

A review of the genus *Hercostomus* from Nepal  
(Diptera: Empidoidea: Dolichopodidae)

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Abstract

The species of the genus *Hercostomus* from Nepal are reviewed. The following 16 species are described as new to science: *Hercostomus* (*Hercostomus*) *acuticornutus*, *H. (H.) basantapuranus*, *H. (H.) brevilobatus*, *H. (H.) chiliwanus*, *H. (H.) completus*, *H. (H.) dentatus*, *H. (H.) emarginatus*, *H. (H.) emotoi*, *H. (H.) indistinctus*, *H. (H.) lelepanus*, *H. (H.) nakanishii*, *H. (H.) nepalensis*, *H. (H.) papunanus*, *H. (H.) subdentatus*, *H. (H.) tankanus*, *H. (H.) thudamanus*.

**Key words:** Dolichopodidae, *Hercostomus*, new species, Nepal

Introduction

Only 2 species of the genus *Hercostomus* LOEW, 1857 were recorded from Nepal: *Hercostomus phollae* HOLLIS, 1964; *Hercostomus ulleriensis* HOLLIS, 1964 (HOLLIS, 1964; DYTE, 1975). In the present paper, the Nepalese species of this genus are reviewed. Up to now 25 species are known to occur in Nepal, among which 16 species are described as new to science. Specimens studied are housed in the Biosystematics Laboratory of Kyushu University. All material was collected in eastern Nepal by the members of the Kyushu University Scientific Expedition to the Nepal Himalaya in 1971 and 1972 by sweeping and using a Malaise trap. The following abbreviations are used: acr-acrostichal, ad-anterodorsal, ap-apical, apv-apicoventral, av-anteroventral, d-dorsal, dc-dorsocentral, LI-fore leg, LII-mid leg, LIII-hind leg, npl-notopleural, pd-posterodorsal, pv-posteroventral, v-ventral.

Key to species (males) of *Hercostomus* from Nepal

1. Cercus very slender and stripe-like (*longicercus*-group) . . . . . 2
- Cercus rather short and thick . . . . . 6
2. 5th pair of dc not convergent; acr absent . . . . . 3
- 5th pair of dc convergent; acr present . . . . . 4
3. Fore tarsomere 5 weakly flattened dorso-ventrally . . . . . *completus* sp. n.
- Fore tarsomere 5 strongly flattened laterally and nearly oval in shape . . . . . *emarginatus* sp. n.
4. Legs mainly brownish yellow or yellow . . . . . 5

- Legs mainly black . . . *filiformis* YANG et SAIGUSA
5. Face bare; clypeus projecting downward beyond lower margin of eyes; fore tarsus without ridge-like ventral margin . . . . . *chiliwanus* sp. n.
- Face with pale short hairs on lower portion; clypeus not projecting downward beyond lower margin of eyes; fore tarsomere 4 with ridge-like ventral margin . . . . . *tankanus* sp. n.
6. Hind femur with 1 preapical bristle . . . . . 7
- Hind femur with 4-5 preapical bristles . . . . . *phollae* HOLLIS
7. Cercus very large and nearly quadrate, yellow, with dark edges and marginal denticles; distance between 2 rows of acr very narrow and even disappearing anteriorly (*cyaneculus*-group) . . . . . 8
- Cercus not as above; not in accordance with “acr nearly uniseriate”, mentioned (in 12) for the spp. *Yuanlongensis*, *spiniger* and *nepalensis* . . . 9
8. Fore coxa black; fore tibia with 1 long apv . . . . . *lii* YANG
- Fore coxa yellow; fore tibia with 1 short apv . . . . . *indistinctus* sp. n.
9. Cercus with oblique apical incision (*biancistrus*-group) . . . . . 10
- Cercus different . . . . . 11
10. Thorax mainly yellow'. . . . . *dentatus* sp. n.
- Thorax entirely metallic green . . *subdentatus* sp. n.
11. Thorax with at least metapleuron yellow; cercus with 2 strong apical spines directed inward (*subnovus*-group) . . . . . 12
- Thorax entirely metallic green . . . . . 15
12. Postocular bristles entirely black; acr nearly uniseriate; epandrial lobe acute apically . . . . . 13
- Middle and lower postocular bristles yellow; acr biseriate; epandrial lobe obtuse apically. . . . . *nakanishii* sp. n.
13. Epandrial lobe slender . . . . . 14
- Epandrial lobe short and thick . . . . . *yunlongensis* YANG et SAIGUSA
14. Metapleuron with upper portion narrowly black; aedeagus strongly curved apically . . *spiniger* YANG
- Metapleuron entirely yellow; aedeagus nearly straight apically . . . . . *nepalensis* sp. n.

15. Hypandrium simple ..... 16

- Hypandrium irregularly furcate; cercus with 1 digitiform apical process (*digitatus*-group) ..... 22

16. Cercus nearly quadrate or triangular with marginal denticles (*baishanzuensis*-group) ..... 17

- Cercus nearly strip-like and slightly thickened apically, without distinct marginal denticles; face with short hairs on lower portion (*fluvius*-group) .....  
..... *fluvius* WEI

17. Legs mainly yellow to dark brownish yellow .. 18

- Legs mainly black ..... 21

18. Postocular bristles entirely black ..... 19

- Middle and lower postocular bristles yellow .....  
..... *basantapuranus* sp. n.

19. acr present ..... 20

- acr absent ..... *brevilobatus* sp. n.

20. First flagellomere long (2.1-2.2 x as long as wide) and acute apically ..... *acuticornutus* sp. n.

- First flagellomere short (1.35-1.5 x as long as wide) and angular apically ..... *emotoi* sp. n.

21. acr absent ..... *baishanzuensis* YANG et YANG

- acr present ..... *serratus* YANG et SAIGUSA

22. Antenna entirely black; middle and lower postocular bristles yellow ..... 23

- Antenna mainly yellow; postocular bristles entirely black ..... *papunanus* sp. n.

23. Fore tarsomeres 4-5 slightly thickened .....  
..... *thudamanus* sp. n.

- Fore tarsus simple ..... *lelepanus* sp. n.
- The *longicercus*-group
1. *Hercostomus (Hercostomus) completus* sp. n.  
(Figs 1-3)
- Diagnosis.* Face and clypeus with several pale short hairs. acr absent. Fore femur with 2 long baso-ventral bristles. Fore tarsomere 5 weakly flattened dorsoventrally.
- Male.* Body length 2.9-3.2 mm, wing length 3.6-3.7 mm.  
Head metallic green, with pale gray and gray brown pollen; face nearly as wide as first flagellomere. Hairs and bristles on head mainly black; postocular bristles black; lower occiput with pale hairs medially. Face and clypeus with several pale short hairs. Antenna (Fig. 1) entirely black; first flagellomere rather small, 1.1 x as long as wide, obtuse apically; arista dorsal, black, indis-
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- Figs. 1-3 — *Hercostomus (Hercostomus) completus* sp. n. (male) - 1. antenna (excluding scape), lateral view; 2. genitalia, lateral view; 3. apical genital processes, lateral view. Scale 0.25.

tinctly pubescent, with basal segment 0.2 x as long as apical segment. Proboscis dark brown with short black hairs; palpus black with short black hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum (excluding notopleural area) and scutellum, that have a gray brown pollen. Hairs and bristles on thorax black; 6 strong dc (5th pair of dc not distinctly convergent), acr absent; scutellum with 4 pale short marginal hairs between the 2 outer bristles. Propleuron pale haired, with 1 black bristle on lower portion. Metapleuron with 6 pale hairs on antero-lower corner. Legs yellow; fore and hind coxae yellow, mid coxa (except narrowly at apex) blackish; mid and hind femora with extreme tips brownish; hind tibia with brownish tip; fore and mid tarsi from tip of tarsomere 1 onward dark brown, hind tarsus black with tarsomere 1 blackish. Fore tarsomere 5 weakly flattened dorsoventrally. Hairs and bristles on legs black, fore coxa with 6-7 apical bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore femur with 2 long black ventral bristles basally. Fore tibia with 1 ad, 2 pd and 3 ap; mid tibia with 3 ad, 2 pd and 4 ap; hind tibia with 3 ad, 3 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 pv at base and 2 v. Relative lengths of tibia and 5 tarsomeres LI 2.0 : 1.2 : 0.7 : 0.6 : 0.4 : 0.4; LII 3.2 : 1.7 : 1.0 : 0.8 : 0.55 : 0.4; LIII 3.7 : 1.4 : 1.5 : 0.95 : 0.55 : 0.45. Wing tinged with grayish; veins dark brown, R4+5 weakly curved backward, M nearly straight, R4+5 and M slightly convergent apically; CuAx ratio 1.0-1.1. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray and gray brown pollen; segments 6-7 slightly elongated. Hairs and bristles on abdomen black. Male genitalia (Figs 2-3): Epandrial lobe stout, with 1 basal and 2 apical hairs; cercus very slender and strip-like; hypandrium slightly thickened apically; aedeagus with subapical dorsal denticle.

*Female.* Body length 2.7-3.0 mm, wing length 3.5-3.7 mm.

*Holotype* male, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, J. Emoto. *Paratypes* 23 males 16 females, same data as holotype; 5 males 3 females, all same locality as holotype, 1972. VI. 11, H. Shima; 3 males, all same locality as holotype, 1972. VI. 10, J. Emoto; 4 males, Thurukpa (2600 m) - Topke Gola (3700 m), 1972. VI. 8, J. Emoto; 1 male, Thurukpa (2600 m) - Topke Gola (3700 m), 1972. VI. 11, H. Shima; 5 males 1 female, Thurukpa (2600 m) - Papun (2100 m), 1972. VII. 10, J. Emoto; 3 males 2 females, Thurukpa (2600 m) - Papun (2100 m), 1972. VII. 10, P. Norbu; 11 males, Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara; 1 male, Shawa (2300 m), 1972. VI. 9, J. Emoto; 5 males, Basantapur (2300 m) - Chouki (2700 m), 1972. VI. 21, H. Makihara.

*Etymology.* The specific name refers to the epandrial lobe without incision on apical margin.

*Remarks.* The new species is very similar to *Hercostomus* (*H.*) *emarginatus* sp. n. in having fore femur with 2 long black ventral bristles basally and acr absent, but can be separated from the latter by the fore tarsomere 5, that is weakly thickened.

## 2. *Hercostomus* (*Hercostomus*) *emarginatus* sp. n. (Figs 4-6)

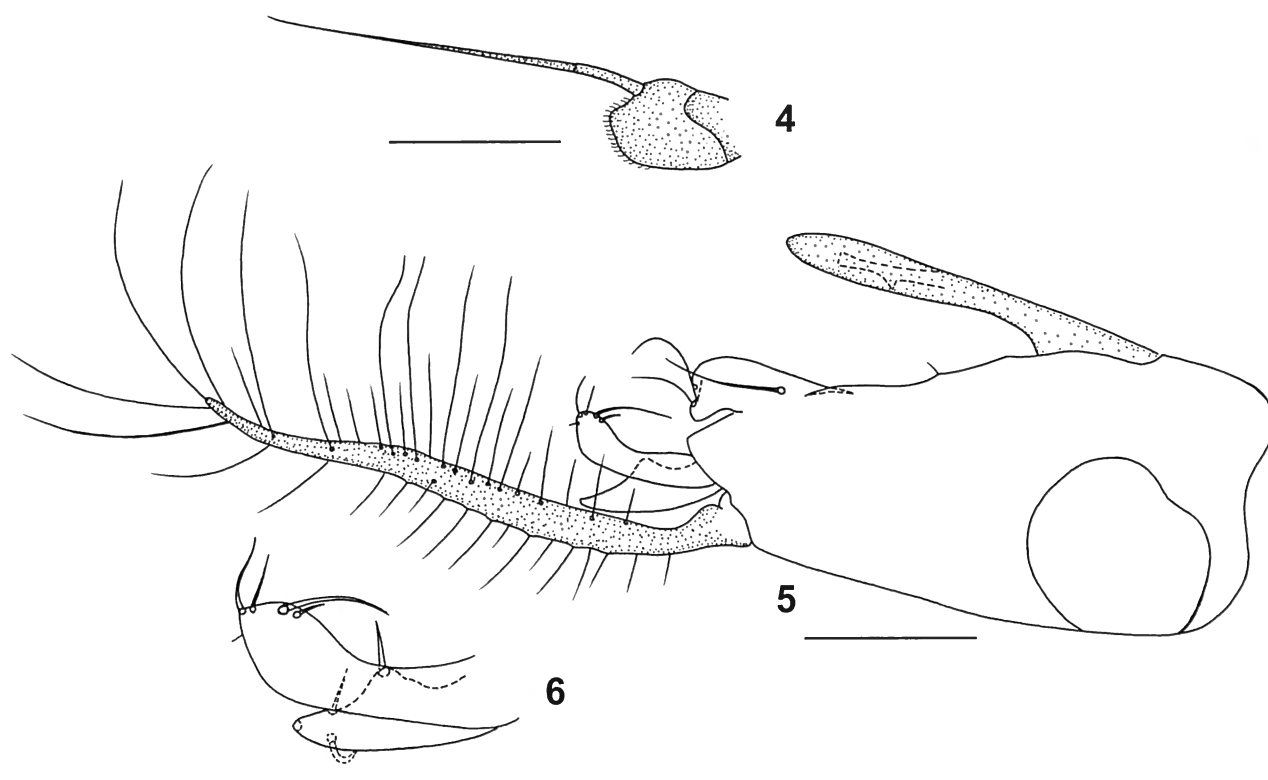
*Diagnosis.* Face and clypeus with several pale short hairs. acr absent. Fore femur with 2 long ventral bristles basally. Fore tarsomere 5 strongly flattened laterally, and nearly oval in shape.

*Male.* Body length 3.3-3.5 mm, wing length 3.5-3.7 mm.

