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A Study on the Chinese Beridinae (Diptera: Stratiomyidae)

Ding YANG¹⁾ and Akira NAGATOMI¹⁾

Abstract

This paper lists 5 genera and 27 species of the subfamily Beridinae from China and Taiwan, and describes 19 species, of which 13 species seem to be new to science. The names of the genera and species here described or redescribed are as follows (the new species are marked with *): *Actina*: *acutula**, *maculipennis**, *spatulata**, *varipes*, *xizangensis**. *Allognosta*: *basiflava**, *flavofemorialis*, *maculipleura*, *orientalis**, *sichuanensis**. *Beris*: *alamaculata**, *basiflava**, *emeishana**, *fuscipes*, *gansuensis**, *hirotsui*. *Chorisops*: *separata**, *unita**. *Spartimas*: *ornatipes*.

Key words: Taxonomy, Beridinae, 5 genera, 13 new species, China and Taiwan.

Introduction

The subfamily Beridinae from China and Taiwan is revised, although the material examined is still scarce. From a total of 5 genera and 27 species listed in this paper, 19 species are described or redescribed and 13 species seem to be new to science.

Unfortunately for the present study material of 7 species known from China and Taiwan has not been available and 9 species are based upon only one sex.

There are several revisional works on the subfamily Beridinae as follows: BRUNETTI (1920, 1923) made a revision of the Beridinae species from India and Burma, and the Oriental region respectively. ENDERLEIN (1921) first revised the Beridinae genera of the world and presented a key. FREY (1960) made a supplementary revision of the Beridinae of the Oriental region and presented a key to most of the known species from this region. LINDNER (1936–38) published a monograph of the Palearctic Stratiomyidae. NAGATOMI & TANAKA (1969, 1972) made a systematic study of the Japanese *Actina*, *Allognosta* and *Beris*. ROZKOŠNÝ (1983) revised the European Beridinae in his authoritative work on the European Stratiomyidae. WOODLEY (1981, 1987) made a systematic study of the Beridinae from the Nearctic and Afrotropical regions respectively. Further, there are several important papers on the Beridinae of the Palearctic and Oriental regions as follows: JAMES (1939); LINDNER (1940); NAGATOMI (1964); NARTSHUK (1972); NARTSHUK & ROZKOŠNÝ (1975); ROZKOŠNÝ (1979); ROZKOŠNÝ & NARTSHUK (1980). For lists of the genera and species of the Beridinae

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from the world, see JAMES (1973, 1975), ROZKOŠNÝ & NARTSHUK (1988) and WOODLEY (1981, 1987, 1989).

The types of new species are deposited in Beijing Agricultural University (Beijing, China) and some paratypes are retained in Kagoshima University (Kagoshima, Japan).

Subfamily Beridinae

For diagnosis of Beridinae, see ROZKOŠNÝ (1982), and for the relationships of Beridinae to the Chiromyzinae, Parhadrestinae and other subfamilies, see WOODLEY (1986). An abridged diagnosis of Beridinae is given below. Antennal flagellum cylindrical or spindle-shaped, consisting of 8 segments, of which the last one is not thin or needle-like; scutellum with 4–8 spine-like processes, but unarmed in *Allognosta*; vein M_3 absent or incomplete; vein M_4 arising from discal cell; tibial spur formula 0:0:0, but 0:1:0 in *Allognosta*; abdomen with 7 exposed large segments, although segment 6 is rather markedly reduced in *Allognosta*.

The genus *Exodontha* Rondani, 1856 should be removed from the subfamily Beridinae. This genus belongs to the subfamily Antissinae or the tribe Antissini of the subfamily Clitellariinae. In *Exodontha*, the abdomen has only 5 exposed large segments, tibial spur formula 0:1:0 as in *Allognosta* (plesiomorphic character), but the abdominal tergites have no preapical transverse grooves.

