

Species of the genus *Hybos* Meigen from Tibet, China (Diptera: Empidoidea, Hybotinae)

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ABSTRACT

The species of the genus *Hybos* Meigen from Tibet are reviewed. The following seven species are described as new to science: *Hybos beibenganus* sp. nov., *Hybos brevifurcatus* sp. nov., *Hybos curvus* sp. nov., *Hybos hanmianus* sp. nov., *Hybos lihuae* sp. nov., *Hybos nigripes* sp. nov., and *Hybos beibenganus* sp. nov. A key to the species of the genus *Hybos* from Tibet is presented for the first time.

Key words. Diptera, Empididae, *Hybos*, new species, Tibet.

INTRODUCTION

The genus *Hybos* Meigen, 1803 is characterized by the following features: eyes usually with upper facets enlarged; palpus slender, nearly as long as proboscis; Rs short; anal cell longer than basal cells; hind femur distinctly to strongly swollen, with spine-like ventral bristles (Chvála 1983; Yang & Yang 2004). It is distributed worldwide with 164 known species, of which 12 species are distributed in the Palaearctic Region and 130 species in the Oriental Region (Yang *et al.* 2007). The major references dealing with the Palaearctic and Oriental species of the genus *Hybos* are as follows: Bezzi 1904, 1912; Brunetti 1913, 1920; Chvála 1983; Chvála & Kovalev 1989; Frey 1938, 1953, 1954; Melander 1928; Plant 2013; Shamshev *et al.* 2013; Smith 1965, 1975; Saigusa 1963, 1965; Yang & Yang 2004.

The Chinese species were reviewed with 85 known species by Yang and Yang (2004). The following seven species of the genus *Hybos* were reported from Tibet by Yang and Yang (1987): *Hybos digitiformis* Yang *et* Yang, 1987; *Hybos furcatus* Yang *et* Yang, 1987; *Hybos lii* Yang *et*

Yang, 1987; *Hybos oncus* Yang *et* Yang, 1987; *Hybos pallidus* Yang *et* Yang, 1987; *Hybos psilus* Yang *et* Yang, 1987; *Hybos tibetanus* Yang *et* Yang, 1987 (Yang & Yang 2004). Since then no *Hybos* species has been reported from Tibet again. In the present paper, seven new species are added to the fauna of Tibet. A key to the known species of *Hybos* from Tibet is presented.

MATERIALS AND METHODS

The type specimens are deposited in the Entomological Museum of China Agricultural University, Beijing (CAU). Terms used for adult structures and male genitalia follow those of McAlpine (1981) and Sinclair & Cumming (2006) respectively. The following abbreviations are used: acr = acrostichal bristle(s), ad = anterodorsal bristle(s), av = anteroventral bristle(s), d = dorsal bristle(s), dc = dorsocentral bristle(s), h = humeral bristle(s), npl = notopleural bristle(s), oc = ocellar bristle(s), pd = posterodorsal bristle(s), prsc = prescutellar bristle(s), psa = postalar bristle(s), pv = posteroventral bristle(s), sc = scutellar bristle(s), v = ventral bristle(s).

Taxonomy

Key to species of *Hybos* from Tibet

- 1 Thorax black; legs not entirely yellowish 2
- Thorax brownish yellow with pleuron nearly yellow; legs entirely yellowish; pterostigma indistinct *H. lii*
- 2 R_{4+5} and M_1 distinctly convergent 3
- R_{4+5} and M_1 not distinctly convergent 4
- 3 Legs partly dark brownish yellow; first flagellomere without dorsal hairs; hypandrium trifurcated *H. furcatus*
- Legs entirely black; first flagellomere with 2 dorsal hairs; hypandrium not trifurcated *H. oncus*
- 4 Legs partly or largely yellow or brownish yellow 5
- Legs black, at most tarsi partly yellow 7
- 5 All coxae brownish yellow or yellow; hind femur with two rows of long v 6
- All coxae entirely black; hind femur with only one row of short v *H. digitiformis*
- 6 Arista pubescent; hind tibia with 2 d at middle; pterostigma present *H. pallidus*
- Arista bare; hind tibia with 1 d at middle; pterostigma absent *H. psilus*
- 7 Hind femur with nearly three rows of v 8
- Hind femur weakly thickened with only one row of v *H. tibetanus*
- 8 Apico-lateral process of hypandrium with long thick bristles; right surstyli very long 9
- Apico-lateral process of hypandrium bare or with short hairs; right surstyli short 12
- 9 Arista pubescent; pterostigma distinct; left surstyli furcated 10
- Arista bare; pterostigma indistinct; left surstyli not furcated *H. beibenganus* sp. nov.
- 10 Left surstyli trifurcated 11
- Left surstyli bifurcated *H. hanmianus* sp. nov.
- 11 Apico-lateral process of hypandrium large, distinctly projected; right surstyli long finger-like *H. lihuae* sp. nov.
- Apico-lateral process of hypandrium small, indistinctly projected; right surstyli apically much thickened, irregular in shape *H. nigripes* sp. nov.
- 12 Right surstyli furcated; hypandrium without large lateral incision 13
- Right surstyli not furcated; hypandrium with a large lateral incision *H. curvus* sp. nov.
- 13 Right surstyli with two lateral processes widely separated and more or less similar in shape; left surstyli furcated *H. brevifurcatus* sp. nov.
- Right surstyli with two lateral processes narrowly separated and distinctly different in shape; left surstyli not furcated *H. tongmaiensis* sp. nov.

1. Hybos beibenganus sp. nov.

Figs. 1–3

urn:lsid:zoobank.org:act:27C5A72A-9077-4669-B830-A28A45FBCDC0

Diagnosis.—Arista bare. Wing hyaline, stigma indistinct; R_{4+5} and M_1 parallel apically. Legs nearly entirely black except extreme base of hind tibia dark yellow. Left surstyli rather short, not furcated, and with wide apex; right surstyli long, curved, and nearly finger-like. Hypandrium with large apico-lateral process bearing very long and thick bristles.

Description.—Male. Body length 3.6–4.3 mm, wing length 3.5–3.8 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere without dorsal hair; arista black, bare, except apical 1/3 or so thin. Proboscis nearly as

long as head, blackish. Palpus blackish, with 5-7 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax black, h absent, 2 npl (posterior npl long), irregularly biserial acr, uniserial dc nearly as long as acr, 1 long prsc, 1 psa shorter than prsc; scutellum with 8 marginal hairs and 2 long sc. Legs nearly entirely black except extreme base of hind tibia dark yellow. Hairs on legs mostly dark yellow and bristles black, but hairs and bristles on coxae dark yellow and hairs on fore and mid tibiae and tarsi mostly blackish. Fore femur 1.2 times and hind femur 2.7 times as wide as mid femur. Mid femur with row of long thin yellow pv. Hind femur with 2 long spine-like preapical ad and nearly three rows of spine-like v on tubercles. Fore tibia with 2 d; apically with 3 bristles (which of 1 ad is long). Mid tibia with 2 long ad; apically with 4 bristles (which of 1 av is very long). Hind tibia apically with 1 long thin brownish yellow ad somewhat erect. Fore tarsomere 1 with 4 long hair-like pv somewhat erect. Hind tarsomeres 1-2 with short irregular ventral spines. Wing hyaline, stigma indistinct; veins brown, R_{4+5} and M_1 parallel apically. Squama yellow with pale yellow hairs. Halter yellow.