Head metallic green with pale gray and gray brown pollen; face nearly as wide as first flagellomere. Hairs and bristles on head mainly black; postocular bristles black, lower occiput with pale hairs medially. Face and clypeus with several pale short hairs. Antenna (Fig. 4) entirely black; first flagellomere rather small, 1.1 x as long as wide, obtuse apically; arista subapical, black, indistinctly pubescent, with basal segment 0.2 x as long as apical segment. Proboscis dark brown, with short black hairs; palpus black with short black hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum (excluding notopleural area) and scutellum that are tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc (5th pair of dc not distinctly convergent), acr absent; scutellum with 8 pale short marginal hairs between the 2 outer bristles. Propleuron pale haired, with 1 black bristle on lower portion. Metapleuron with 6 pale hairs on antero-lower corner. Legs yellow; fore and hind coxae yellow, mid coxa (except narrowly at apex) blackish; mid and hind femora with extreme tips brownish; hind tibia with brown tip; fore and mid tarsi from tip of tarsomere 1 onward dark brown, except for fore tarsomere 5, that is black; hind tarsus black. Fore tarsomeres 2-4 rather thin, tarsomere 5 strongly flattened laterally and nearly oval in shape. Hairs and bristles on legs black, fore coxa with 7-8 apical bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore femur with 2 long ventral bristles basally. Fore tibia with 1 short ad, 2 pd and 3 ap; mid tibia with 3 ad, 2 pd and 4 ap; hind tibia with 3 ad, 3 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 pv at base, 2 v and 1 av. Relative lengths of tibia and 5 tarsomeres LI 2.0 : 1.1 : 0.6 : 0.55 : 0.45 : 0.45; LII 3.1 : 1.7 : 1.0 : 0.8 : 0.55 : 0.45; LIII 3.7 : 1.3 : 1.5 : 0.95 : 0.6 : 0.45. Wing slightly grayish; veins dark brown, R4+5 and M nearly straight, and apically nearly parallel; CuAx ratio 1.0. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray and gray brown pollen; segments 6-7 slightly elongated. Hairs and bristles on abdomen black. Male genitalia (Figs 5-6): Epandrial lobe stout, with a weak apical incision, and



Figs. 4-6 — *Hercostomus (Hercostomus) emarginatus* sp. n. (male) - 4. antenna (excluding scape), lateral view; 5. genitalia, lateral view; 6. apical genital processes, lateral view. Scale 0.25.

2 apical hairs; cercus very slender and stripe-like; hypandrium slightly thickened apically; aedeagus with subapical dorsal denticle.

*Female.* Unknown.

*Holotype* male, Nepal: Thurukpa (2600 m) - Topke Gola (3700 m), 1972. VI. 8, J. Emoto. *Paratypes* 1 male, same data as holotype; 2 males, all same locality as holotype, 1972. VI. 12, J. Emoto; 1 male, Thurukpa (2600 m) - Papun (2100 m), 1972. VII. 10, J. Emoto; 4 males, Thurukpa (2600 m) - Papun (2100 m), 1972. VII. 10, P. Norbu; 2 males, Papun (2100 m) - Thurukpa (2600 m), 1972. VII. 10, J. Emoto; 6 males, Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, J. Emoto; 4 males, Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara; 1 male, Penmaten (2600 m) - Topke Gola (3700 m), 1972. VI. 30, H. Makihara; 1 male, Basantapur (2300 m) - Chouki (2700 m), 1972. VI. 21, H. Makihara.

*Etymology.* The specific name refers to the epandrial lobe with incised apical margin.

*Remarks.* The new species is very similar to *Hercostomus (H.) completus* sp. n., but can be separated from it by fore tarsomere 5, that is distinctly flattened laterally, and nearly oval.

### 3. *Hercostomus (Hercostomus) filiformis* YANG et SAIGUSA, 2001

*Hercostomus (Hercostomus) filiformis* YANG et SAIGUSA, 2001. Bull. Inst. R. Sci. Nat. Belg. Ent. 71: 200. Type locality: Yunnan (Luchun).

*Specimen examined.* 1 male, Nepal: Lelep (1770 m), 1972. VI. 4, J. Emoto.

*Distribution.* Nepal, China (Yunnan).

### 4. *Hercostomus (Hercostomus) chiliwanus* sp. n. (Figs 7-8)

*Diagnosis.* Clypeus distinctly projecting downward beyond lower margin of eyes. 3-4 uniseriate acr present between 3rd and 5th dc. 5th pair of dc distinctly convergent.

*Male.* Body length 2.3-2.4 mm, wing length 2.5-2.6 mm.

Head metallic green, with pale gray pollen; frons with not very dense white pollen; face nearly as wide as first flagellomere, with very dense, silvery white pollen. Clypeus distinctly projecting downward beyond lower margin of eyes. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna

(Fig. 7) entirely black; first flagellomere rather small, as long as wide, obtuse apically; arista subapical, black, indistinctly pubescent, with basal segment 0.15 x as long as apical segment. Proboscis dark brown with short black hairs; palpus black with short black hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen except for mesonotum (excluding notopleural area) and scutellum, that are slightly tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc (5th pair of dc distinctly convergent), 3-4 uniseriate acr present between 3rd and 5th dc; scutellum with 6 black short marginal hairs between the 2 outer bristles. Propleuron pale haired, with 1 black bristle on lower portion. Legs brownish yellow; fore coxa brownish yellow, mid and hind coxae (except narrowly at apex) blackish; femora with dorsal surface somewhat dark; tarsi from tip of tarsomere 1 onward dark brown. Hairs and bristles on legs black, fore coxa with 5 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with a row of ad, 2 pd, 2 ap and 1 distinct apv (1/3 as long as tarsomere 1); mid tibia with 3 ad, 2 pd, 1 av and 4 ap; hind tibia with 3 ad, 4 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 pv at base. Relative lengths of tibia and 5 tarsomeres LI 1.45 : 0.8 : 0.3 : 0.2 : 0.1 : 0.15; LII 2.2 : 1.0 : 0.45 : 0.4 : 0.25 : 0.25; LIII 2.5 : 0.65 : 0.8 : 0.55 : 0.35 : 0.35. Wing slightly grayish; veins dark brown, R4+5 and M curved backward and convergent apically. CuAx ratio 0.55. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen. Hairs and bristles on abdomen black. Male genitalia (Fig. 8): Epandrial lobe short, with 2 dorsal hairs apically; cercus very slender and strip-like; hypandrium slightly narrowed at tip.

*Female.* Unknown.

*Holotype* male, Nepal: Chiliwa (1350 m) - Shibku (2100 m), 1972. VII. 7, J. Emoto. *Paratype* 1 male, same data as holotype.

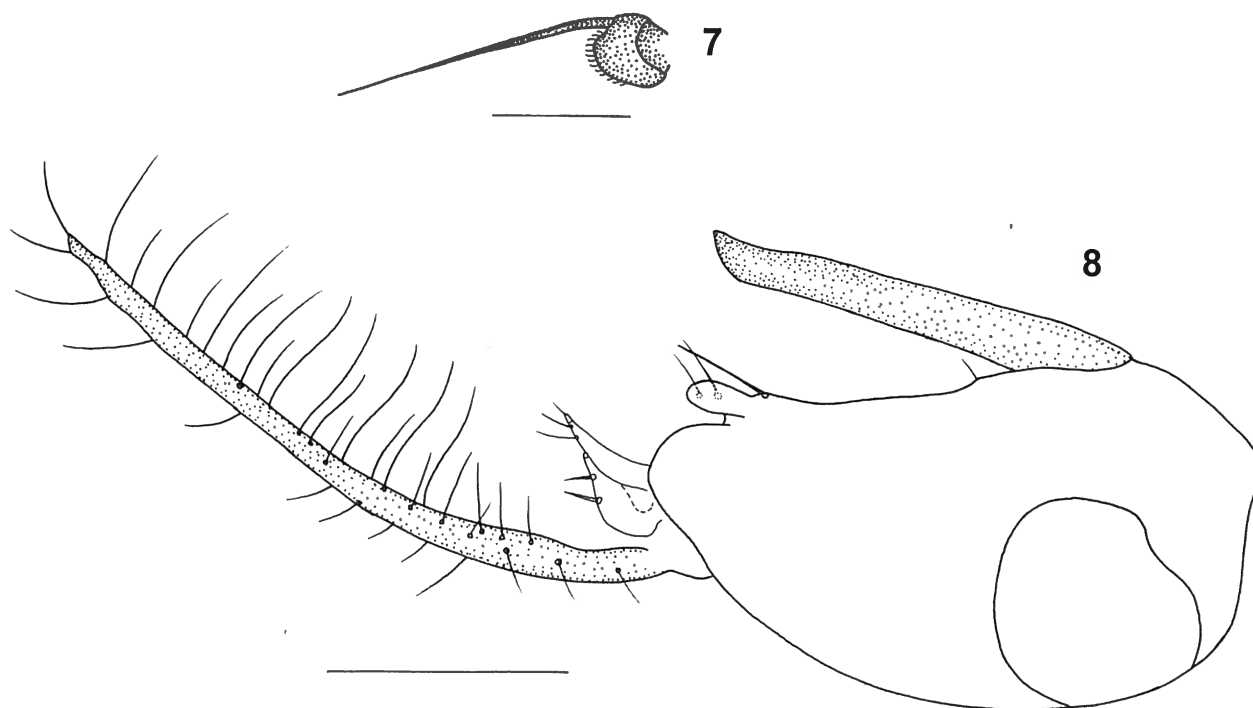
*Etymology.* The specific name refers to the type locality Chiliwa.

*Remarks.* The new species can be easily separated from other known species of the group by the clypeus, that is distinctly projecting downward beyond lower margin of eyes.

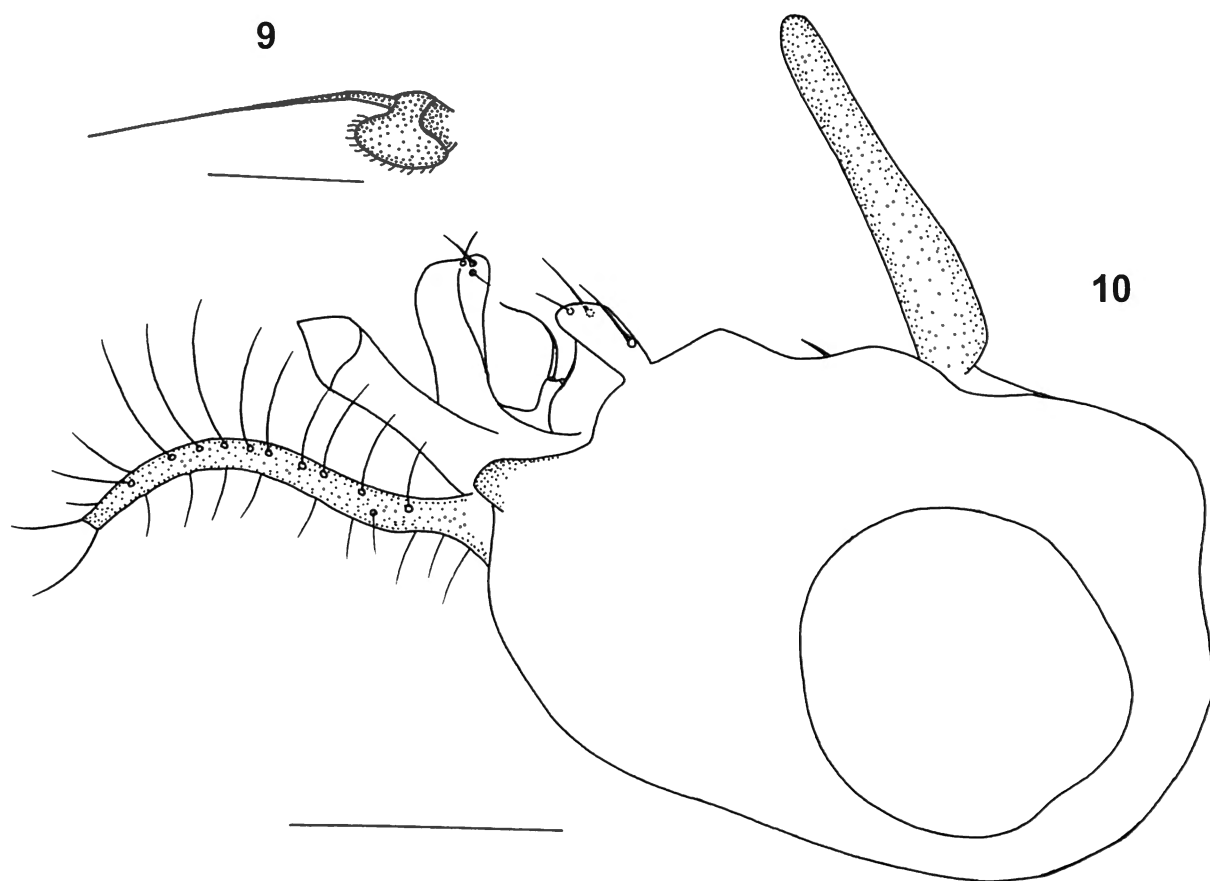
##### 5. *Hercostomus (Hercostomus) tankanus* sp. n. (Figs 9-10)

*Diagnosis.* Face with several pale short hairs on lower portion. 6-7 uniseriate acr. 5th pair of dc slightly convergent. Fore tarsomere 4 with ridge-like ventral margin.

*Male.* Body length 2.0-2.1 mm, wing length 2.3-2.4 mm. Head metallic green, with mainly pale gray pollen; frons



Figs. 7-8 — *Hercostomus (Hercostomus) chiliwanus* sp. n. (male) - 7. antenna (excluding scape), lateral view; 8. genitalia, lateral view. Scale 0.25.