Key (1) to the Chinese genera of Beridinae

1. Scutellum with 4–8 spines; tibia without apical spur; body more slender 2
- Scutellum without spines; mid tibia with one apical spur; body depressed and more robust; male eyes contiguous *Allognosta*
2. Mid-lower face flat; palpus well developed and two-segmented 3
- Mid-lower face swollen; palpus vestigial or one-segmented; male eyes contiguous; flagellomeres in each Chinese species mostly wider than long; eyes pilose in both sexes *Beris*
3. Scape + pedicel much shorter than flagellum; scape less than twice as long as pedicel; flagellomeres in each Chinese species mostly longer than wide; eyes bare or practically so in both sexes; frons and face short pilose 4
- Scape + pedicel subequal in length to flagellum; scape over twice as long as pedicel; flagellomeres in each Chinese species mostly wider than long; eyes pilose in both sexes; male frons and face long erect pilose *Actina*
4. Male eyes separated; female face narrower than an eye; distance between ridge below proboscis and antennae twice, or nearly so, that between antennae and median ocellus *Chorisops*
- Male eyes contiguous; female face wider than an eye; distance between ridge below proboscis and antennae much less than twice that between antennae and median ocellus. *Spartimas*

Actina MEIGEN

Actina MEIGEN, 1804, *Klass. Beschr.*, 1(2): 116. Type-species: *Actina chalybea* MEIGEN, 1804 from France.

Metaberis LINDNER, 1967, *Reichenbachia*, 9: 86. Type-species: *Metaberis longicornis* LINDNER, 1967 from Mongolia.

Diagnosis. Head shining metallic green or purple; eyes pilose and distinctly separated in both sexes; male frons gradually broadening towards vertex, female frons wider and parallel-sided; mid-lower face flat and triangular; antennal scape slender, at least twice as long as pedicel; palpus well developed and two-segmented. Thorax shining metallic green or purple; scutellum with 4 spines; no tibial spurs present.

Distribution. Palaearctic region (9 species), Oriental region (6 species), Nearctic region (1 species), Neotropical region (1 species), Australasian region (8 species).

Previously the genus *Actina* contained 21 described species. Three species were known from China, i.e., *Actina amoena* (ENDERLEIN, 1921) (type-locality: Taiwan), *Actina flavicornis* (JAMES, 1939) (type-locality: Taiwan), and *Actina varipes* LINDNER, 1940 (type-locality: Gansu). Here 7 species are treated. Among them 4 species are described as new to science. The diagnoses of *amoena* and *flavicornis* are based upon the original descriptions of ENDERLEIN (1921) and JAMES (1939) respectively.

**Key (2) to 5 species of *Actina* from China based on males
(*amoena* and *flavicornis* are excluded)**

1. Wing (except stigma) hyaline without markings..... 2
- Wing (except stigma) hyaline with veins M₁, M₂ and M₄ having brown to dark brown borders, and with 2nd submarginal cell and bases of 1st submarginal cell and 1st posterior cell brown to dark brown..... 4
2. Legs yellow, but apex of hind femora, hind tibiae (except base) (or only apex of hind tibiae), and fore tarsi brown to dark brown 3
- Legs brown to dark brown, but bases of tibiae, and hind tarsomeres 1–2 possibly yellow; gonostyli with inner lobe near base and aedeagal complex with wide lateral lobes distinctly longer than median lobe (Figs. 16–17). Northern China..... *varipes*
3. Coxae yellow, but hind coxae brown to dark brown; aedeagal complex with lateral lobes distinctly longer than median lobe (Figs. 3–4). Southern China *acutula*
- Coxae dark brown to black; aedeagal complex with lateral lobes nearly as long as median lobe (Figs. 11–12). Northern China..... *spatulata*
4. Legs brown to dark brown, but apical portions of femora, and hind tarsomeres 1–2 yellow; mid tibiae and tarsomere 1 paler than rest of mid tarsi; gonostyli with inner lobe near apex; posterior margin of dorsal bridge straight

- transversely; aedeagal complex with lateral lobes wider than in *maculipennis* and slightly longer than median lobe (Figs. 20–21). Northern China....*xizangensis*
- Legs yellow, but apex of hind femora brown and hind tibiae dark brown except for base; gonostyli without inner lobe; posterior margin of dorsal bridge with a larger median concavity; aedeagal complex with lateral lobes narrower than in *xizangensis* and distinctly longer than median lobe (Figs. 7–8). Southern China*maculipennis*