Abdomen weakly curved downward, subshiny black with pale gray pollen; hypopygium weakly swollen. Hairs and bristles on abdomen dark yellow except hypopygium with black bristles.

Male genitalia (Figs. 1-3). Left epandrial lobe short and wide, with indistinctly concave inner margin; left surstylus rather short, not furcated, and with wide apex. Right epandrial lobe long and narrow, with weakly concave inner margin and a short subapical inner process; right surstylus long, curved, nearly finger-like. Hypandrium apically incised, with large apico-lateral process bearing very long and thick bristles.

Female. Body length 2.9-3.1 mm, wing length 3.2-3.5 mm. Similar to male.

Material examined.—Holotype male, Tibet, Nyingchi, Beibeng, 2011. VIII. 11, Lihua Wang (CAU). Paratypes 2 males 10 females, same data as holotype (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is similar to *H. bispinipes* Saigusa from Hubei and Taiwan of China, but may be separated from the latter by the

right epandrial lobe with a subapical inner process and hypandrium with the large apico-lateral process distinctly projected. In *H. bispinipes*, the right epandrial lobe has no subapical inner process, and the hypandrium has the large apico-lateral process indistinctly projected (Yang & Yang 2004).

Etymology.—The specific name refers to the type locality Beibeng.

2. *Hybos brevifurcatus* sp. nov.

Figs. 4-7

urn:lsid:zoobank.org:act:4E8D2B73-D1DF-4204-BB32-8D6168725863

Diagnosis.—Wing hyaline or tinged grayish, stigma brown; R_{4+5} and M_1 little convergent apically. Legs black except extreme base of hind tibia brownish yellow. Left surstylus rather short, obliquely furcated; right surstylus short, furcated, with two lateral processes somewhat similar in shape. Hypandrium apically with short small process shallowly furcated, and with weak subapical lateral process bearing hairs.

Description.—Male. Body length 2.9-4.2 mm, wing length 3.2-3.6 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere elongate, about as long as scape and pedicel together, without dorsal hair; arista black, indistinctly pubescent except apical 1/3 or so thin. Proboscis nearly as long as head, blackish. Palpus blackish, with 5-6 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax blackish to black, hairs on mesoscutum short and sparse; h absent, 2 npl (posterior npl long), uniserial dc nearly as long as irregularly biserial acr, 1 long prsc, 1 psa shorter than prsc; scutellum with 8 short marginal hairs (2 hairs between sc) and 2 long sc. Legs black except extreme base of hind tibia brownish yellow. Hairs on legs yellow and bristles black, but hairs and bristles on coxae yellow and hairs on tarsi partly blackish. Fore femur 1.25 times and hind femur 2.5

times as wide as mid femur. Fore and mid femora each with row of brownish yellow thin pv (pv on mid femur relatively long). Hind femur with 2 long spine-like preapical ad and nearly three rows of spine-like v on tubercles. Fore tibia with 2 ad; apically with 4 bristles (of which 1 ad and 1 thin pv are long). Mid tibia with 2 long ad; apically with 4 bristles (of which 1 av is very long). Hind tibia apically with 1 long thin brownish yellow ad somewhat erect. Fore tarsomere 1 with 4 long hair-like pv somewhat erect. Hind tarsomeres 1-2 with short irregular ventral spines. Wing hyaline except wing tinged grayish in one paratype, stigma brown; veins dark brown, R_{4+5} and M_1 little convergent at extreme tip. Squama yellow with pale yellow hairs. Halter dark yellow.

Abdomen weakly curved downward, subshiny black with pale gray pollen; hypopygium weakly swollen. Hairs and bristles on abdomen including hypopygium mostly yellow.

Male genitalia (Figs. 4–7). Left epandrial lobe nearly as long as right epandrial lobe, with distinctly concave inner margin; left surstylus rather short, obliquely furcated. Right epandrial lobe with distinctly concave inner margin; right surstylus short, furcated, with two lateral processes somewhat similar in shape. Hypandrium rather wide, apically with short small process shallowly furcated, and with weak subapical lateral process bearing hairs.

Female. Unknown.

Material examined.—Holotype male, Tibet, Nyingchi, 80K, 2011. VIII. 19, Lihua Wang (CAU). Paratypes 3 males, same data as holotypes (CAU); 2 males, Tibet, Nyingchi, Hanmi, 2011. VIII. 5, Lihua Wang (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is somewhat similar to *H. tongmaiensis* sp. nov., but may be separated from the latter by the right surstylus with two lateral processes widely separated and more or less similar in shape and left surstylus furcated. In *H. tongmaiensis*, the right surstylus has two lateral processes narrowly separated and distinctly different in shape, and the left surstylus is not furcated.

3. *Hybos curvus* sp. nov.

Figs. 8–11

urn:lsid:zoobank.org:act:A02E0304-8A0B-4AB8-841C-23E50EA12963

Diagnosis.—Wing slightly brownish; R_{4+5} and M_1 parallel apically. Legs entirely black. Hind femur with row of 8 pd. Left surstylus rather short, curved, and nearly finger-like; right surstylus short, basally wide, apically nearly acute. Hypandrium distinctly longer than wide, apically with large lateral incision.

Description.—Male. Body length 3.8–4.1 mm, wing length 3.9–4.7 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere slightly elongated (nearly as long as scape and pedicel together), without dorsal hair; arista black, pubescent except apical 1/4 or so thin and bare. Proboscis nearly as long as head, blackish. Palpus blackish, with 6 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax black, h absent, 2 npl (posterior npl long); uniserial dc short hair-like, nearly as long as irregularly biserial acr, 1 long prsc, 1 psa shorter than prsc; scutellum with 8 marginal hairs (2 hairs located between sc) and 2 long sc. Legs entirely black. Hairs on legs blackish and bristles black. Fore femur 1.3 times and hind femur 2.7 times as wide as mid femur. Mid femur with 5–6 ad and 2 spine-like pv. Hind femur with 2 long preapical ad, one row of 8 pd, and nearly three rows of spine-like v on tubercles (av relatively long). Fore tibia with 1 subapical ad; apically with 1 very long hair-like ad and 1 very long hair-like pv. Mid tibia with 2 very long ad and 1 very long pv, apically with 4 long bristles. Hind tibia apically with 1 thin brown ad very long. Fore tarsomere 1 with 7–8 long hair-like pv. Hind tarsomeres 1–2 with short, irregular ventral spines. Wing slightly brownish; stigma long, brown; veins dark brown, R_{4+5} and M_1 parallel apically. Squama yellow with pale yellow hairs. Halter dark yellow.

Abdomen curved downward, subshiny black

with pale gray pollen; hypopygium swollen. Hairs and bristles on abdomen dark yellow.

Male genitalia (Figs. 8–11). Left epandrial lobe longer than right epandrial lobe, with weakly convex inner margin near middle; left surstylius rather short, curved, and nearly finger-like. Right epandrial lobe basally wide, with concave inner margin; right surstylius short, basally wide, apically nearly acute. Hypandrium distinctly longer than wide, apically with large lateral incision.

Female. Body length 3.7–4.7 mm, wing length 3.8–4.5 mm. Similar to male.