Figs. 9-10 — *Hercostomus (Hercostomus) tankanus* sp. n. (male) - 9. antenna (excluding scape), lateral view; 10. genitalia, lateral view. Scale 0.25.

gray brown pollinose, with white pollen on middle portion, face nearly as wide as first flagellomere with white pollen. Hairs and bristles on head mainly black; postocular bristles (including hairs on lower occiput) black. Face with several pale short hairs on lower portion. Antenna (Fig. 9) entirely black; first flagellomere rather small, 1.1 x as long as wide, obtuse apically; arista subapical, black, indistinctly pubescent, with basal segment 0.15 x as long as apical segment. Proboscis dark brown, with short black hairs; palpus black, with short black hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum (excluding notopleural area) and scutellum, that are tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc (5th pair of dc slightly convergent), 6-7 uniseriate acr; scutellum with 2 pale short marginal hairs between the 2 outer bristles. Propleuron pale haired, with 1 black bristle on lower portion. Legs yellow; fore coxa yellow, mid and hind coxae (except narrowly at apex) dark brown; hind femur with extreme tip brown; tarsi from tip of tarsomere 1 onward dark brown. Fore tarsomere 4 with ridge-like ventral margin. Hairs and bristles on legs black, fore coxa with 5 bristles, mid and hind coxae each with 1 outer

bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 2 pd, 2 ap and 1 long apv (about 1/2 as long as tarsomere 1); mid tibia with 3 ad, 2 pd, 1 av and 4 ap; hind tibia with 2 ad, 3 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 pv at base. Relative lengths of tibia and 5 tarsomeres LI 1.2 : 0.65 : 0.3 : 0.15 : 0.1 : 0.15; LII 1.7 : 0.7 : 0.4 : 0.3 : 0.2 : 0.2; LIII 2.1 : 0.6 : 0.7 : 0.55 : 0.4 : 0.3. Wing nearly hyaline; veins dark brown, R4+5 indistinctly curved backward, M more or less straight, R4+5 and M weakly convergent apically. CuAx ratio 0.8. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray and gray brown pollen. Hairs and bristles on abdomen black. Male genitalia (Fig. 10): Epandrial lobe short, with 2 inner hairs apically; cercus slender and strip-like.

*Female.* Unknown.

*Holotype* male, Nepal: Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara. *Paratype* 1 male, same data as holotype.

*Etymology.* The specific name refers to the type locality Tank.

**Remarks.** The new species is somewhat similar to *Hercostomus* (*H.*) *chiliwanus* sp. n., but can be separated from it by the face, bearing several pale short hairs on lower portion, and fore tarsomere 4, that has a ridge-like ventral margin.

#### The *cyaneculus*-group

##### 6. *Hercostomus* (*Hercostomus*) *lii* YANG, 1996

*Hercostomus* (*Hercostomus*) *lii* YANG, 1996. Ann. Soc. Ent. Fr. (N.S.) 32(4): 413. Type locality: Tibet (Bomi).

**Specimen examined.** 1 male, Nepal: Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara.

**Distribution.** Nepal, China (Tibet, Shaanxi).

##### 7. *Hercostomus* (*Hercostomus*) *indistinctus* sp. n. (Figs 11-13)

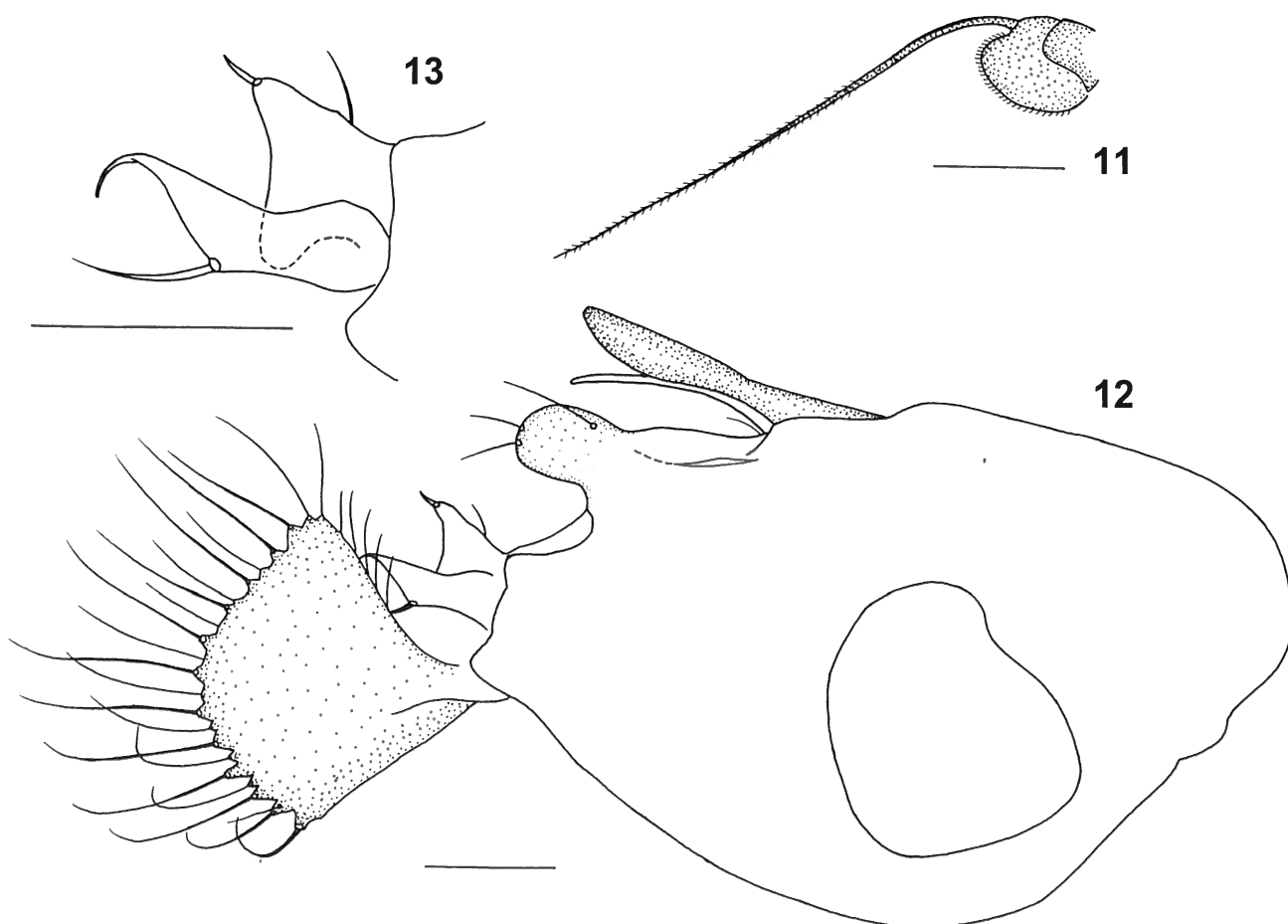
**Diagnosis.** Arista with somewhat indistinct hairs. R4+5 and M distinctly convergent apically. Mid and hind fe-

mora with some long pale ventral hairs (slightly shorter than femur thickness).

**Male.** Body length 4.4-4.7 mm, wing length 5.9-6.2 mm.

Head metallic green, mainly with pale gray pollen; upper occiput slightly tinged with gray brown pollen; frons subshiny metallic green with thin pale gray pollen, face with very dense silvery white pollen; face wider than first flagellomere, clypeus slightly convex. Hairs and bristles on head mainly black; middle and lower postocular bristles (including hairs on lower occiput) yellow. Antenna (Fig. 11) entirely blackish; first flagellomere rather small, as long as wide, obtuse apically; arista subapical, black, very shortly pubescent, with basal segment 0.3 x as long as apical segment. Proboscis brown, with short black hairs; palpus black, with short black hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum (excluding notopleural area) and scutellum, that are covered with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc (5th dc not convergent), 3-7 irregularly uniseriate acr, rather short and hair-like; scutellum with 3-4 short pale marginal hairs between the 2 outer bristles. Propleuron pale haired, with 1 black bristle on lower portion. Metapleuron with 4 pale hairs on



Figs. 11-13 — *Hercostomus* (*Hercostomus*) *indistinctus* sp. n. (male) - 11. antenna (excluding scape), lateral view; 12. genitalia, lateral view; 13. apical genital processes, lateral view. Scale 0.25.

antero-lower corner. Legs yellow; fore coxa yellow, mid and hind coxae (except at apex) blackish; tarsi from tip of tarsomere 1 onward dark brown to black. Hairs and bristles on legs black; fore coxa with pale hairs, except at apex, where it bears black hairs and bristles; mid coxa with partly pale hairs on basal half; fore coxa with 6 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore femur basally with very short pale ventral hairs, mid and hind femora (except at apex) with pale ventral hairs (some ventral hairs on basal portion longer, and slightly shorter than femur thickness). Fore tibia with 1 ad, 2 pd, 1-2 pv, 2 ap and 1 short blackish apv (1/5 as long as tarsomere 1); mid tibia with 3-4 ad, 2 pd, 2 av and 5 ap; hind tibia with 3 ad, 3-4 pd, 3 av and 3 ap. Hind tarsomere 1 with 1 v at base. Relative lengths of tibia and 5 tarsomeres LI 3.1 : 1.6 : 0.7 : 0.6 : 0.5 : 0.4; LII 4.4 : 2.1 : 1.0 : 0.8 : 0.55 : 0.45; LIII 5.1 : 1.55 : 1.5 : 1.0 : 0.6 : 0.5. Wing nearly hyaline, tinged with grayish apically, its antero-apical area above R4+5 gray brown; veins dark brown, R4+5 weakly curved backward, M nearly straight, R4+5 and M distinctly convergent apically; CuAx ratio 0.9. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen; cercus yellow, with black margin. Hairs and bristles on abdomen black, except for terga 1-5, that bear some pale hairs laterally and sterna 2-3, that bear entirely pale hairs. Male genitalia (Figs 12-13): Outer epandrial lobe stout, and inner epandrial lobe indistinct; cercus rather large, nearly quadrate, as long as wide, and with short marginal denticles; hypandrium slightly narrowed at apex.

*Female.* Body length 4.6-4.0 mm, wing length 5.6-5.8 mm. Face wider.

*Holotype* male, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VII. 10, J. Emoto. *Paratypes* 5 males 11 females, same data as holotype; 1 male, all same locality as holotype, 1972. VII. 11; 5 males 2 females, Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara; 1 male 5 females, Ponktable (1900 m) - Buze (2800 m), 1972. VII. 22, H. Shima & H. Makihara; 1 male, Topke Gola (3700 m) - Thurupka (2600 m), 1972. VII. 9, J. Emoto; 1 male, Chouki (2700 m) - Basantapur (2300 m), 1972. VII. 24, H. Makihara; 9 males 6 females, Dobang Kharka (2400 m), 1971. IX. 24-25, A. Nakanishi.

*Etymology.* The specific name refers to the indistinctly pubescent arista.

*Remarks.* The new species is somewhat similar to *Hercostomus* (*H.*) *potanini* STACKELBERG, 1934 from China, but different in the following characters: arista with somewhat indistinct hairs, R4+5 and M distinctly convergent apically; entire hind tibia and hind tarsomere 1 (except at apex) yellow; in *H. potanini* arista with long hairs, R4+5 and M slightly convergent apically, apex of hind tibia and entire hind tarsus black (STACKELBERG, 1934).

#### The *biancistrus*-group

#### 8. *Hercostomus* (*Hercostomus*) *dentatus* sp. n. (Figs 14-17)

*Diagnosis.* First flagellomere 1 distinctly elongated, 3.0 x as long as wide; arista with basal segment slightly longer than apical segment. Thorax mainly yellow.

*Male.* Body length 2.7 mm, wing length 3.6 mm.

Head metallic green, with pale gray pollen, except for upper occiput that has a gray brown pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna (Fig. 14) blackish; scape dark yellow, with dorsal surface dark brown; first flagellomere with baso-ventral area yellow; first flagellomere 1 distinctly elongated, 3.0 x as long as wide, and acute apically; arista dorsal, black, nearly bare, with long basal segment 1.1 x as long as apical segment. Proboscis dark brown, with short black hairs; palpus black with short black hairs and 1 black apical bristle.

Thorax yellow, with pale gray pollen; dorsum metallic green, except for mesonotum, that on its narrow lateral portion (including humerus) is dark yellow; pteropleuron and laterotergite blackish. Hairs and bristles on thorax black; 6 strong dc, 9 uniseriate acr. Propleuron black haired, with 1 black bristle on lower portion. Legs yellow; all coxae yellow; tarsi from tip of tarsomere 1 onward dark brown. Hairs and bristles on legs black; fore coxa with 6 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 2 ap and 1 short apv; mid tibia with 3 ad, 2 pd, 1 av and 5 ap; hind tibia with 3 ad, 3 pd, 3-4 av and 3 ap. Hind tarsomere 1 with 1 v at middle. Relative lengths of tibia and 5 tarsomeres LI 2.1 : 1.0 : 0.5 : 0.4 : 0.3 : 0.3; LII 2.95 : 1.3 : 0.7 : 0.55 : 0.45 : 0.4; LIII 3.5 : 0.95 : 1.0 : 0.7 : 0.45 : 0.4. Wing nearly hyaline; veins dark brown, R4+5 weakly curved backward apically, M nearly straight, R4+5 and M weakly convergent apically; CuAx ratio 0.7. Squama yellow, with black hairs. Halter yellow.

