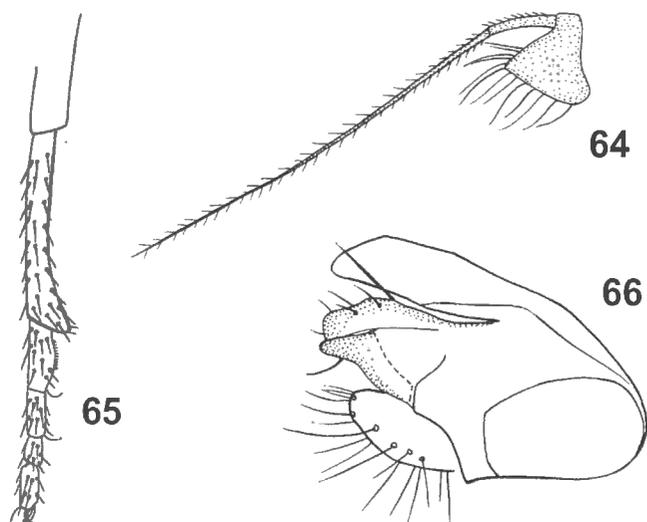
Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; middle and lower postocular bristles (including ventral hairs) pale yellow. Antenna (Fig. 64) black; first flagellomere short triangular; arista black with basal segment rather short. Proboscis and palpus dark brown with black hairs.

Thorax metallic green, with pale grey pollen; meta-pleuron yellow. Hairs and bristles on thorax black; 4-5 paired acr short and hair-like, 4 strong dc. Propleuron pale haired, with 1 black bristle on lower part.

Legs yellow; fore and mid femora, fore trochanter and coxa pale yellow; mid coxa with a black anterior stripe and blackish posterior upper margin; hind leg (except coxa) dark brownish yellow; fore tarsomere 5 dark brown and somewhat thickened apically; mid tarsus from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black, but hairs on fore femur pale yellow; fore coxa with 4 bristles, hind coxa with 1 outer bristle. Hind femur with 4 hair-like ventral bristles (of which only 1 inner bristle is long and erect). Fore tibia with a



Figs. 62-63 — *Chaetogonopteron seriatum* sp. nov., male. 62. Hind tarsomeres 1-2, lateral view; 63. genitalia, lateral view.



Figs. 64-66 — *Chaetogonopteron singulare* sp. nov., male. 64. antenna (excluding scape and pedicel), lateral view; 65. fore tarsus, lateral view; 66. genitalia, lateral view.

row of 4 ad; fore tarsomere 1 nearly as long as tarsomeres 2-5 together, tarsomeres 3-5 shortened (Fig. 65); mid tibia with 3 ad, 2 pd, 1 av and 4-5 pv; hind tibia with 3 ad; hind tarsomere 1 with 3 long ventral hairs basally, hind tarsomere 2 with a row of v and some curved thin hairs. Relative lengths of segments of legs LI 2.3: 1.2: 0.4: 0.25: 0.2: 0.25; LII 4.0: 2.0: 1.0: 0.8: 0.5: 0.4; LIII 4.3: 0.9: 1.1: 0.65: 0.5: 0.4.

Wing hyaline, weakly tinged with greyish; veins dark brown, R4+5 and M more or less parallel apically; CuAx ratio 0.45. Squama yellow with black margin, and with black hairs. Halter yellow.

Abdomen metallic green, with pale grey pollen; tergum 2 with postero-lateral area yellow; sterna 1-2 yellow. Hairs and bristles on abdomen black, venter mainly with pale hairs; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 66): Epandrium longer than wide, its surstylus with narrow dorsal lobe bearing 1 bristle and a wide ventral lobe (bearing 1 long bristles and 5 short bristles); cercus wide and rounded apically; hypandrium rather thick but narrow apically.

Female. Unknown.

Holotype male: Yunnan: Jinghong, Mengyang (type locality), 1999. III. 5, Ding YANG (CAU).

Paratypes: Menglun, 1999.III.7, 2 males (99071), 2 males (99073); Mengla, 1999.III. 9, 5 males (99079), Menglun, 1999.III.9, 1 male (99083), 3 males (99087); Mengyang, 1999.III. 11, 1 male (99090).

Distribution. China (Yunnan).

Etymology. The name refers to the dorsal lobe of the surstylus with 1 bristle.

Remarks. This species is very similar to *Ch. campsicnemoides* (MEUFFELS & GROOTAERT, 1987), but may be separated from the latter by having the dorsal lobe of the surstylus with 1 bristle and fore tarsomere 2 longer than tarsomere 3. In *Ch. campsicnemoides*, the dorsal lobe of the surstylus has 2 bristles; the fore tarsomere 2 is as long as tarsomere 3 (MEUFFELS & GROOTAERT, 1987).

34. *Chaetogonopteron sublaetum* sp. nov. (Figs. 67-69)

Diagnosis. Hind tarsomeres 1-2 shortened, tarsomere 1 with 4 long bristles thin or thick, tarsomere 2 without worm-like appendage (clidium). Hind femur with a row of distinct ventrals. Thorax and abdomen mainly yellow.