Material examined.—Holotype male, Tibet, Nyingchi, Beibeng, 2011. VIII. 11, Lihua Wang (CAU). Paratypes 2 males 2 females, same data as holotype (CAU); 3 males 2 females, Tibet, Nyingchi, Hanmi, 2011. VIII. 5, Lihua Wang (CAU); 1 female, Tibet, Nyingchi, 80K, 2011. VIII. 18, Lihua Wang (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is similar to *H. wudanganus* Yang et Yang, but may be separated from the latter by the wing slightly brownish and left surstylius rather narrow without lateral process. In *H. wudanganus*, the wing is hyaline, and the left surstylius is rather wide with a lateral process (Yang & Yang 2004).

Etymology.—The specific name refers to the curved left surstylius.

4. *Hybos digitiformis* Yang et Yang, 1987

Hybos digitiformis Yang et Yang, 1987: 168. Type locality: China: Tibet, Bomi.

Diagnosis.—Antenna brownish. Palpus brownish yellow. Legs black except tarsi and hind tibia brownish yellow. Hind femur with row of very short spine-like v. R_{4+5} and M_1 little convergent at extreme tips. Halter yellowish. Left surstylius rather narrow, finger-like; right surstylius short and wide with obtuse apex. Hypandrium longer than wide, apically obtuse with a short finger-like subapical lateral process.

Material.—Holotype male, Tibet, Bomi, Jieda, 3050 m, 1978. VII. 24, Fasheng Li (CAU).

Distribution.—China (Tibet).

5. *Hybos furcatus* Yang et Yang, 1987

Hybos furcatus Yang et Yang, 1987: 169. Type locality: China: Tibet, Bomi.

Diagnosis.—Antenna brownish yellow. Palpus dark yellow. Legs partly dark brownish yellow. Hind femur with two rows of spine-like v. R_{4+5} and M_1 distinctly convergent at extreme tips. Halter yellowish. Left surstylius hoof-shaped; right surstylius short and wide with weak lateral process apically. Hypandrium longer than wide, apically trifurcated.

Material.—Holotype male, Tibet, Bomi, Yigong, 2300 m, 1978. VII. 31, Fasheng Li (CAU).

Distribution.—China (Tibet).

6. *Hybos hanmianus* sp. nov.

Figs. 12–15

urn:lsid:zoobank.org:act:06100867-410B-4500-94CB-3C6987121F27

Diagnosis.—Wing hyaline, stigma brown; R_{4+5} and M_1 little convergent apically. Legs entirely black. Left surstylius rather short, bifurcated; right surstylius long finger-like. Hypandrium with small apico-lateral process bearing very long and thick bristles.

Description.—Male. Body length 3.1–3.2 mm, wing length 3.1 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere without dorsal hair; arista black, pubescent except apical 1/3 or so thin and bare. Proboscis nearly as long as head, blackish. Palpus blackish, with 5–7 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax black, hairs on mesoscutum sparse; h absent, 2 npl (posterior npl long), uniserial dc nearly as long as irregularly biserial acr, 1 long prsc, 1 psa shorter than prsc; scutellum with 6 marginal hairs and 2 long sc. Legs entirely black. Hairs on legs blackish to black, bristles black. Fore femur 1.2 times and hind femur 2.5 times as wide

as mid femur. Fore femur with row of long thin pv; mid femur with one row of long thin av and one row of very long pv. Hind femur with 2 long spine-like preapical ad and nearly three rows of spine-like v on weak tubercles (7 av relatively long). Fore tibia with 2 ad; apically with 3 bristles (of which 1 ad is long). Mid tibia with 2 long ad; apically with 4 bristles (1 av and 1 pv very long, but av longer than pv). Hind tibia apically with 1 long thin brownish yellow ad somewhat erect. Fore tarsomere 1 with 4 long hair-like pv somewhat erect. Hind tarsomeres 1-2 with short irregular ventral spines. Wing hyaline, stigma brown; veins brown, R_{4+5} and M_1 parallel apically but little convergent at extreme tip. Squama yellow with pale yellow hairs. Halter brown.

Abdomen weakly curved downward or nearly straight, subshiny black with pale gray pollen; hypogynium weakly or distinctly swollen. Hairs and bristles on abdomen mostly black except those on venter yellow, or hairs and bristles on abdomen dark yellow; hypopygium with mostly black hairs and bristles.

Male genitalia (Figs. 12–15). Left epandrial lobe rather wide, with nearly straight inner margin; left surstyli rather short, bifurcated, and with two lateral processes distinctly different in shape. Right epandrial slightly narrower than left epandrial lobe, with weakly convex inner margin and a short subapical inner process; right surstylus long finger-like. Hypandrium rather wide, with small apico-lateral process bearing very long and thick bristles.

Female. Unknown.

Material examined.—Holotype male, Tibet, Nyingchi, Hanmi, 2011. VIII. 6, Lihua Wang (CAU). Paratype 1 male, Tibet, Medog, 80K, 1000 m, 2012. VII. 22, Wenliang Li (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is somewhat similar to *H. bispinipes* Saigusa from Hubei and Taiwan of China, but may be separated from the latter by the right epandrial lobe with a subapical inner process and left surstylus wide and furcated. In *H. bispinipes*, the right epandrial lobe has no subapical inner process, and the left surstylus is narrow and not furcated (Yang & Yang 2004). The new species is also somewhat similar to *H. beibenganus* sp. nov., but may be separated from the latter by the arista pubescent and pterostigma

present.

Etymology.—The specific name refers to the type locality Hanmi.

7. *Hybos lihueae* sp. nov.

Figs. 16–19

urn:lsid:zoobank.org:act:3C0E12B1-6895-4635-ACDF-0AE068EE126F

Diagnosis.—Wing hyaline; R_{4+5} and M_1 parallel apically. Legs nearly entirely black except extreme base of hind tibia brownish yellow. Left surstylus rather short, more or less trifurcated; right surstylus long, curved, nearly finger-like. Hypandrium with distinctly projected apico-lateral process bearing very long and thick bristles.

Description.—Male. Body length 3.3–3.4 mm, wing length 3.3–3.6 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere elongated (as long as scape and pedicel together), without dorsal hair; arista black, indistinctly pubescent except apical 1/4 or so thin and bare. Proboscis nearly as long as head, blackish. Palpus blackish, with 6 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax black, h absent, 2 npl (posterior npl long), uniserial dc nearly as long as irregularly biserial acr, 1 long prsc, 1 psa shorter than prsc; scutellum with 8 marginal hairs (4 hairs located between sc) and 2 long sc. Legs nearly entirely black except extreme base of hind tibia brownish yellow. Hairs on legs mostly dark yellow and bristles black, but hairs and bristles on coxae dark yellow and hairs on fore and mid tibiae and tarsi mostly blackish. Fore femur 1.2 times and hind femur 2.6 times as wide as mid femur. Mid femur with row of long thin yellow pv. Hind femur with 2 long spine-like preapical ad and nearly three rows of spine-like v on tubercles. Fore tibia with 2 d; apically with 4 bristles (1 long ad and 1 long hair-like pv). Mid tibia with 2 long ad; apically with 3 bristles (of which 1 av is very long). Hind tibia

apically with 1 long thin brownish ad somewhat erect. Fore tarsomere 1 with 7 long hair-like pv. Hind tarsomeres 1-2 with short irregular ventral spines. Wing hyaline; stigma long, brown; veins dark brown, R_{4+5} and M_1 parallel apically. Squama yellow with pale yellow hairs. Halter dark yellow.