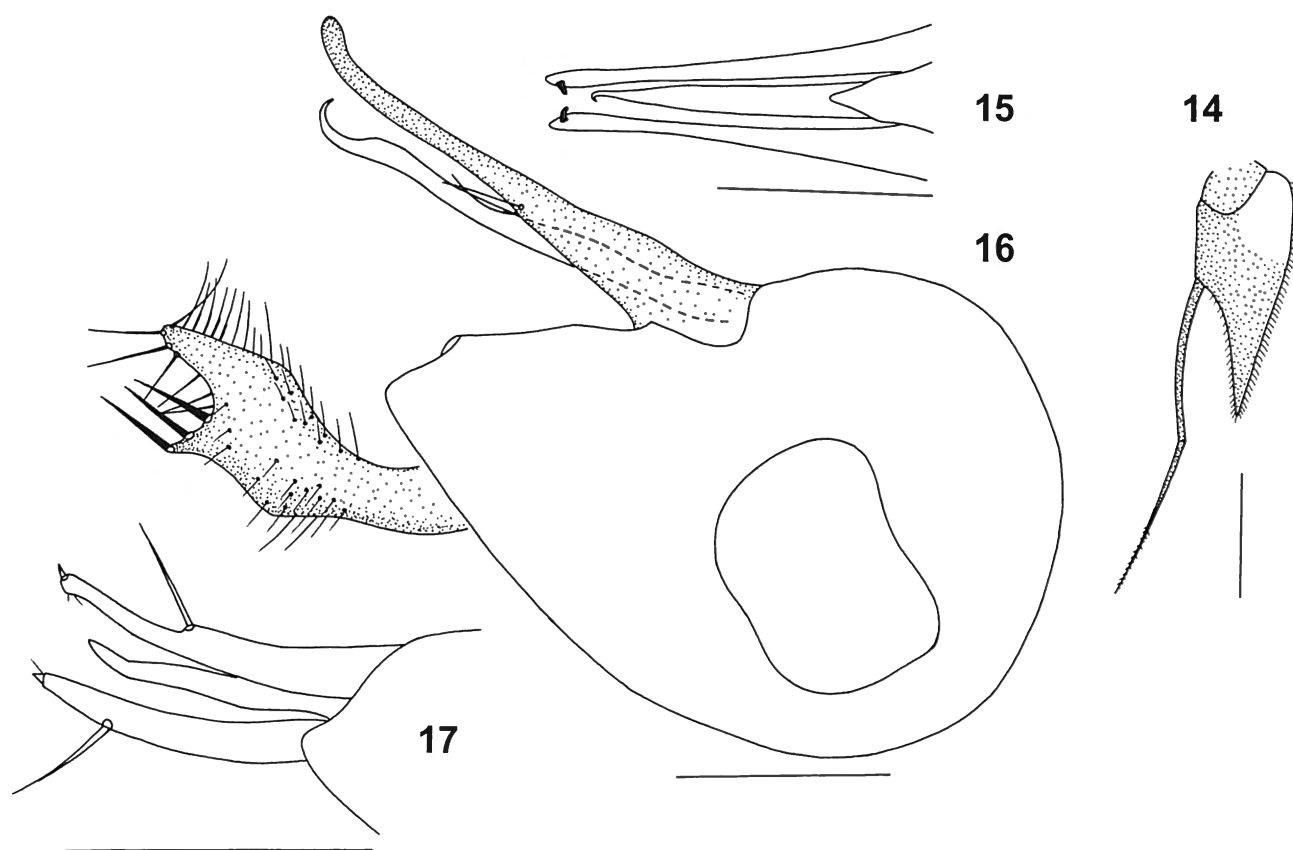
Abdomen metallic green, with gray brown pollen; tergum 1 laterally yellow, terga 2-3 with lateral margin yellow, sterna 2-3 brownish; genitalia yellow basally dark. Hairs and bristles on abdomen black, except sterna 2-3, that bear some pale hairs. Male genitalia (Figs 15-17): Epandrial lobe absent; cercus with distinct apical incision, bearing some strong bristles; hypandrium with long lateral arm weakly bent at apex and 1 black dorsal denticle apically.

*Female.* Unknown.

*Holotype* male, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VII. 10, J. Emoto.

*Etymology.* The specific name refers to the lateral arm of hypandrium with black dorsal denticle apically.





Figs. 14-17 — *Hercostomus (Hercostomus) dentatus* sp. n. (male) - 14. antenna (excluding scape), lateral view; 15. hypandrium, ventral view; 16. genitalia, lateral view; 17. apical genital processes, lateral view. Scale 0.25.

**Remarks.** The new species is very similar to *Hercostomus (H.) subdentatus* sp. n., but can be separated from the latter by its mainly yellow thorax.

**9. *Hercostomus (Hercostomus) subdentatus* sp. n.**  
(Figs 18-21)

**Diagnosis.** First flagellomere 1 distinctly elongated, 3.2 x as long as wide; arista with basal segment slightly longer than apical segment. Thorax entirely metallic green.

**Male.** Body length 2.7 mm, wing length 4.0 mm.

Head metallic green, with pale gray pollen; face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna (Fig. 18) blackish; scape dark yellow, with dorsal surface dark brown; first flagellomere with baso-ventral area dark yellow; first flagellomere 1 distinctly elongated, 3.2 x as long as wide, and acute apically; arista dorsal, black, nearly bare, with long basal segment 1.2 x as long as apical segment. Proboscis dark brown, with black short hairs; palpus black, with black short hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen. Hairs and

bristles on thorax black; 6 strong dc, 8 uniseriate acr. Propleuron black and pale haired, with 1 black bristle on lower portion. Legs yellow; mid and hind coxae reddish yellow; tarsi from tip of tarsomere 1 onward dark brown. Hairs and bristles on legs black, fore coxa with 6 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, 1 pd and 2 ap and 1 short apv; mid tibia with 3 ad, 2 pd, 1 av and 4 ap; hind tibia with 3 ad, 3 pd, 3 av and 3 ap. Hind tarsomere 1 with 1 v at middle. Relative lengths of tibia and 5 tarsomeres LI 2.0 : 1.0 : 0.5 : 0.4 : 0.3 : 0.3; LII 2.8 : 1.2 : 0.6 : 0.55 : 0.45 : 0.4; LIII 3.2 : 1.0 : 1.0 : 0.6 : 0.45 : 0.4. Wing nearly hyaline; veins dark brown, R4+5 weakly curved backward apically, M nearly straight, R4+5 and M weakly convergent apically; CuAx ratio 0.7. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen; genitalia brownish yellow, with basal portion dark and cercus yellow. Hairs and bristles on abdomen black, except for sterna 2-3, that bear pale hairs. Male genitalia (Figs 19-21): Epandrial lobe absent; cercus with weak apical incision bearing some strong bristles; hypandrium with long lateral arm weakly bent, bearing 1 black dorsal denticle subapically.

*Female.* Unknown.

*Holotype* male, Nepal: Topke-Gola (3700 m) - Thurukpa (2600 m), 1972. VII. 9, J. Emoto.

*Etymology.* The specific name refers to the similarity with *Hercostomus* (*H.*) *dentatus* sp. n.

*Remarks.* The new species can be separated from *Hercostomus* (*H.*) *dentatus* sp. n. by the entirely metallic green thorax.

The *subnovus*-group

**10. *Hercostomus* (*Hercostomus*) *spiniger* YANG, 1997**

*Hercostomus* (*Hercostomus*) *spiniger* YANG, 1997. Stud. Dipt 4(1): 120. Type locality: Tibet (Yadong).

*Specimen examined.* 1 male, Nepal: Ponktable (1900 m) - Buze (2800 m), 1972. VII. 22, H. Shima.

*Distribution.* Nepal, China (Shaanxi, Tibet).

**11. *Hercostomus* (*Hercostomus*) *yunlongensis* YANG et SAIGUSA, 2001**

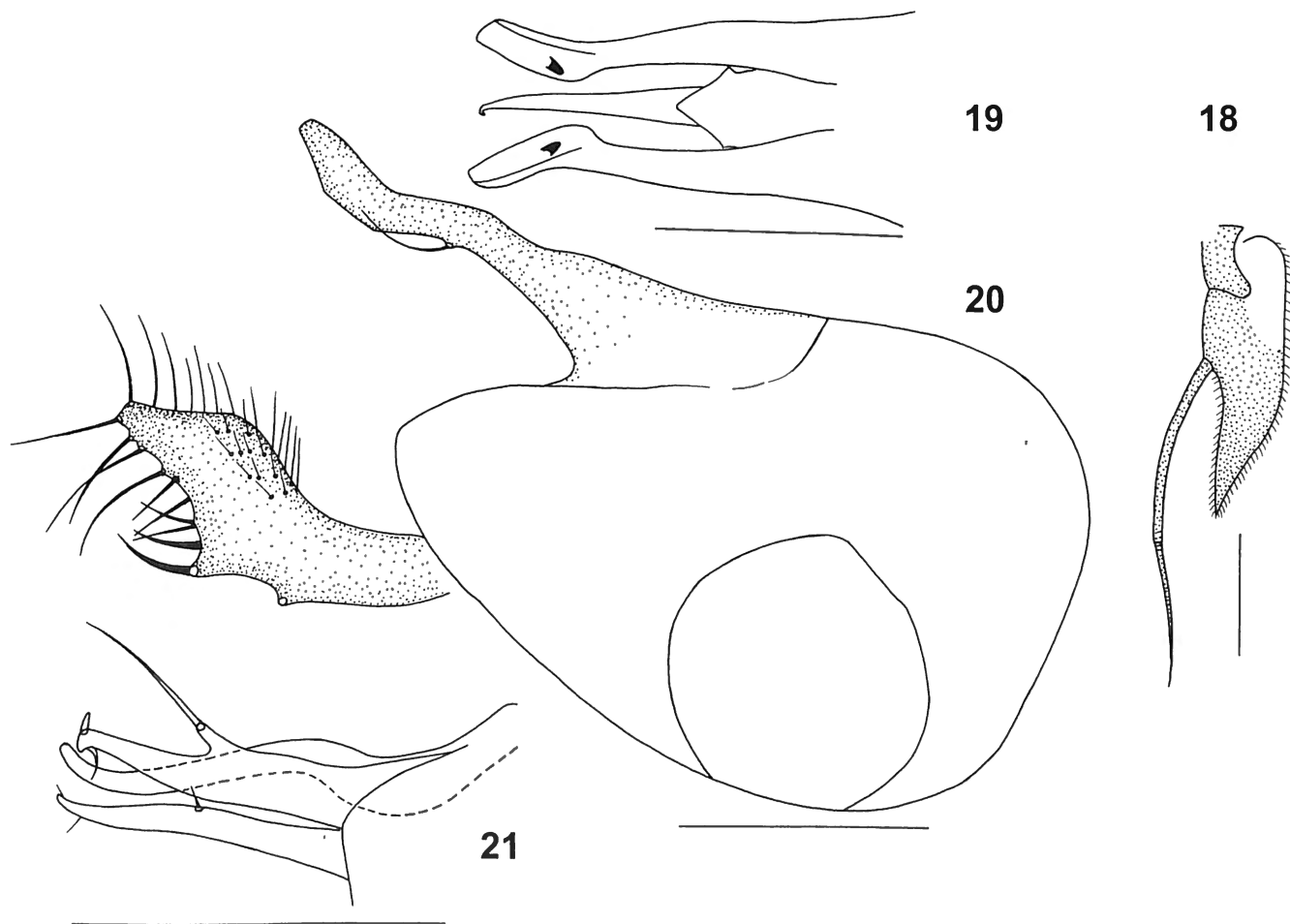
*Hercostomus* (*Hercostomus*) *yunlongensis* YANG et SAIGUSA, 2001. Bull. Inst. R. Sci. Nat. Belg. Ent. 71: 209. Type locality: Yunnan (Yunlong).

*Specimen examined.* 1 male, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, J. Emoto.

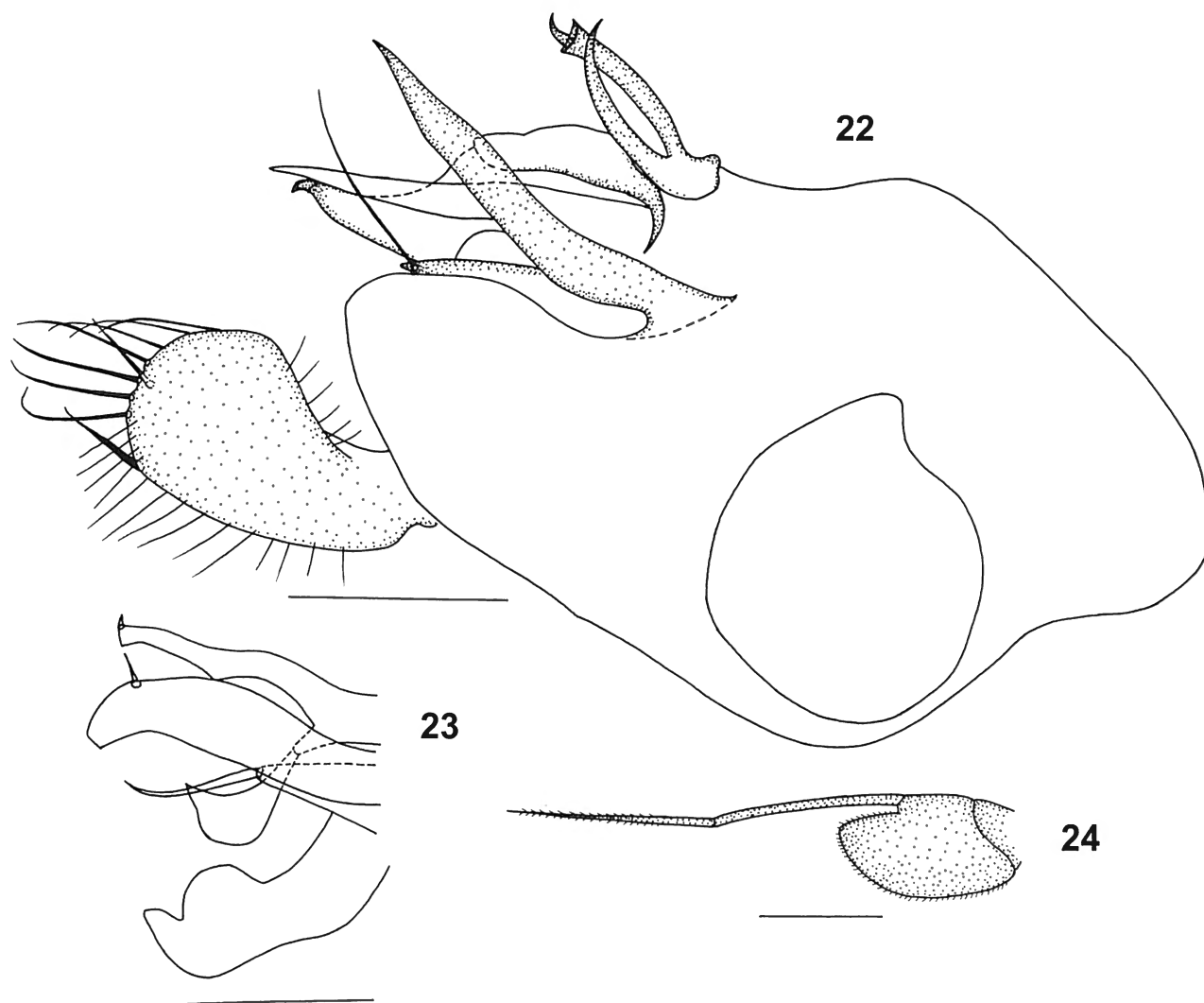
*Distribution.* Nepal, China (Yunnan).