Male. Body length 2.4-3.0 mm, wing length 3.3-3.6 mm.

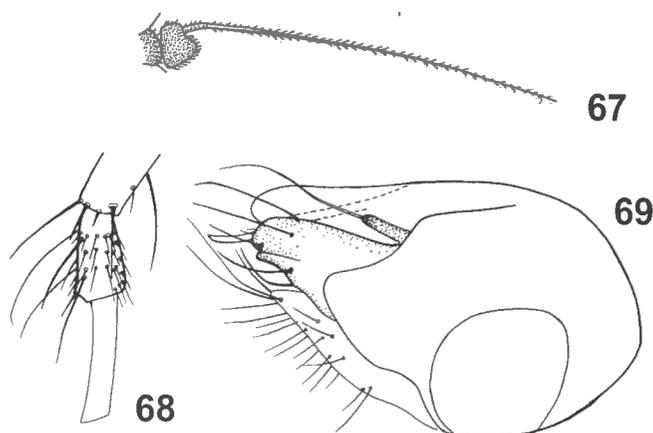
Head metallic green, with pale grey pollen; eyes contiguous on face. Hairs and bristles on head black; postocular bristles (including ventral hairs) black. Antenna (Fig. 67) black; first flagellomere brown, short subtriangular; arista dark brown with basal segment rather short. Proboscis and palpus brownish yellow, with black hairs, palpus with 2-3 black bristles.

Thorax yellow; mesonotum metallic green, with narrow anterior part and narrow lateral part yellow; scutellum metallic green, with posterior margin yellow; pteropleuron with a black dot, laterotergum with dark brown anterior margin. Hairs and bristles on thorax black; 7-8 irregularly paired acr short and hair-like, 5 strong dc; scutellum with short marginal hairs. Propleuron black haired, with 1 black bristle on lower part.

Legs yellow; all coxae yellow, mid coxa with a black dot on posterior upper corner and a blackish anterior stripe; fore tarsomere 5 and mid tarsomeres 2-5 brown or dark brown, hind tarsus brownish to brown. Hairs and bristles on legs black; fore coxa with 6 bristles, hind coxa with 1 outer bristle. Mid tibia with 3 ad, 2 pd, 2 av and 1 pv; hind tibia with 1 ad and 4-5 pd; hind tarsomeres 1-2 shortened, tarsomere 1 with 4 long bristles thin or thick, tarsomere 2 without worm-like appendage (Fig. 68). Hind femur with a row of distinct v, hind tibia with a row of recumbent v (which is absent apically). Relative lengths of segments of legs LI 3.8: 2.8: 1.3: 1.2: 0.7: 0.4; LII 6.8: 3.7: 2.0: 1.8: 1.0: 0.4; LIII 7.2: 1.0: 1.2: 2.3: 1.35: 0.4.

Wing weakly tinged with greyish; veins dark brown, R4+5 and M parallel apically, M nearly straight; CuAx ratio 0.7. Squama dark yellow with dark brown margin, and with black hairs. Halter yellow.

Abdomen metallic green; tergum 1 wholly yellow, tergum 2 (sometimes tergum 3) yellow laterally, sterna 1-2 yellow; hypopygium yellow with black surstylus. Hairs and bristles on abdomen black; terga 1-6 with a row of bristles on posterior margin. Male genitalia (Fig. 69): Epandrium longer than wide; surstylus with finger-like dorsal lobe bearing 2 bristles and wide ventral lobe with 3 strong bristles and some short hairs, basally



Figs. 67-69 — *Chaetogonopteron sublaetum* sp. nov., male. 67. antenna (excluding scape), lateral view; 68. hind tarsomeres 1-2, lateral view; 69. genitalia, lateral view.

with a finger-like projection bearing 1 long apical bristle; cercus narrow apically; hypandrium rather thick and nearly straight.

Female. Body length 3.1-3.4 mm, wing length 3.3-3.8 mm. Similar to male, but eyes very narrowly separated on face; terga 2-4 or 2-5 yellow laterally.

Holotype male: Yunnan: Jinghong, Mengyang (type locality), 1999. III. 5, Ding YANG

Paratypes: Mengyang, 1999. III. 5, 4 males, 2 females, Ding YANG. Yunnan: Mengla, 1999. III. 8, 4 males, 1 female, Ding YANG; Menglun, 1999. III. 7, 14 males, 16 females Ding YANG. Additional paratypes are: 4 males (99060), 2 males (99071), 1 males (99073), 2 males (99077), 1 male (99083), 1 male (99087), 5 males (99090).

Distribution. China (Yunnan).

Etymology. The name refers to its similarity with *Ch. laetum* (BECKER).

Remarks. This species is very similar to *Ch. laetum* (BECKER) from the Oriental region, but may be separated from the latter in having 5 dc and CuAx ratio 0.7. In *Ch. laetum*, there are 6 dc (BECKER, 1922) and the "apical section of 5th vein twice as long as the posterior cross-vein" (HOLLIS, 1964).

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