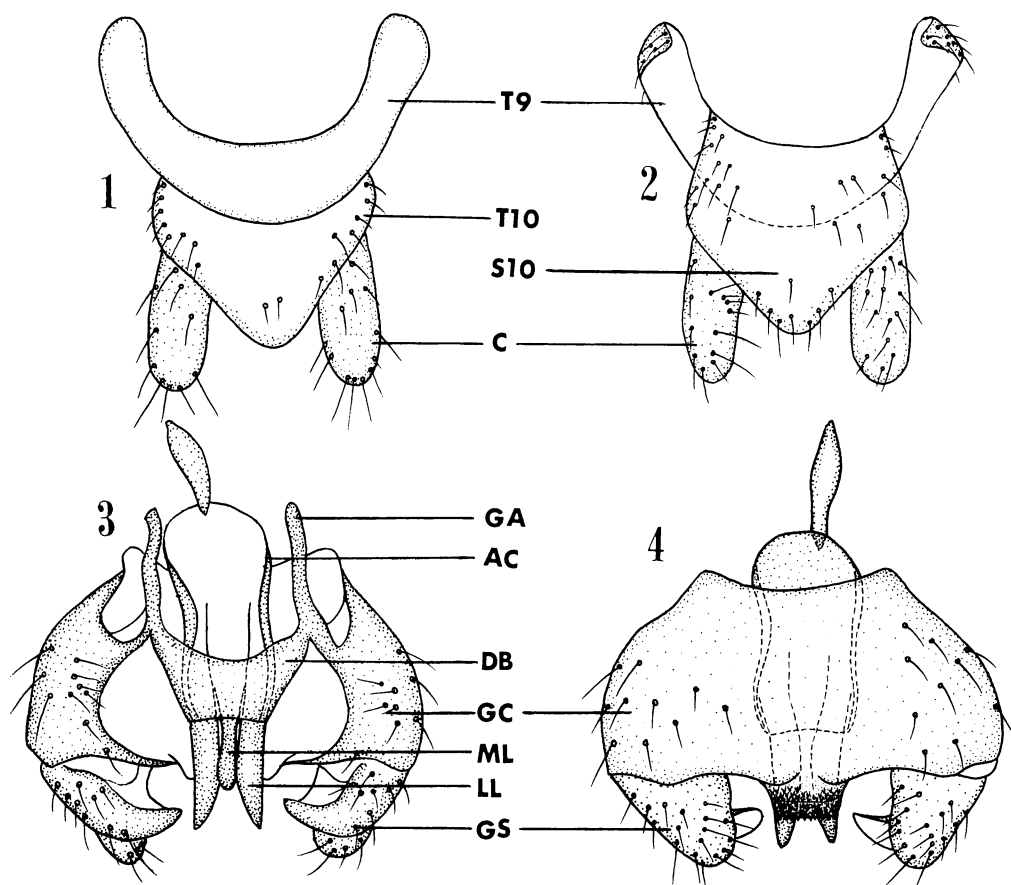
Key (3) to 4 species of *Actina* from China based on females
(*maculipennis*, *spatulata* and *xizangensis* are excluded)

1. Wing hyaline, veins brown to dark brown 2
– “Wings light yellowish; the veins yellow; abdomen light brownish yellow, darker laterally and basally, and becoming blackish beyond the middle of the fifth segment.” (after JAMES, 1939). Taiwan. (♂ unknown)
..... *flavicornis*
2. Antennal scape about 3 times as long as wide; abdominal dorsum wholly subshining brown to dark brown (in *varipes*, abdomen with metallic green tinge) 3
– Antenna yellowish, scape somewhat darker and 4 times as long as wide; “Abdomen braun, matt, Mitte des 2., 3., 4. und 5. Tergites und die Unterseite hell braungelb.” (after ENDERLEIN, 1921). Taiwan and Burma
..... *amoena*
3. Hind tibia, except base, yellow; antennal scape and pedicel brown to dark brown. Southern China *acutula*
– Hind tibia, except apex, brown to dark brown; antennal scape and pedicel yellow. Northern China *varipes*

***Actina acutula* YANG et NAGATOMI, sp. nov.**

(Figs. 1–4)

Male. Body length 6.0–6.2 mm, wing length 4.8–5.0 mm. Head black, frons and vertex more or less shining metallic purple, ocellar tubercle shining metallic green; frons just above antennae, face and cheeks pale grey pollinose. Head longer, blackish, haired, but occiput (except upper part) and cheeks with pale yellowish pile which becomes shorter; eyes with short pale brownish pilosity. Head 1.4–1.5 times higher than long; width of one eye on a mid line from a direct frontal view 1.0–1.1 times distance between antennae and median ocellus, 5.2–6.0 times width of frons just above antennae and 7.6–8.0 times width of face at narrowest point; width of frons just above antennae 1.0–1.2 times as wide as ocellar triangle, 1.3–1.5 times width of face at narrowest point and 0.3–0.4 times width of frons at median ocellus. Antenna brownish yellow, flagellum black apically; scape and pedicel black haired,



Figs. 1-4. *Actina acutula*, sp. nov., male. 1, Tergites 9-10 and cerci, dorsal view; 2, tergite 9, sternite 10 and cerci, ventral view; 3, genital capsule, dorsal view; 4, genital capsule, ventral view. AC, aedeagal complex; C, cercus; DB, dorsal bridge; GA, gonocoxal apodeme; GC, gonocoxite; GS, gonostylus; LL, lateral lobe in aedeagal complex; ML, median lobe in aedeagal complex; S10, sternite 10; T9, tergite 9; T10, tergite 10.

flagellum with minute white pubescence; antennal ratio *c.* 1:0.5:1.8. Antenna *c.* 1.4 times as long as distance between antennae and median ocellus. Proboscis yellow and yellowish pilose; palpus yellow, black apically.