**12. *Hercostomus* (*Hercostomus*) *nepalensis* sp. n. (Figs 22-24)**

*Diagnosis.* Postocular bristles entirely black. Palpus brown. Metapleuron entirely yellow; acr nearly uniseriate.



Figs. 18-21 — *Hercostomus* (*Hercostomus*) *subdentatus* sp. n. (male) - 18. antenna (excluding scape), lateral view; 19. hypandrium, ventral view; 20. genitalia, lateral view; 21. apical genital processes, lateral view. Scale 0.25.



Figs. 22-24 — *Hercostomus (Hercostomus) nepalensis* sp. n. (male) - 22. genitalia, lateral view; 23. apical genital processes, lateral view; 24. antenna (excluding scape), lateral view. Scale 0.25.

*Male.* Body length 3.5-3.8 mm, wing length 4.5-4.7 mm.

Head metallic green, with pale gray pollen (except for frons and face, that are densely white pollinose); face slightly narrower than first flagellomere. Hairs and bristles on head mainly black; postocular bristles black; lower occiput with pale hairs medially. Antenna (Fig. 24) entirely black; first flagellomere rather large, 1.6 x as long as wide, obtuse apically; arista subapical, black, very shortly pubescent, with basal segment 0.9 x as long as apical segment. Proboscis dark yellow, with black short hairs; palpus brown, with black short hairs and 1 black apical bristle.

Thorax metallic green, with pale gray pollen, except for metapleuron that is yellow. Hairs and bristles on thorax black; 6 strong dc, 6-7 nearly uniseriate acr, short and hair-like. Propleuron partly or entirely pale haired, with 1 black bristle on lower portion. Legs yellow; all coxae yellow; tarsi from tip of tarsomere 1 onward brown

to dark brown. Hairs and bristles on legs black; fore coxa with 8-9 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Femora with some short pale ventral hairs basally. Fore tibia with 1 ad, 2 pd and 2 ap; mid tibia with 3 ad, 2 pd, 2 av and 5 ap; hind tibia with 3 ad, 3 pd, 5-6 av and 4 ap. Hind tarsomere 1 with 3 v. Relative lengths of tibia and 5 tarsomeres LI 2.4 : 1.5 : 0.9 : 0.65 : 0.45 : 0.4; LII 3.6 : 2.0 : 1.1 : 0.9 : 0.55 : 0.4; LIII 4.3 : 1.3 : 1.65 : 1.0 : 0.55 : 0.45. Wing weakly tinged with grayish; R4+5 curved backward, M nearly straight, R4+5 and M strongly convergent apically; CuAx ratio 0.8. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray and gray brown pollen; terga 1-2 with narrow lateral portion blackish or dark yellow; sternum 2 brown. Hairs and bristles on abdomen black, except for terga 1-2, that bear some pale hairs laterally and sterna 2-3, that bear pale hairs. Male

genitalia (Figs 22-23): Epandrial lobe long and thick, spine-like; cercus rather large, widely rounded apically, with 2 black strong spines directed inward; hypandrium irregularly furcate.

*Female.* Unknown.

*Holotype* male, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, J. Emoto. *Paratype* 1 male, Nepal: Ponktable (1900 m) - Buze (2800 m), 1972. VII. 22, H. Shima.

*Etymology.* The specific name refers to the distribution: Nepal.

*Remarks.* The new species is similar to *Hercostomus* (*H.*) *spiniger* YANG, 1997 from China and Nepal, but can be separated from the latter by having metapleuron entirely yellow and aedeagus nearly straight apically. In *H. spiniger*, the metapleuron is yellow, with narrow upper portion blackish, and the aedeagus is strongly curved apically (YANG, 1997).

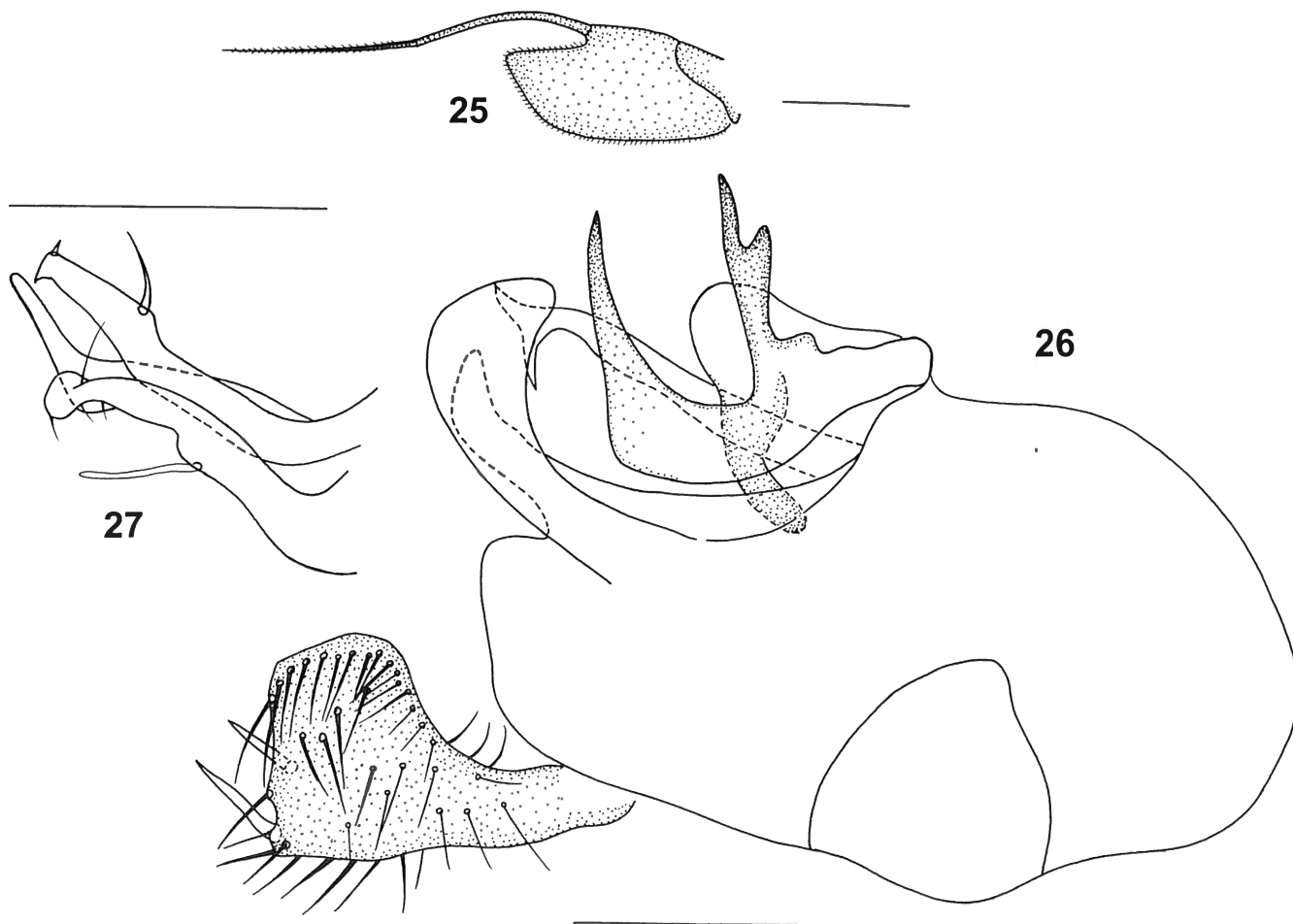
**13. *Hercostomus* (*Hercostomus*) *nakanishii* sp. n.**  
(Figs 25-27)

*Diagnosis.* Middle and lower postocular bristles yellow. acr biseriate. Metapleuron yellow, with narrow upper portion blackish to black.

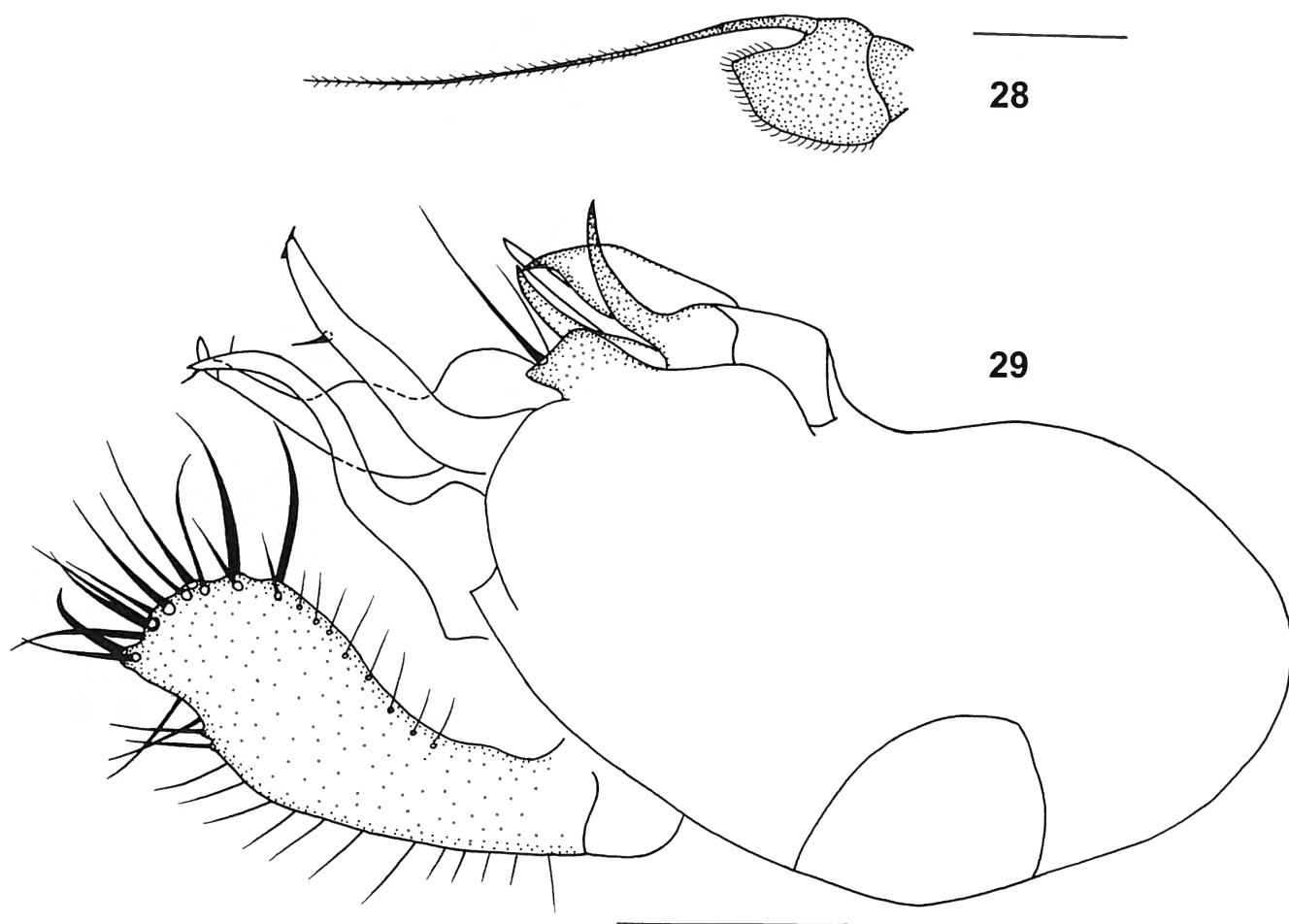
*Male.* Body length 3.5-3.8 mm, wing length 4.2-4.3 mm.

Head metallic green, with pale gray pollen (except for frons and face, that are densely white pollinose); face slightly narrower than first flagellomere. Hairs and bristles on head mainly black; middle and lower postocular bristles (including hairs on lower occiput) yellow. Antenna (Fig. 25) entirely black; first flagellomere rather large, 1.8 x as long as wide, obtuse apically; arista subapical, black, very shortly pubescent, with basal segment as long as apical segment. Proboscis brown or dark brown, with short black hairs; palpus brown, with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen; metapleuron yellow dorsally narrowly, blackish or black. Hairs and bristles on thorax black; 6 strong dc, 7-8 irregularly paired



Figs. 25-27 — *Hercostomus* (*Hercostomus*) *nakanishii* sp. n. (male) - 25. antenna (excluding scape), lateral view; 26. genitalia, lateral view; 27. apical genital processes, lateral view. Scale 0.25.



Figs. 28-29 — *Hercostomus (Hercostomus) thudamanus* sp. n. (male) - 28. antenna (excluding scape), lateral view; 29. genitalia, lateral view. Scale 0.25.

acr, short and hair-like (the two rows somewhat close). Propleuron pale haired, with 1 black bristle on lower portion. Legs yellow; all coxae yellow; tarsi from tip of tarsomere 1 onward brown to dark brown. Hairs and bristles on legs black; fore coxa with 5 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Femora with some short pale ventral hairs basally. Fore tibia with 1 ad, 2 pd and 4 ap; mid tibia with 4 ad, 2 pd, 1 av and 5 ap; hind tibia with 4 ad, 3-4 pd, 5-6 av and 4 ap. Hind tarsomere 1 with 2-3 v. Relative lengths of tibia and 5 tarsomeres LI 2.6 : 1.6 : 1.0 : 0.65 : 0.5 : 0.35; LII 3.8 : 2.3 : 1.3 : 1.0 : 0.6 : 0.4; LIII 4.5 : 1.5 : 2.0 : 1.1 : 0.6 : 0.45. Wing nearly hyaline; R4+5 somewhat curved backward, M nearly straight, R4+5 and M strongly convergent apically; CuAx ratio 0.65. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen; sterna 2-3 brownish yellow. Hairs and bristles on abdomen black, except on sternum 2, that bears some pale hairs. Male genitalia (Figs 26-27): Epandrium with 2 lateral processes (inner process mostly hidden by large outer process); cercus rather large and somewhat quadrate, with 2 black strong spines directed inward; hypandrium irregularly furcate.