Abdomen nearly straight, subshiny blackish with pale gray pollen; hypopygium distinctly swollen. Hairs and bristles on abdomen mostly dark yellow except hypopygium with partly or entirely black bristles.

Male genitalia (Figs. 16–19). Left epandrial lobe rather short, with slightly concave inner margin; left surstyli rather short, more or less trifurcated. Right epandrial lobe larger than left epandrial lobe, with weakly concave inner margin; right surstyli long, nearly finger-like. Hypandrium slightly longer than wide, with distinctly projected apico-lateral process bearing very long and thick bristles.

Female. Unknown.

Material examined.—Holotype male, Tibet, Nyingchi, Beibeng, 2011. VIII. 11, Lihua Wang (CAU). Paratype 1 male, Tibet, Medog, 80K, 1000 m, 2012. VII. 24, Xuankun Li (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is similar to *H. nigripes* sp. nov., but it may be separated from the latter by the apico-lateral process of the hypandrium large and distinctly projected, and right surstyli long finger-like. In *H. nigripes*, the apico-lateral process of the hypandrium is small and indistinctly projected, and the right surstyli is apically much thickened and irregular in shape.

Etymology.—The specific name refers to the collector Ms. Lihua Wang.

8. *Hybos lii* Yang et Yang, 1987

Hybos lii Yang et Yang, 1987: 169. Type locality: China: Tibet, Bomi.

Diagnosis.—Thorax pale brownish yellow except pleuron nearly yellow. Antenna dark yellow except first flagellomere pale yellow. Palpus dark yellow. Legs entirely pale yellow. Hind femur with two row of spine-like v. Hind tibia with 2 d at middle. Pterostigma absent. R_{4+5} and M_1 distinctly

divergent apically. Halter yellowish. Left surstyli rather narrow, nearly finger-like; right surstyli large and wide with apical margin weakly incised. Hypandrium longer than wide, apically somewhat acute, and with a short finger-like subapical lateral process.

Material.—Holotype male, Tibet, Bomi, Yigong, 2300 m, 1978. VI. 13, Fasheng Li (CAU).

Distribution.—China (Tibet).

9. *Hybos nigripes* sp. nov.

Figs. 20–23

urn:lsid:zoobank.org:act:5EFDC7B8-370D-4643-9F66-67D81D3F075C

Diagnosis.—Wing hyaline, weakly tinged grayish; R_{4+5} and M_1 parallel apically. Legs black except hind knees brownish yellow. Left surstyli rather short and wide, more or less trifurcated; right surstyli long, apically much thickened. Hypandrium with weakly projected apico-lateral process bearing very long and thick bristles.

Description.—Male. Body length 3.0–3.2 mm, wing length 3.2–3.3 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere elongated (as long as scape and pedicel together), without dorsal hair; arista black, indistinctly pubescent except apical 1/4 or so thin and bare. Proboscis nearly as long as head, blackish. Palpus blackish, with 5–6 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax black; hairs on mesoscutum short and sparse; h absent, 2 npl (posterior npl long), uniserial dc nearly as long as irregularly biserial acr, 1 long prsc, 1 psa shorter than prsc; scutellum with 6 pale marginal hairs (2 hairs located between sc) and 2 long sc. Legs black except hind knee brownish yellow. Hairs on legs mostly yellow and bristles black, but hairs and bristles on coxae dark yellow and hairs on tarsi partly blackish. Fore femur 1.25 times and hind femur 2.6 times as wide as mid femur. Mid femur with row of long thin yellow

pv. Hind femur with 2 long spine-like preapical ad and nearly three rows of spine-like v on tubercles. Fore tibia with 2 d; apically with 4 bristles (1 long ad and 1 very long hair-like blackish pv). Mid tibia with 2 long ad; apically with 4 bristles (of which 1 av is very long). Hind tibia apically with 1 long thin brownish ad somewhat erect. Fore tarsomere 1 with 7 long hair-like pv. Hind tarsomeres 1-2 with short irregular ventral spines. Wing hyaline, slightly tinged grayish; stigma long, brown; veins dark brown, R_{4+5} and M_1 parallel apically. Squama yellow with pale yellow hairs. Halter yellow.

Abdomen curved downward, subshiny blackish with pale gray pollen; hypopygium swollen. Hairs and bristles on abdomen yellow; hairs and bristles hypopygium yellow except hypandrium with black rowed bristles on lateral process.

Male genitalia (Figs. 20–23). Left epandrial lobe short and wide, with distinctly concave inner margin; left surstyli rather short and wide, more or less trifurcated. Right epandrial lobe narrower than left epandrial lobe, with weakly concave inner margin; right surstyli long, weakly curved, apically much thickened, irregular in shape. Hypandrium with weakly projected apico-lateral process bearing very long and thick bristles.

Female. Body length 3.3–3.7 mm, wing length 3.5–3.8 mm. Similar to male, but wing hyaline.

Material examined.—Holotype male, Tibet, Nyingchi, 80K, 2011. VIII. 18–19, Lihua Wang (CAU). Paratypes 16 males 1 female, same data as holotype; 1 male 1 female, Tibet, Nyingchi, Hanmi, 2011. VIII. 6, Lihua Wang (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is similar to *H. lihuiae* sp. nov., but it may be separated from the latter by the apico-lateral process of the hypandrium small and indistinctly projected, and right surstyli apically much thickened and irregular in shape.

Etymology.—The specific name refers to the black bristles on the lateral process of the hypandrium.

10. *Hybos oncus* Yang et Yang, 1987

Hybos oncus Yang et Yang, 1987: 164. Type locality: China: Tibet, Bomi.

Diagnosis.—Antennal first flagellomere with 2 dorsal hairs. R_{4+5} and M_1 convergent apically. Legs entirely black. Hind femur with only one row of v. Hind tarsomeres 1–2 with row of short spine-like v. Left surstylus long spine-like; right surstylus relatively short, nearly finger-like. Hypandrium apically distinctly narrowed with a small subapical lateral process shallowly incised apically.

Material.—Holotype male, Tibet, Bomi, Yigong, 2300 m, 1978. VI. 13, Fasheng Li (CAU).

Distribution.—China (Tibet).

11. *Hybos pallidus* Yang et Yang, 1987

Hybos pallidus Yang et Yang, 1987: 165. Type locality: China: Tibet, Bomi.

Diagnosis.—Antenna brownish yellow. Palpus brownish yellow. Legs dark brownish yellow except tibiae and tarsi dark yellow. Hind femur with two rows of v. Hind tibia with 2 long d at middle. R_{4+5} and M_1 slightly divergent apically. Halter pale yellow. Left surstylus short and narrow; right surstylus rather wide with apical margin slightly incised. Hypandrium distinctly longer than wide, apically distinctly constricted with curved and acute apex.

Material.—Holotype male, Tibet, Bomi, Yigong, 2300 m, 1978. VI. 13, Fasheng Li (CAU).

Distribution.—China (Tibet).

12. *Hybos psilus* Yang et Yang, 1987

Hybos psilus Yang et Yang, 1987: 167. Type locality: China: Tibet, Bomi.