*Female.* Unknown.

*Holotype* male, Nepal: Dobang Kharka (2400 m), 1971. X. 9, A. Nakanishi. *Paratypes* 2 males, same data as holotype, 1971. IX. 24; 1 male, Thurukpa (2600 m) - Topke-Gola (3700 m), 1972. VI. 12, J. Emoto.

*Etymology.* The species is named after Prof. A. Nakanishi.

*Remarks.* The new species is easily separated from other species of the *H. subnovus*-group by the long curved lateral lobe, that is obtuse apically.

#### The *digitatus*-group

#### 14. *Hercostomus (Hercostomus) thudamanus* sp. n. (Figs 28-29)

*Diagnosis.* Middle and lower postocular bristles yellow. First flagellomere 1.3 x as long as wide. Fore tarsomeres 4-5 slightly thickened.

*Male.* Body length 3.9-4.1 mm, wing length 5.1-5.3 mm.

Head metallic green, with pale gray pollen, except for frons and face, that are densely white pollinose; face slightly narrower than first flagellomere. Hairs and bristles on head mainly black; middle and lower postocular bristles (including hairs on lower occiput) yellow. Antenna (Fig. 28) entirely black; first flagellomere rather small, 1.3 x as long as wide, angular apically; arista dorsal, black, very shortly pubescent, with basal segment 0.22 x as long as apical segment. Proboscis brown, with short black hairs; palpus black, with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen except for mesonotum (excluding notopleural area) and scutellum, that are slightly tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 10 irregularly paired acr, short and hair-like. Propleuron black and pale haired, with 1 black bristle on lower portion. Legs yellow; coxae yellow, mid coxa (except narrowly at apex) blackish; tarsi from tip of tarsomere 1 onward brown to dark brown. Fore tarsomeres 4-5 slightly thickened. Hairs and bristles on legs black; fore coxa with 6 bristles, mid and hind coxae each with 1 outer bristle; mid and hind femora each with 1 preapical bristle. Fore tibia with 2 pd, 1 pv and 2 ap; mid tibia with 3 ad, 3 pd, 2 av and 4 ap; hind tibia with 4 ad, 5-6 pd, 4 av and 3 ap. Hind tarsomere 1 with 3 v. Relative lengths of tibia and 5 tarsomeres LI 3.0 : 1.9 : 1.1 : 0.9 : 0.55 : 0.45; LII 4.3 : 2.4 : 1.4 : 1.0 : 0.6 : 0.5; LIII 5.4 : 1.6 : 1.9 : 1.1 : 0.6 : 0.45. Wing nearly hyaline; veins dark brown, R4+5 curved backward, M nearly straight, R4+5 and M strongly convergent apically; CuAx ratio 0.6. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen. Hairs and bristles on abdomen black, except for terga 1-2, that bear some pale lateral hairs, and sternum 2, that bears pale hairs. Male genitalia (Fig. 29): Epandrial lobe stout; cercus rather large, with very short digitiform apical process, bearing 1 spine-like bristle; hypandrium irregularly furcate.

*Female.* Unknown.

*Holotype* male, Nepal: NE of Thudam (4000 m), 1972. VI. 25, Y. Nishida. *Paratypes* 1 male, same data as holotype; 4 males, all same locality as holotype, 1972. VI. 30, H. Shima & J. Emoto; 1 male, Thudam (3500 m) - Tanga La (4700 m), 1972. VII. 5, H. Shima; 1 male, Topke Gola (3700 m) - Thurukpa (2600 m), 1972. VII. 9, J. Emoto.

*Etymology.* The specific name refers to the type locality Thudam.

*Remarks.* The new species is somewhat similar to *Hercostomus* (*H.*) *jindinganus* YANG et SAIGUSA 2000, from Sichuan, but can be separated from the latter by the middle and lower postocular bristles, that are yellow. In *H. jindinganus*, the postocular bristles are entirely black (YANG & SAIGUSA, 2000).

# 15. *Hercostomus* (*Hercostomus*) *lelepanus* sp. n. (Figs 30-32)

*Diagnosis.* Middle and lower postocular bristles yellow. First flagellomere as long as wide. Face with dense pale brownish yellow pollen.

*Male.* Body length 3.0 mm, wing length 3.3 mm.

Head metallic green, with pale gray pollen, except for frons that is covered with a dense white pollen and face, that has a dense pale brownish yellow pollen; face narrower than first flagellomere. Hairs and bristles on head mainly black; middle and lower postocular bristles (including hairs on lower occiput) yellow. Antenna (Fig. 32) black; first flagellomere rather small, as long as wide, obtuse apically; arista nearly dorsal, black, very shortly pubescent, with basal segment 0.2 x as long as apical segment. Proboscis yellow, with short black hairs; palpus yellow, with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen, except mesonotum (excluding notopleural area) and scutellum, that are slightly tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 6-7 irregularly paired acr, short and hair-like. Propleuron pale haired, with 1 black bristle on lower portion. Legs yellow; coxae yellow, mid coxa (except narrowly at apex) brown; fore tarsus yellow, 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 1 ad, 2 pd, 2 ap and 1 very short apv; mid tibia with 3 ad, 2 pd, 1 av 5 ap; hind tibia with 3 ad, 3 pd, 3-4 weak av and 3 ap. Hind tarsomere 1 with 3 v (basal bristle stronger). Relative lengths of tibia and 5 tarsomeres LI 2.1 : 1.1 : 0.65 : 0.55 : 0.45 : 0.35; LII 2.9 : 1.5 : 0.9 : 0.65 : 0.45 : 0.3; LIII 3.0 : 1.0 : 1.5 : 1.0 : 0.6 : 0.45. Wing slightly tinged with grayish; veins dark brown, R4+5 curved backward, M nearly straight, R4+5 and M strongly convergent apically; CuAx ratio 0.6. Squama yellow, with black hairs. Halter yellow.

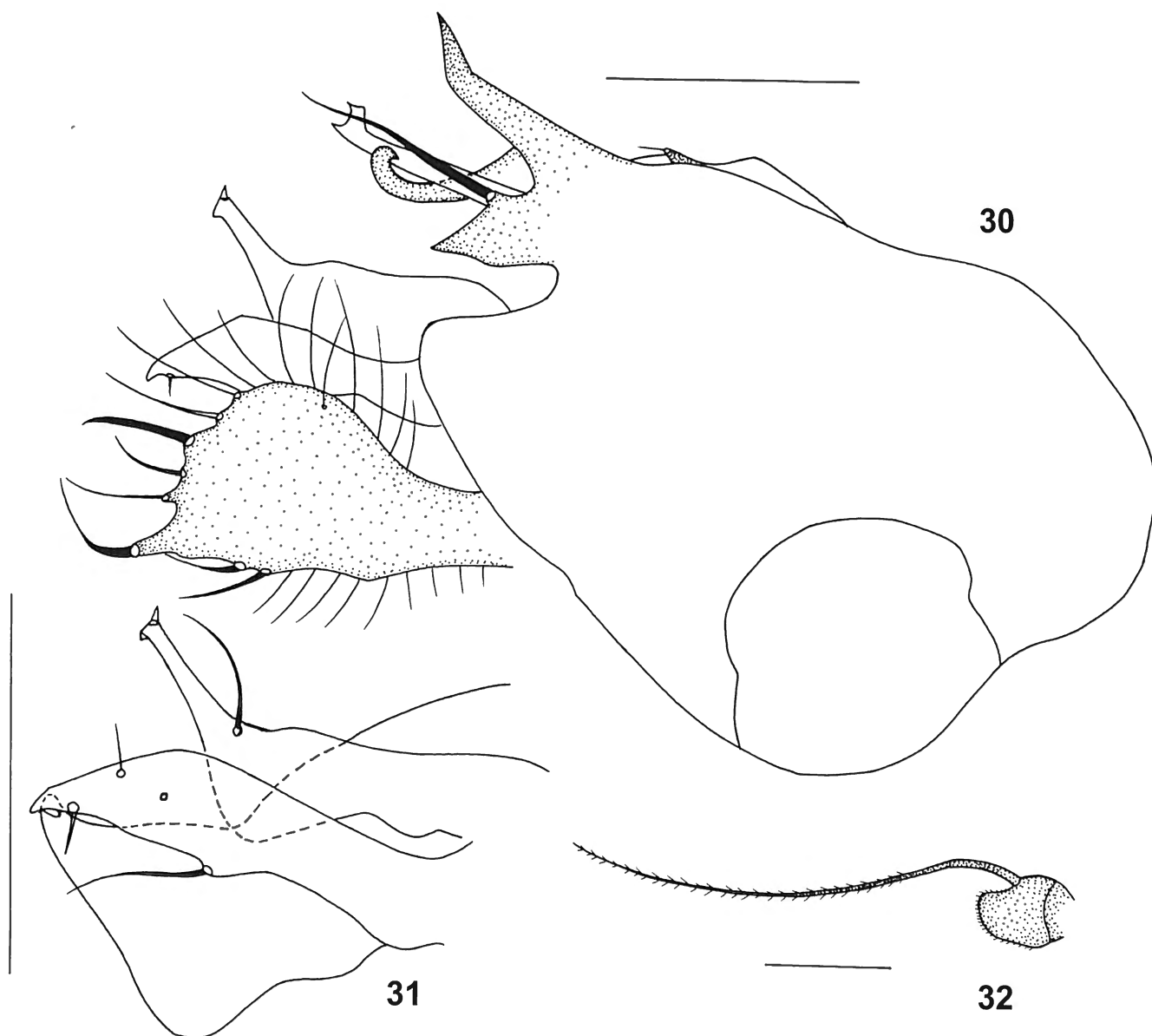
Abdomen metallic green, with pale gray pollen; cercus blackish, with yellow base. Hairs and bristles on abdomen black, except sterna 2-4, that bear pale hairs. Male genitalia (Figs 30-31): Epandrial lobe large and furcate, its short thick dorsal arm acute apically, and its long ventral arm curved and acute apically; cercus rather large, with 1 distinct digitiform apical process; hypandrium irregularly furcate.

*Female.* Unknown.

*Holotype* male, Nepal: Lelep (1770 m), 1972. VI. 2, Y. Nishida.

*Etymology.* The specific name refers to the type locality Lelep.

*Remarks.* The new species is somewhat similar to *Hercostomus* (*H.*) *thudamanus* sp. nov, but can be separated



Figs. 30-32 — *Hercostomus (Hercostomus) lelepanus* sp. n. (male) - 30. genitalia, lateral view; 31. apical genital processes, lateral view; 32. antenna (excluding scape), lateral view. Scale 0.25.

from the latter by the short first flagellomere (as long as wide) and simple fore tarsus. In *H. thudamanus*, the first flagellomere is longer (1.3 x as long as wide), and the fore tarsomeres 4-5 are slightly thickened.

**16. *Hercostomus (Hercostomus) papunanus* sp. n.**  
(Figs 33-35)

**Diagnosis.** Postocular bristles entirely black. Frons subshiny with thin pale gray pollen; face with dense brownish yellow pollen. Antenna mainly yellow.

**Male.** Body length 3.2 mm, wing length 3.7 mm.

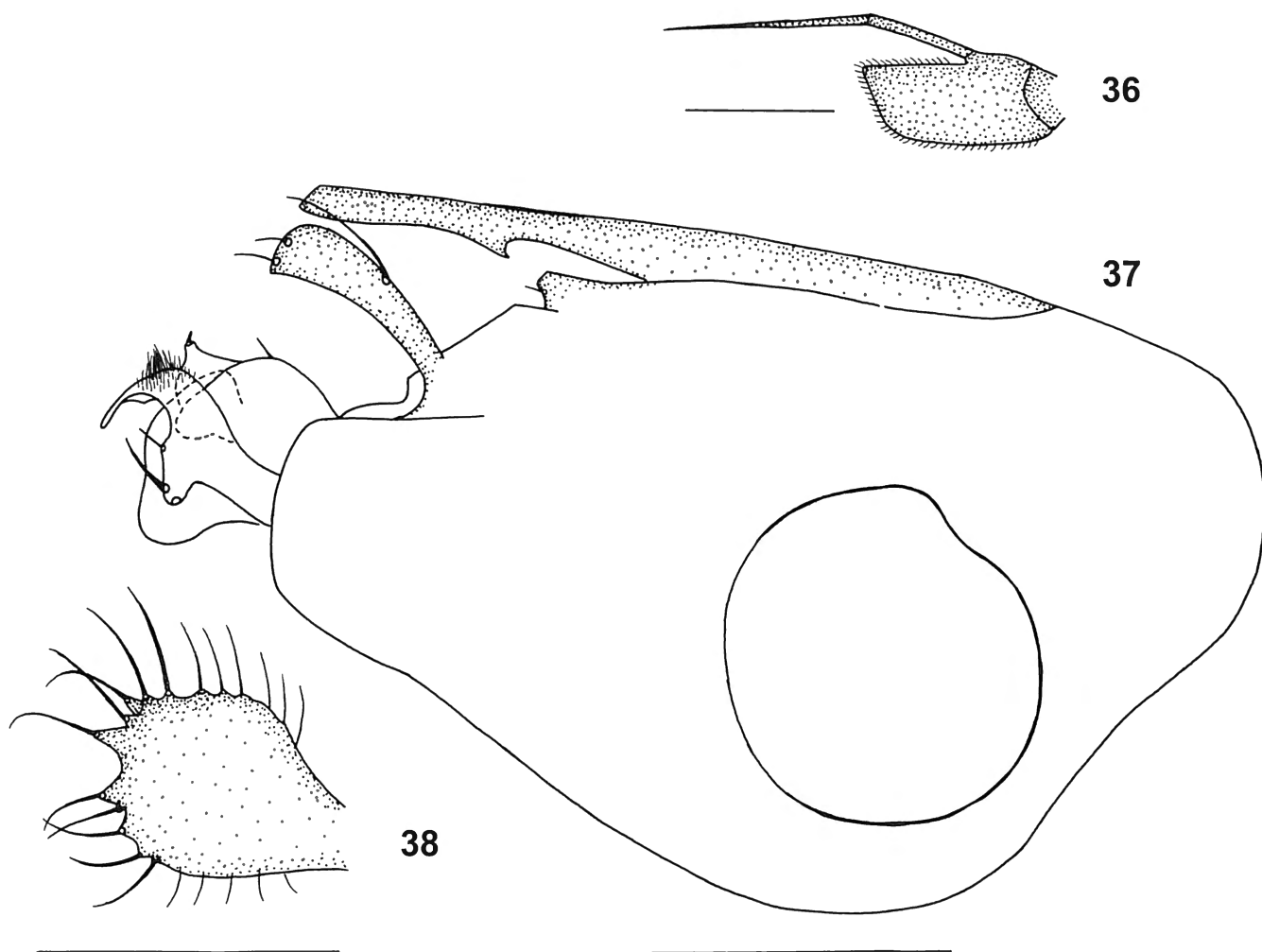
Head metallic green, with pale gray pollen, except for the frons, that is subshiny, with thin pale gray pollen; face

slightly narrower than first flagellomere, with dense brownish yellow pollen. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna (Fig. 33) yellow, first flagellomere with blackish apex and dorsal surface; first flagellomere 1.3 x as long as wide, obtuse apically; arista dorsal, black, very shortly pubescent, with basal segment 0.35 x as long as apical segment. Proboscis brownish yellow with short black hairs; palpus yellow with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen except for mesonotum (excluding notopleural area) and scutellum, that are covered with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 6-7 irregularly paired acr, short and hair-like. Propleuron pale haired, with 1 black bristle on lower portion. Legs [hind tarsus broken]







Figs. 36-38 — *Hercostomus (Hercostomus) basantapuranus* sp. n. (male) - 36. antenna (excluding scape), lateral view; 37. genitalia, lateral view; 38. cercus, lateral view. Scale 0.25.

**Remarks.** The new species is easily separated from other known species of the group by the mainly yellow antenna and short cercus.

The *baishanzuensis*-group

**17. *Hercostomus (Hercostomus) baishanzuensis* YANG et YANG, 1995**

*Hercostomus baishanzuensis* YANG et YANG, 1995. Insects of Baishanzu Mountain, Eastern China. p. 515. Type locality: Zhejiang (Baishanzu).

**Specimens examined.** 2 males, Nepal: Thudam (3500 m), 1972. VI. 21-30, Malaise trap; 1 male, Nepal: Basantapur (2300 m), 1972. VII. 26, H. Shima.

**Distribution.** Nepal, China (Zhejiang, Yunnan).

**18. *Hercostomus (Hercostomus) serratus* YANG et SAIGUSA, 1999**

*Hercostomus (Hercostomus) serratus* YANG et SAIGUSA, 1999. Bull. Inst. R. Sci. Nat. Belg. Ent. 69: 245. Type locality: Sichuan (Emei Mountain).

**Specimen examined.** 1 male, Nepal: Thudam (3500 m) - Tanga La (4700 m), 1972. VII. 5, H. Shima.

**Distribution.** Nepal, China (Sichuan).

**19. *Hercostomus (Hercostomus) basantapuranus* sp. n. (Figs 36-38)**

**Diagnosis.** Middle and lower postocular bristles yellow. First flagellomere large, 2.0-2.1 x as long as wide, somewhat angular apically.

*Male.* Body length 2.4-2.5 mm, wing length 3.1-3.2 mm.

Head metallic green, with pale gray pollen (except for frons, that is covered with brown pollen); face slightly narrower than first flagellomere. Hairs and bristles on head mainly black; middle and lower postocular bristles (including hairs on lower occiput) yellow. Antenna (Fig. 36) entirely black; first flagellomere large, 2.0-2.1 x as long as wide, somewhat angular apically; arista dorsal, black, indistinctly pubescent, with basal segment 0.5-0.7 x as long as apical segment. Proboscis brown, with short black hairs; palpus brownish yellow or black with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum and scutellum, that are slightly tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 5th pair of dc slightly convergent, 6 irregularly paired acr, short and hair-like. Propleuron black haired, with 1 black bristle on lower portion. Legs yellow; coxae yellow, mid coxa (except narrowly at apex) blackish; tarsi from tip of tarsomere 1 onward brown to 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 each with 1 preapical bristle. Fore tibia with 1 pd, 2 ap and 1 short apv (about 1/4 as long as tarsomere 1); mid tibia with 2 ad, 2 pd and 4 ap; hind tibia with 2 ad, 2-3 pd and 3 ap. Relative lengths of tibia and 5 tarsomeres LI 1.6 : 0.9 : 0.4 : 0.3 : 0.2 : 0.2; LII 2.2 : 1.0 : 0.55 : 0.45 : 0.3 : 0.2; LIII 2.6 : 0.9 : 0.9 : 0.55 : 0.45 : 0.2. Wing hyaline; veins dark brown, R4+5 slightly curved backward, M nearly straight, R4+5 and M distinctly convergent apically; CuAx ratio 0.5. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen. Hairs and bristles on abdomen black, except for sterna 2-3, that bear pale hairs. Male genitalia (Figs 37-38): Outer epandrial lobe long, inner epandrial lobe short; cercus nearly quadrate, with distinct outer marginal denticles, and weak ventral marginal denticles; hypandrium nearly straight, with 1 distinct dorsal denticle.

*Female.* Body length 1.7-2.2 mm, wing length 3.1-3.3 mm. First flagellomere still somewhat large and elongated.

*Holotype* male, Nepal: Basantapur (2300 m), 1972. V. 1-5, collected with Malaise trap. *Paratypes* 36 males 19 females, same data as holotype; 3 males 1 female, all same locality as holotype, 1972. V. 10, Y. Nishida; 3 males 2 females, all same locality as holotype, 1972. IV. 28, H. Shima.

*Etymology.* The specific name refers to the type locality Basantapur.

*Remarks.* The 4 new species of the *H. baishanzuensis*-group from Nepal can be separated from other known species of the group by the yellow legs and the 5th pair of dc, that is slightly convergent. This new species can be separated from *Hercostomus (H.) acuticornutus* sp. n. and

*Hercostomus (H.) emotoi* sp. nov. by the yellow middle and lower postocular bristles. In *H. acuticornutus* and *H. emotoi*, the postocular bristles are entirely black.

## 20. *Hercostomus (Hercostomus) acuticornutus* sp. n. (Figs 39-41)

*Diagnosis.* Postocular bristles entirely black. First flagellomere large, 2.1-2.2 x as long as wide, acute apically.

*Male.* Body length 2.1-2.4 mm, wing length 2.7-2.8 mm.

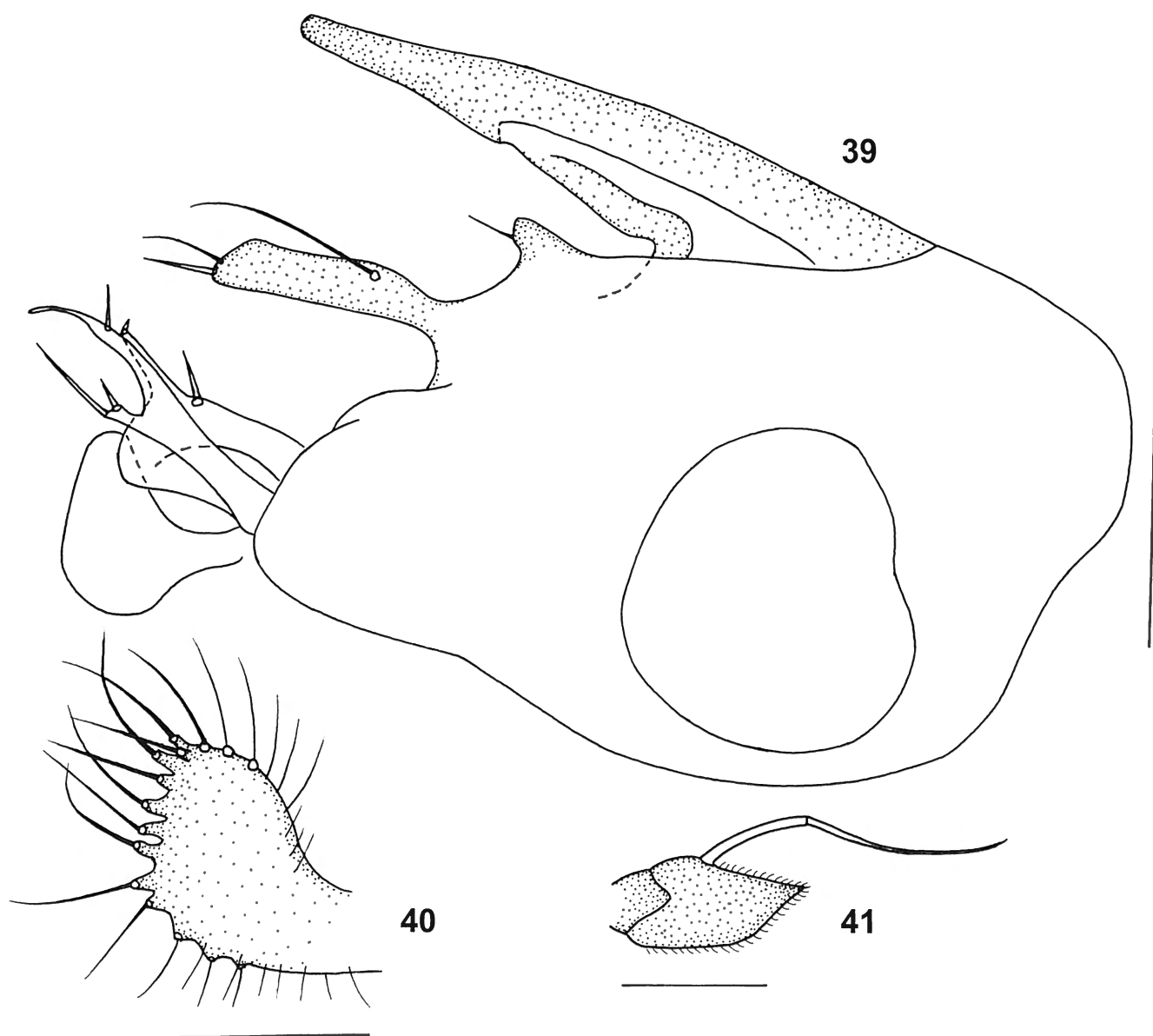
Head metallic green, with pale gray pollen (except for frons that is covered with brown pollen); face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna (Fig. 39) entirely black; first flagellomere large, 2.1-2.2 x as long as wide, acute apically; arista dorsal, black, indistinctly pubescent, with basal segment 0.5 x as long as apical segment. Proboscis dark brown, with short black hairs; palpus black with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum and scutellum, that are slightly tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 5th pair of dc slightly convergent, 4-5 irregularly paired acr, short and hair-like. Propleuron black haired, with 1 black bristle on lower portion. Legs yellow; coxae yellow, mid coxa (except narrowly at apex) blackish; tarsi from tip of tarsomere 1 onward brown to 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 each with 1 preapical bristle. Fore tibia with 1 short ad, 2 pd, 1 pv and 2 ap; mid tibia with 3 ad, 2 pd, 1 av and 4 ap; hind tibia with 2 ad, 3 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 v at base. Relative lengths of tibia and 5 tarsomeres LI 1.5 : 0.7 : 0.35 : 0.25 : 0.15 : 0.2; LII 2.1 : 0.9 : 0.6 : 0.5 : 0.4 : 0.25; LIII 2.4 : 0.6 : 0.9 : 0.6 : 0.5 : 0.3. Wing hyaline, slightly tinged with grayish; veins dark brown, R4+5 slightly curved backward, M nearly straight, R4+5 and M weakly convergent apically; CuAx ratio 0.6. Squama yellow, with black hairs. Halter yellow.

Abdomen metallic green, with pale gray pollen, slightly tinged gray brown. Hairs and bristles on abdomen black. Male genitalia (Figs 40-41): Outer epandrial lobe long, inner epandrial lobe very short; cercus short and somewhat quadrate, with distinct outer marginal denticles; hypandrium nearly straight, without distinct dorsal denticle.

*Female.* Body length 2.4-2.7 mm, wing length 3.0-3.3 mm. Face wider than first flagellomere; first flagellomere shorter.

*Holotype* male, Nepal: Gupa Pokali (2900 m) - Chouki (2700 m), 1972. VII. 16, J. Emoto. *Paratypes* 4 males 2 females, same data as holotype; 1 male, Basantapur (2300 m) - Chouki (2700 m), 1972. VI. 21, H. Makihara; 1 male, Basantapur (2300 m), 1972. VII. 26, H. Shima; 1



Figs. 39-41 — *Hercostomus (Hercostomus) acuticornutus* sp. n. (male) - 39. genitalia, lateral view; 40. cercus, lateral view; 41. antenna (excluding scape), lateral view. Scale 0.25.

male, Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara.

**Etymology.** The specific name refers to the first flagellomere, that is acute apically.

**Remarks.** The new species is very similar to *Hercostomus (H.) emotoi* sp. n., but can be separated from the latter by the rather long first flagellomere (2.1-2.2 x as long as wide), that is acute apically.

**21. *Hercostomus (Hercostomus) emotoi* sp. n.**  
(Figs 42-44)

**Diagnosis.** Postocular bristles entirely black. First flagel-

lomere small, 1.35-1.5 x as long as wide, angularly apically.