Diagnosis.—Antenna brown; first flagellomere with 1 dorsal hair; arista bare. Legs mostly brownish yellow. Hind femur with two rows of v. Hind tibia with 1 long d at middle. Pterostigma absent. R_{4+5} and M_1 slightly divergent apically. Halter pale yellow. Left surstylus rather short, irregularly furcated with curved and acute

lateral processes; right surstylus long finger-like. Hypandrium distinctly longer than wide, apically distinctly constricted and obtuse.

Material.— Holotype male, Tibet, Bomi, Yigong, 2300 m, 1978. VI. 13, Fasheng Li (CAU). Paratypes 2 males, same data as holotype (CAU).

Distribution.— China (Tibet).

13. *Hybos tibetanus* Yang et Yang, 1987

Hybos tibetanus Yang et Yang, 1987: 163. Type locality: China: Tibet, Bomi.

Diagnosis.— Legs black except fore and mid trochanters brownish yellow, tarsomere 1 sometimes dark yellow. Hind femur weakly thickened with one row of v. Fore and mid tarsomere 1 each with 1 v at base. R_{4+5} and M_1 divergent apically.

Material.— Holotype female, Tibet, Bomi, Yigong, 2300 m, 1978. VII. 29, Fasheng Li (CAU). Paratypes 4 females, Tibet, Bomi, Yigong, 2300 m, 1978. VII. 30-31, Fasheng Li (CAU).

Distribution.— China (Tibet).

14. *Hybos tongmaiensis* sp. nov.

Figs. 24–27

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Diagnosis.— Antennal first flagellomere elongated, nearly as long as scape and pedicel together. R_{4+5} and M_1 parallel apically. Legs black except extreme base of hind tibia pale reddish brown. Left surstylus rather short, not furcated, and with wide apex obliquely truncate; right surstylus short, bifurcated. Hypandrium apically shallowly incised with nearly quadrate left lateral process and acute right lateral process.

Description.— Male. Body length 2.9–3.2 mm, wing length 3.2–3.4 mm.

Head black with pale gray pollen. Eyes contiguous on frons, dark yellow with enlarged upper facets. Hairs and bristles on head black; ocellar tubercle distinct, with 2 long oc and 2 short posterior hairs. Antenna black; scape without hairs, pedicel with circlet of subapical hairs; first flagellomere elongated, nearly as long as scape and pedicel together, without dorsal hair; arista

indistinctly pubescent except apical 1/3 or so thin and bare. Proboscis nearly as long as head, blackish. Palpus blackish, with 4–5 ventral hairs.

Thorax black with pale gray pollen. Hairs and bristles on thorax black, hairs on mesoscutum short and rather sparse; h absent, 2 npl (posterior npl long), uniserial dc nearly as long as irregularly biserial acr, 1 long strong prsc, 1 psa shorter than prsc; scutellum with 10 short marginal hairs (2 hairs between sc) and 2 long sc. Legs black except extreme base of hind tibia pale reddish brown. Hairs on legs mostly yellow or dark yellow and bristles black, but hairs and bristles on coxae dark yellow, hairs on tarsi and hind tibia mostly blackish. Fore femur 1.3 times and hind femur 2.6 times as wide as mid femur. Fore and mid femora each with row of dark yellow hair-like pv (pv on mid femur very long). Hind femur with 2 long spine-like preapical ad and nearly three rows of spine-like v on tubercles. Fore tibia with 1 ad somewhat near apex; apically with 4 bristles (1 ad long, 1 blackish hair-like pv very long). Mid tibia with 2 ad; apically with 4 bristles (of which 1 av and 1 pv are long). Hind tibia apically with 1 long hair-like brownish d erect. Hind tarsomeres 1–2 with short irregular ventral spines. Wing hyaline but slightly tinged grayish in one paratype, stigma dark brown; veins dark brown, R_{4+5} and M_1 parallel apically. Squama brownish yellow with yellow hairs. Halter brown.

Abdomen nearly straight or slightly curved downward, subshiny black with pale gray pollen; hypopygium weakly swollen. Hairs and bristles on abdomen mostly yellow.

Male genitalia (Figs. 24–27). Left epandrial lobe narrower than right epandrial lobe, with distinctly concave inner margin; left surstylus rather short, not furcated, and with wide apex obliquely truncate. Right epandrial lobe rather wide basally, with distinctly concave inner margin; right surstylus short, bifurcated, and with two lateral processes narrowly separated. Hypandrium slightly longer than wide, apically shallowly incised with nearly quadrate left lateral process and acute right lateral process.

Female. Unknown.

Material examined.— Holotype male, Tibet, Bomi, Tongmai, 2011. VIII. 25, Lihua Wang (CAU). Paratypes 3 males, same data as holotype (CAU).

Distribution.—China (Tibet).

Remarks.—The new species is similar to *H. brevifurcatus* sp. nov., but may be separated from the latter by the right surstylus with two lateral processes narrowly separated and distinctly different in shape and left surstylus not furcated.

Etymology.—The specific name refers to the type locality Tongmai.

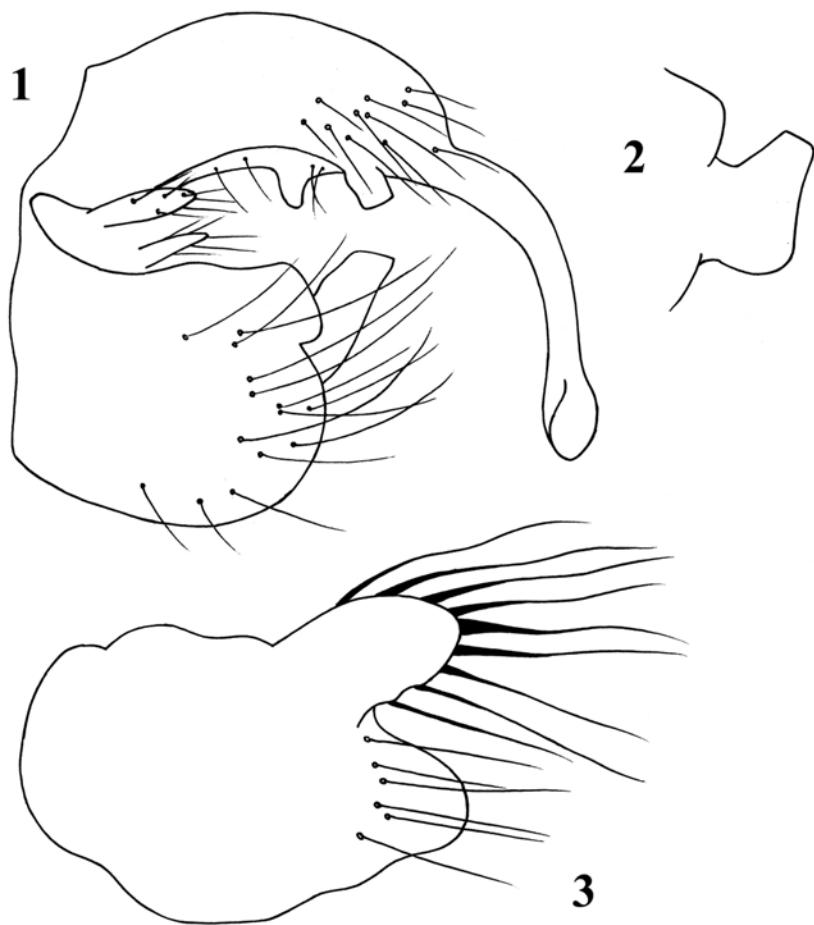
ACKNOWLEDGEMENTS

We are grateful to Ms. Lihua Wang, Mr. Wenliang Li and Mr. Xuankun Li (Beijing) for collecting specimens in Tibet and to Mr. Xuankun Li and Ms. Yan Yan (Beijing) for their help during the study. The research was funded by the National Natural Science Foundation of China (41301049, 31272354, 31111140015), the Ministry of Science and Technology of the Republic of China (MOST Grant 2012FY111100, 2011FY120200), Beijing Natural Science Foundation (No. 5092014), the Doctoral Program of Higher Education of China (20090008110016), and Chinese Universities Scientific Fund (2009-2-08).