**Male.** Body length 2.2-2.4 mm, wing length 2.7-3.0 mm.

Head metallic green, with pale gray pollen (except for frons, that is covered with brown pollen); face slightly narrower than first flagellomere. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna (Fig. 42) entirely black; first flagellomere small, 1.35-1.5 x as long as wide, angular apically; arista dorsal, black, indistinctly pubescent, with basal segment 0.35 x as long as apical segment. Proboscis dark brown, with short black hairs; palpus black with short black hairs and 1 black bristle.

Thorax metallic green, with pale gray pollen, except for mesonotum and scutellum, that are slightly tinged

with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 5th pair of dc slightly convergent, 5 irregularly paired acr, short and hair-like. Propleuron black haired, with 1 black bristle on lower portion. Legs yellow; fore coxa yellow, mid and hind coxae (except narrowly at apex) blackish; 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 1 short ad, 2 pd, 1 pv and 2 ap; mid tibia with 3 ad, 2 pd, 1 av and 4 ap; hind tibia with 2 ad, 3 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 v at base. Relative lengths of tibia and 5 tarsomeres LI 1.4: 0.6: 0.3: 0.25: 0.15: 0.2; LII 2.0: 0.9: 0.55: 0.5: 0.4: 0.3; LIII 2.2: 0.6: 0.8: 0.6: 0.45: 0.3. Wing hyaline, slightly tinged with grayish; veins dark brown, R4+5 slightly curved backward, M nearly straight, R4+5 and M weakly convergent apically; CuAx ratio 0.5. Squama yellow, with black hairs. Halter yellow.

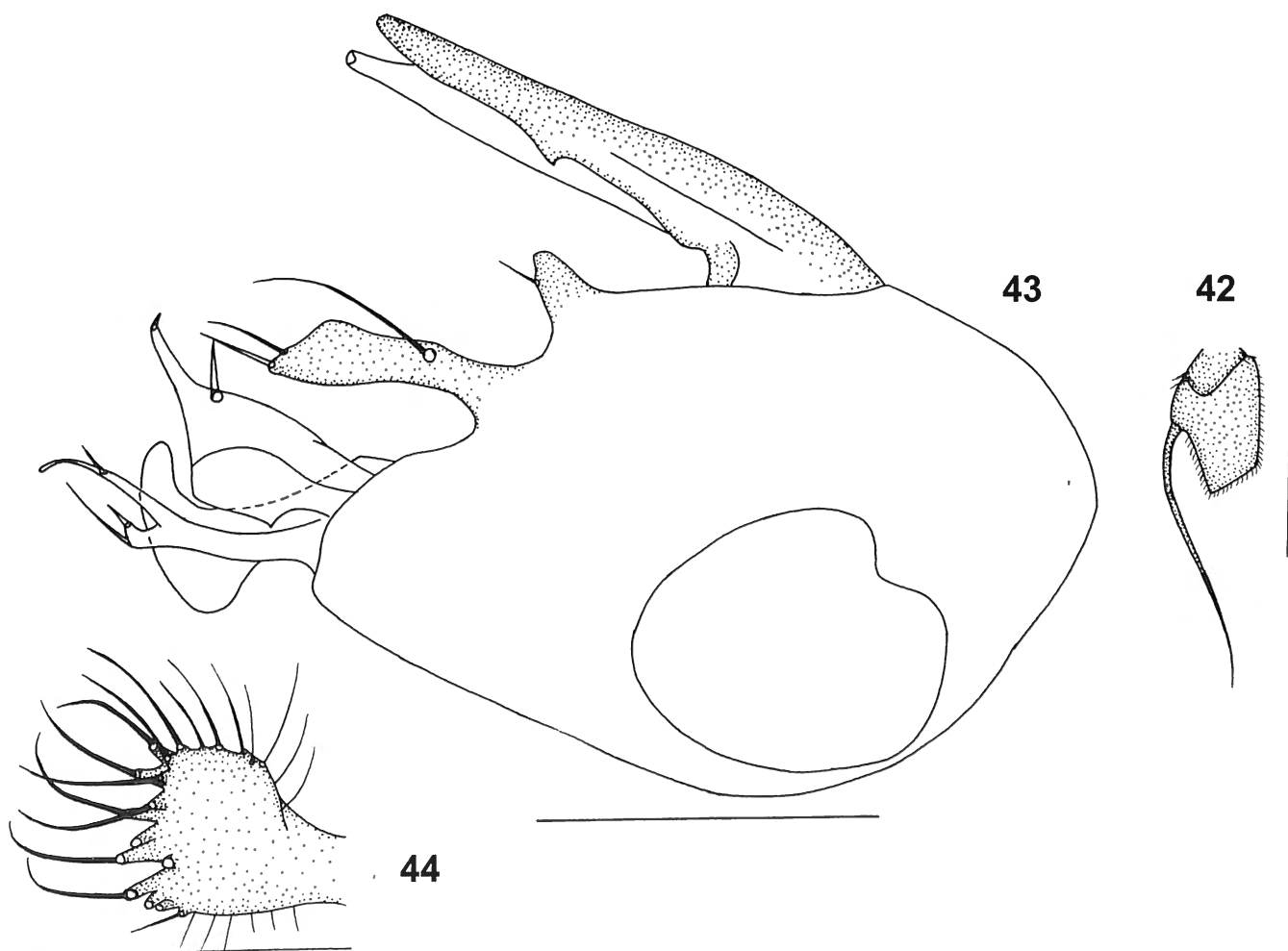
Abdomen metallic green, with pale gray pollen, and

gray brown pollen. Hairs and bristles on abdomen black. Male genitalia (Figs 43-44): Outer epandrial lobe long, inner epandrial lobe short; cercus nearly quadrate, with distinct outer marginal denticles; hypandrium nearly straight, with a weak dorsal denticle at middle.

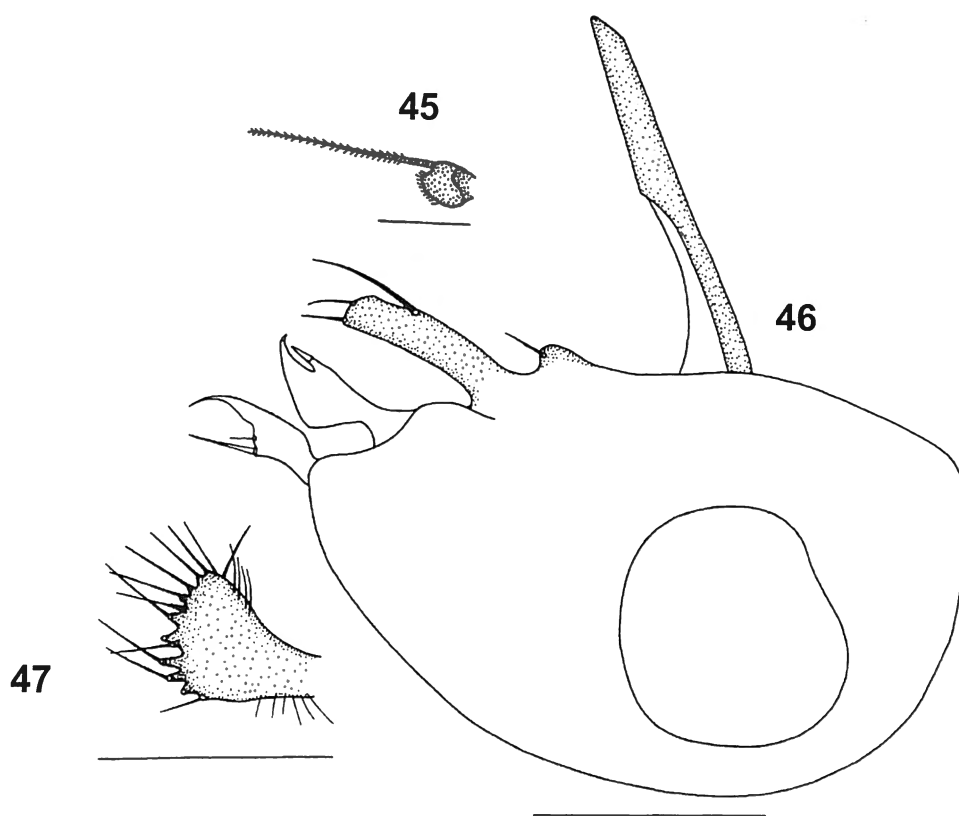
*Female.* Body length 1.9-2.3 mm, wing length 2.7-3.0 mm. Face wider than first flagellomere.

*Holotype* male, Nepal: Gupa Pokali (2900 m) - Chouki (2700 m), 1972. VII. 16, J. Emoto. *Paratypes* 68 males 36 females, same data as holotype; 3 males 1 female, Thurukpa (2600 m) - Papun (2100 m), 1972. VII. 10, J. Emoto; 1 male, Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, H. Shima; 5 males, Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Makihara; 1 male, Basantapur (2300 m) - Chouki (2700 m), 1972. VI. 21, H. Makihara; 1 male, Basantapur (2300 m), 1972. VI. 15, H. Makihara.

*Etymology.* The species is named after Mr. J. Emoto.



Figs. 42-44 — *Hercostomus (Hercostomus) emotoi* sp. n. (male) - 42. antenna (excluding scape), lateral view; 43. genitalia, lateral view; 44. cercus, lateral view. Scale 0.25



Figs. 45-47 — *Hercostomus (Hercostomus) brevilobatus* sp. n. (male) - 45. antenna (excluding scape), lateral view; 46. genitalia, lateral view; 47. cercus, lateral view. Scale 0.25.

**Remarks.** The new species can be separated from *Hercostomus (H.) acuticornutus* sp. n. by the rather short first flagellomere (1.35-1.5 x as long as wide), that is but little angular apically.

**22. *Hercostomus (Hercostomus) brevilobatus* sp. n.**  
(Figs 45-47)

**Diagnosis.** Postocular bristles entirely black. First flagellomere small, as long as wide, obtuse apically. acr absent.

**Male.** Body length 2.0-2.1 mm, wing length 2.4-2.5 mm.

Head metallic green, with gray pollen (except for frons, that is tinged with brown pollen); face nearly as wide as first flagellomere with pale gray pollen. Hairs and bristles on head black; postocular bristles (including hairs on lower occiput) black. Antenna (Fig. 45) entirely black; first flagellomere small, as long as wide, obtuse apically; arista subapical, black, very shortly pubescent, with basal segment 0.2 x as long as apical segment. Proboscis dark brown, with short black hairs; palpus black with short black hairs and 1 black bristle.

Thorax metallic green, with gray pollen, except for

mesonotum and, that are scutellum slightly tinged with gray brown pollen. Hairs and bristles on thorax black; 6 strong dc, 5th pair of dc slightly convergent, acr absent. Propleuron pale haired, with 1 black bristle on lower portion. Legs brownish yellow; coxae blackish, femora dark brownish yellow; 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 2 pd and 2 ap; mid tibia with 2 ad, 2 pd, 1 av and 4 ap; hind tibia with 2 ad, 3 pd, 1 av and 3 ap. Hind tarsomere 1 with 1 v at base. Relative lengths of tibia and 5 tarsomeres LI 1.4 : 0.65 : 0.4 : 0.3 : 0.2 : 0.25; LII 2.0 : 0.95 : 0.55 : 0.45 : 0.3 : 0.25; LIII 2.1 : 0.7 : 0.8 : 0.55 : 0.4 : 0.3. Wing nearly hyaline; veins dark brown, R4+5 slightly curved backward, M nearly straight, R4+5 and M weakly convergent apically; CuAx ratio 0.55. Squama dark yellow, with black hairs. Halter dark yellow.

Abdomen metallic green, with gray pollen. Hairs and bristles on abdomen black. Male genitalia (Figs 46-47): Outer epandrial lobe long, inner epandrial lobe very short; cercus somewhat triangular with distinct outer marginal denticles; hypandrium nearly straight, with a weak dorsal denticle at middle.

*Female.* Unknown.

*Holotype* male, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, H. Shima. *Paratype* 1 male, Tank (1900 m) - Penmaten (2600 m), 1972. VI. 29, H. Maki-hara.

*Etymology.* The specific name refers to the very short inner lateral lobe on epandrium.

*Remarks.* The new species is somewhat similar to *Hercostomus* (*H.*) *baishanzuensis* YANG et YANG 1995, but can be separated from the latter by its mainly dark brownish yellow legs. In *H. baishanzuensis*, the legs are mainly black (YANG & YANG, 1995).

#### The *fluvius*-group

#### 23. *Hercostomus* (*Hercostomus*) *fluvius* WEI, 1997

*Hercostomus* (*Hercostomus*) *fluvius* WEI, 1997. J. Guizhou Agric. Coll. 16: 40. Type locality: Guizhou, Fanjingshan Mountain.

*Specimens examined.* 1 male 1 female, Nepal: Lelep (1770 m), 1972. VI. 1, J. Emoto.

*Distribution.* Nepal, China (Yunnan, Guizhou, Shaanxi).

Species-group unknown with following 2 species.

#### 24. *Hercostomus* (*Hercostomus*) *phollae* HOLLIS, 1964

*Hercostomus phollae* HOLLIS, 1964. Bull. Brit. Mus. (Nat. Hist.) Ent. 15(4): 89. Type locality: Nepal (Taplejung).

*Specimen examined.* Not available.

*Distribution.* Nepal.

*Remarks.* The species can be easily identified by the following characters: Antenna orange brown with first flagellomere black on apical half, hind femur with 4-5 preapical bristles, R4+5 and M slightly convergent apically.

#### 25. *Hercostomus* (*Hercostomus*) *ulleriensis* HOLLIS, 1964

*Hercostomus ulleriensis* HOLLIS, 1964. Bull. Brit. Mus. (Nat. Hist.) Ent. 15(4): 89. Type locality: Nepal (Ulleri).

*Diagnosis.* Antenna yellow, with first flagellomere darkened at tip. Palpus yellow. R4+5 and M strongly convergent apically.

*Specimen examined.* 1 female, Nepal: Papun (2100 m) - Thurukpa (2600 m), 1972. VI. 11, J. Emoto.

*Distribution.* Nepal.

*Remarks.* The species was originally described by HOLLIS (1964) based on 1 female. Its male is still unknown.

#### Acknowledgments

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