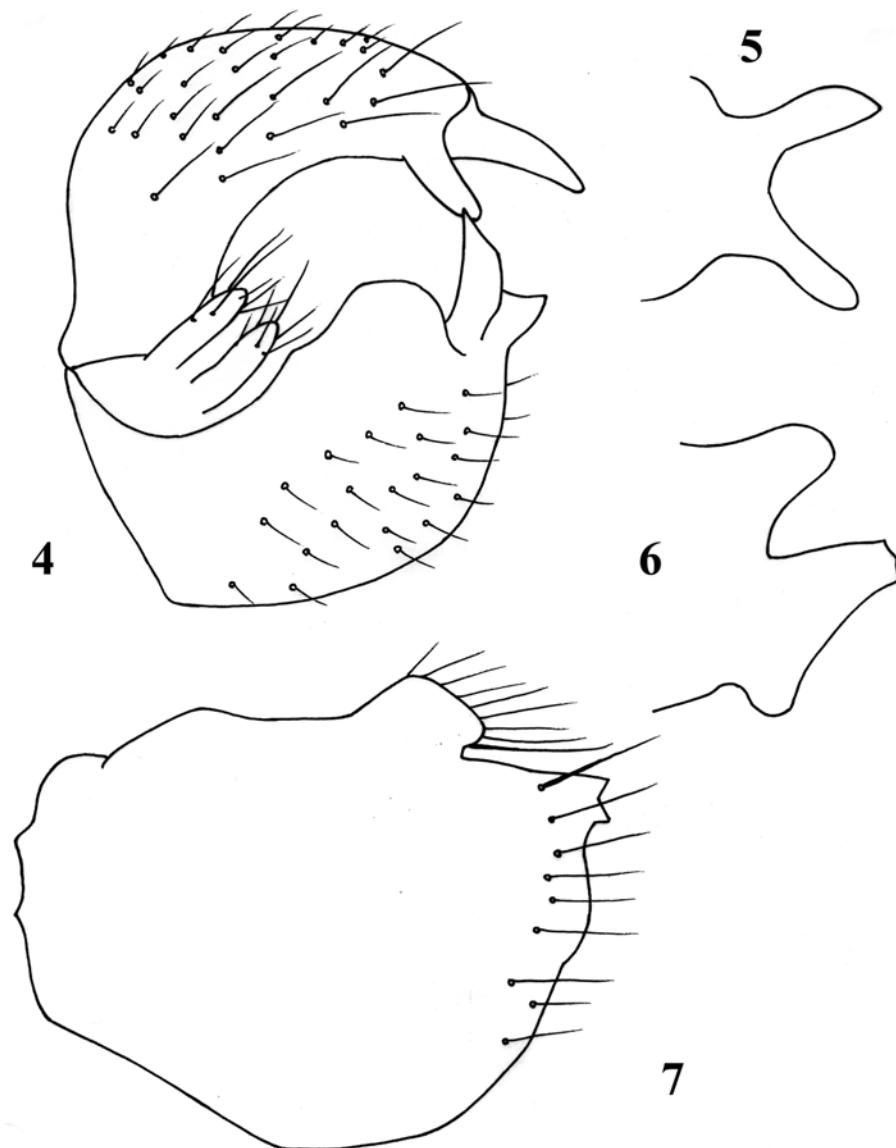
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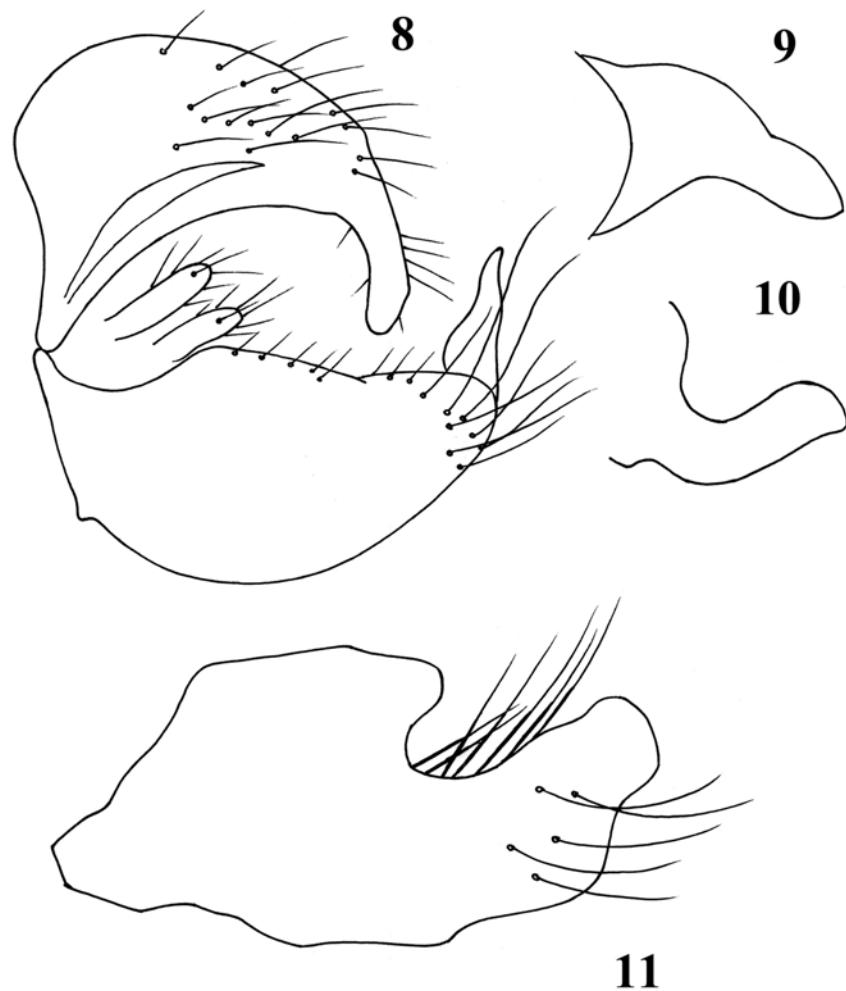
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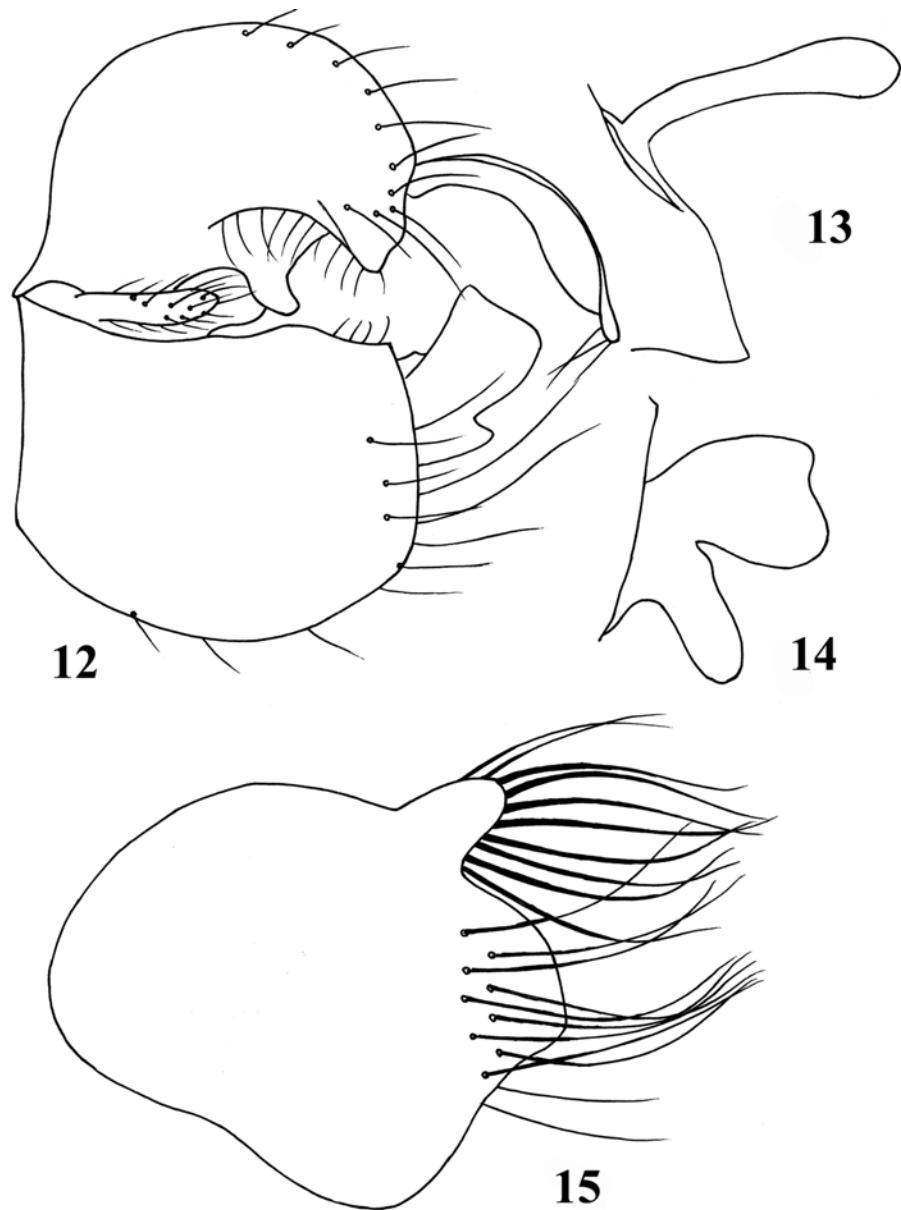
Figs. 1–3. *Hybos beibenganus* sp. nov. (male) 1. Genitalia, dorsal view; 2. left surstylius; 3. hypandrium, ventral view.



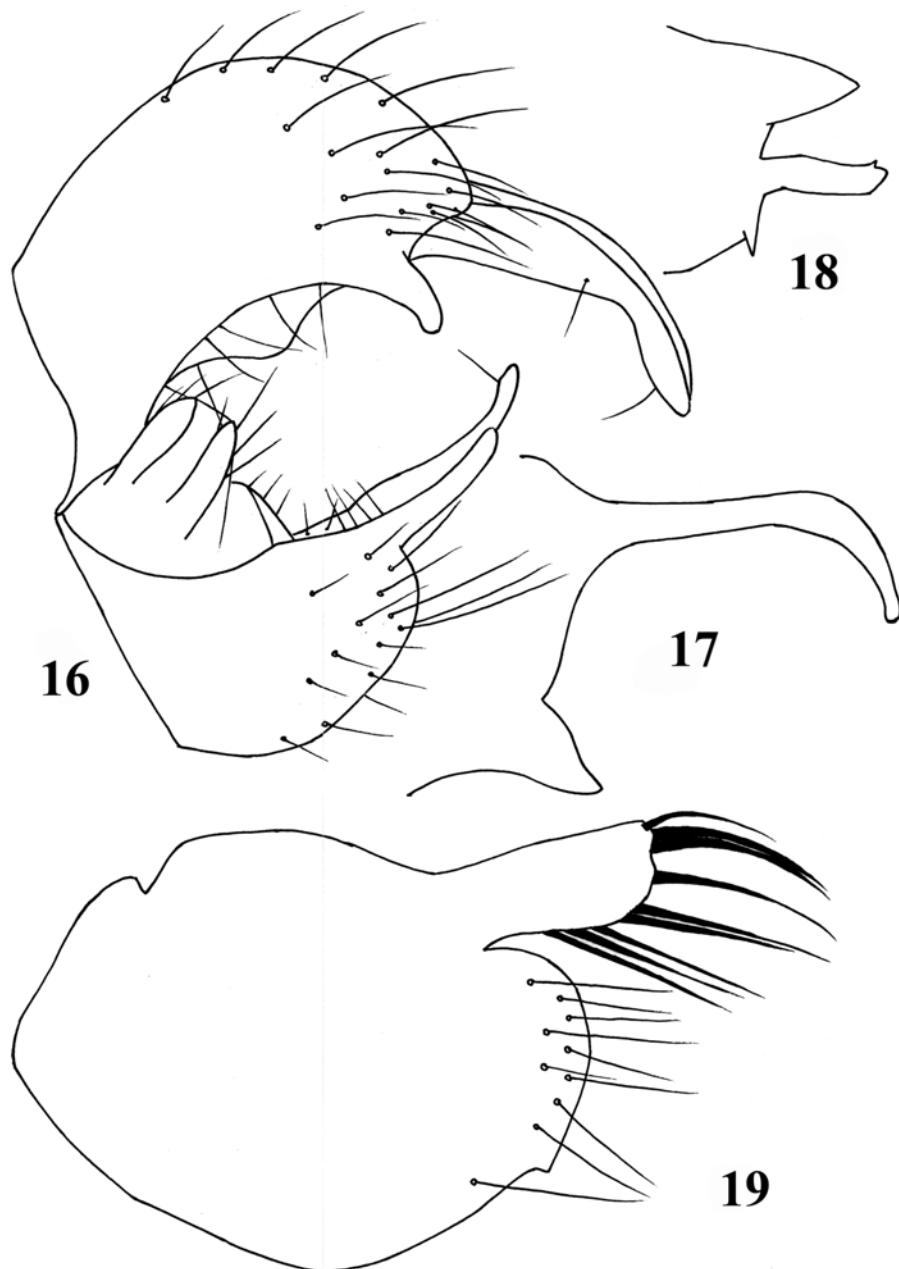
Figs. 4–7. *Hybos brevifurcatus* sp. nov. (male) 4. Genitalia, dorsal view; 5. right surstyulus; 6. left surstyulus; 7. hypandrium, ventral view.



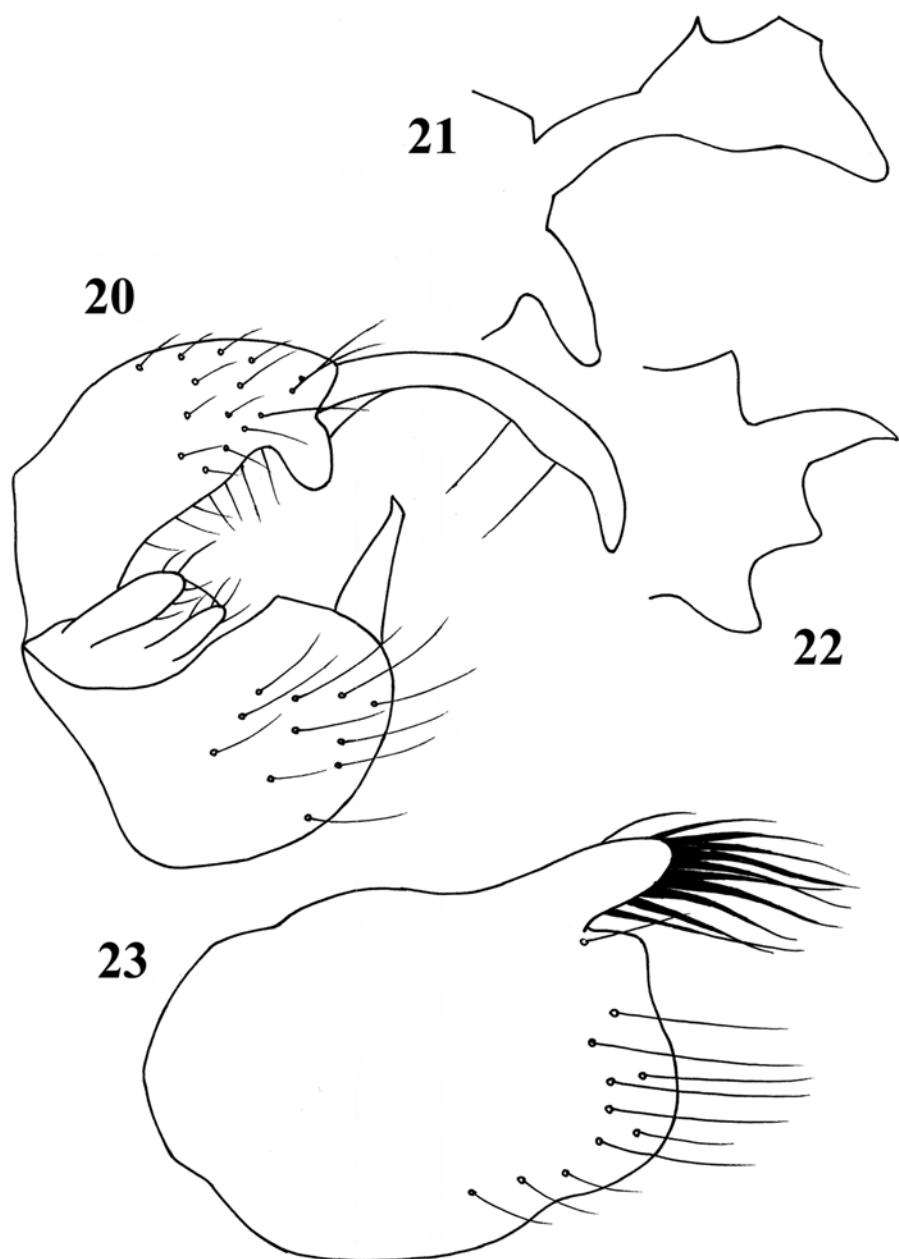
Figs. 8–11. *Hybos curvus* sp. nov. (male) 8. Genitalia, dorsal view; 9. right surstylos;
10. left surstylos; 11. hypandrium, ventral view.



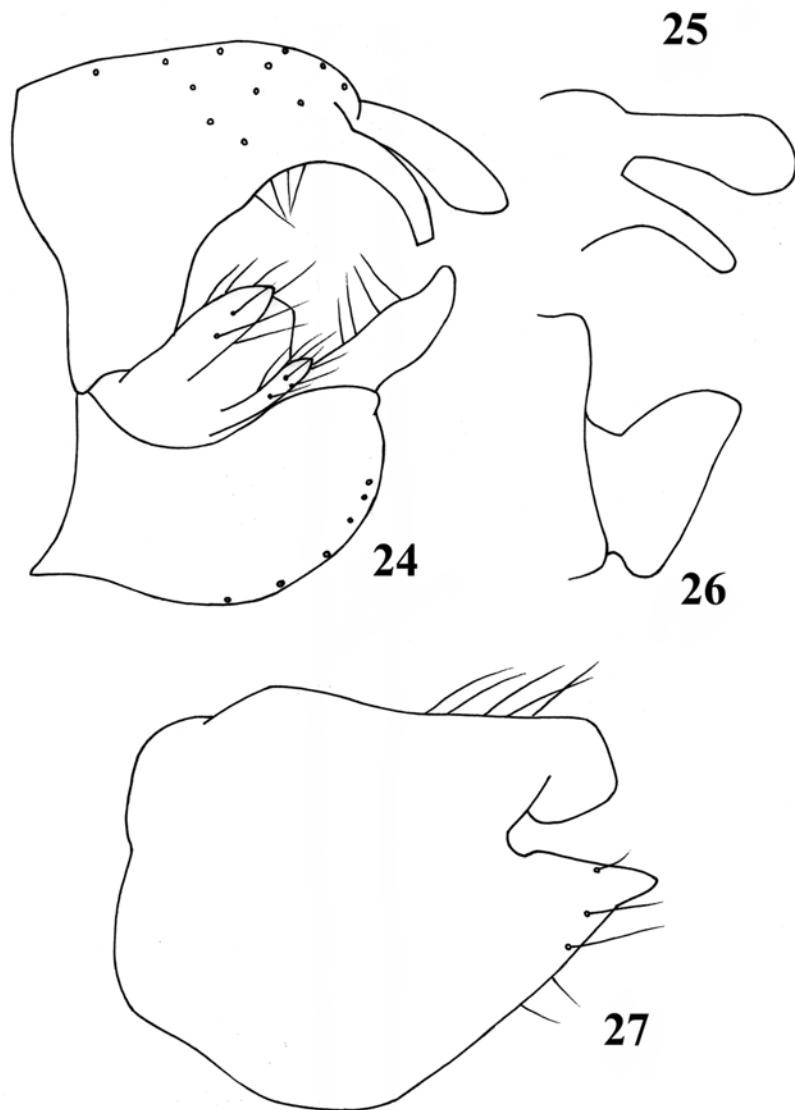
Figs. 12–15. *Hybos hanmianus* sp. nov. (male) 12. Genitalia, dorsal view; 13. right surstyli; 14. left surstyli; 15. hypandrium, ventral view.



Figs. 16–19. *Hybos lihueae* sp. nov. (male) 16. Genitalia, dorsal view; 17. right surstyli; 18. left surstyli; 19. hypandrium, ventral view.



Figs. 20–23. *Hybos nigripes* sp. nov. (male) 20. Genitalia, dorsal view; 21. right surstylius; 22. left surstylius; 23. hypandrium, ventral view.



Figs. 24–27. *Hybos tongmaiensis* sp. nov. (male) 24. Genitalia, dorsal view; 25. right surstyli; 26. left surstyli; 27. hypandrium, ventral view.