Thorax dark brown, mesonotum and scutellum shining metallic green, humeri and postalar calli brownish yellow; pale yellowish pilose, but mid-posterior part of sternopleura, pteropleura (excluding antero-upper portion and lower part), hypopleura and upper part of metapleura bare; spines on scutellum yellow, black basally. Legs yellow, but hind coxae brownish to dark brownish; apex of hind femora, hind tibiae (excluding extreme base) blackish brown; fore tarsi, apical portions of mid and hind tarsi blackish brown; hairs on legs yellow, coxae and femora with some longer pale hairs; tarsi, hind femora and tibiae with some black hairs. Wing hyaline with dark brown stigma; discal cell 0.3 times as long as vein M_1 , 0.45 times as long as vein M_2 . Halter yellow.

Abdomen subshining brown to dark brown. Hairs on abdomen pale yellowish, but longer on venter and sides of dorsum. Male genitalia (Figs. 1-4): Gonostyli with one larger inner

lobe near apex; aedeagal complex with acutely pointed lateral lobes longer than median lobe.

Female. Body length 4.3 mm, wing length 4.8 mm. Similar to male, but differing as follows: Head with shorter yellowish pilosity; frons and vertex including ocellar tubercle shining metallic green. Eyes widely separated. Width of one eye on a mid-line from a direct frontal view 0.9 times distance between antennae and median ocellus, 1.4 times width of frons just above antennae and equal to width of face at lowest point from a direct frontal view; width of frons just above antennae 3.5 times as wide as ocellar triangle, 1.1 times width of face at narrowest point and 0.8 times width of frons at median ocellus. Antenna brownish to dark brownish, but flagellum somewhat darker. Antenna 1.5 times as long as distance between antennae and median ocellus. Palpus brownish yellow to brown. Thorax shorter yellowish pilose. Legs (including hind coxae) yellow, but fore tarsi, tip of hind femora, hind tibiae excluding base, apical portion of mid tarsi, hind tarsomeres 3–5, and apices of hind tarsomeres 1–2 brown to dark brown as in ♂. Abdominal sternite 1 and sides of dorsum with longer pile which is shorter than in ♂.

Holotype ♂, paratypes 1♂, 1♀, CHINA, Emeishan Mountain (630–2,070 m), Sichuan, 14–18. ix. 1978, Fasheng LI.

Distribution. China (Sichuan).

Remarks. *A. acutula* is similar to *diadema* LINDNER, 1936 [= *Actina japonica* (JAMES, 1941)] from Siberia and Japan, but differs from the latter in the following points: Male antenna predominantly brownish yellow (not dark brown); aedeagal complex with lateral lobes distinctly longer than median lobe.

A. acutula (♀) may be separated from *amoena* (ENDERLEIN, 1921, described from 3♀♀ from Taiwan) by having the antenna dark brownish and the scape about 3 times as long as wide. In *amoena* (♀) (after ENDERLEIN, 1921), “Fühler rostgelb, 1. Glied etwas dunkler und ca. 4 mal so lang wie breit”.

Actina amoena (ENDERLEIN)

Hoplacantha amoena ENDERLEIN, 1921, Mitt. zool. Mus. Berlin 10: 202–203. Type-locality: “Toyen-mongai”, Taiwan.

No specimens were available for study. In the original description of *amoena* (♀), “Beine mit den coxen lebhaft ockergelb”. Frey (1960: 74) recorded *amoena* (♂, ♀) from Burma and wrote, “Alle Hüften schwarz. Fühler schwarz, kurz. Kopf im Profil höher als lang” (♂) and “alle Hüften gelb Fühler kurz, etwa von Kopfänge, braun bis rostgelblich” (♀).

Length (♀): Body 5–5.5 mm, wing 4.5–5 mm (after ENDERLEIN, 1921).

Distribution. Taiwan, Burma.

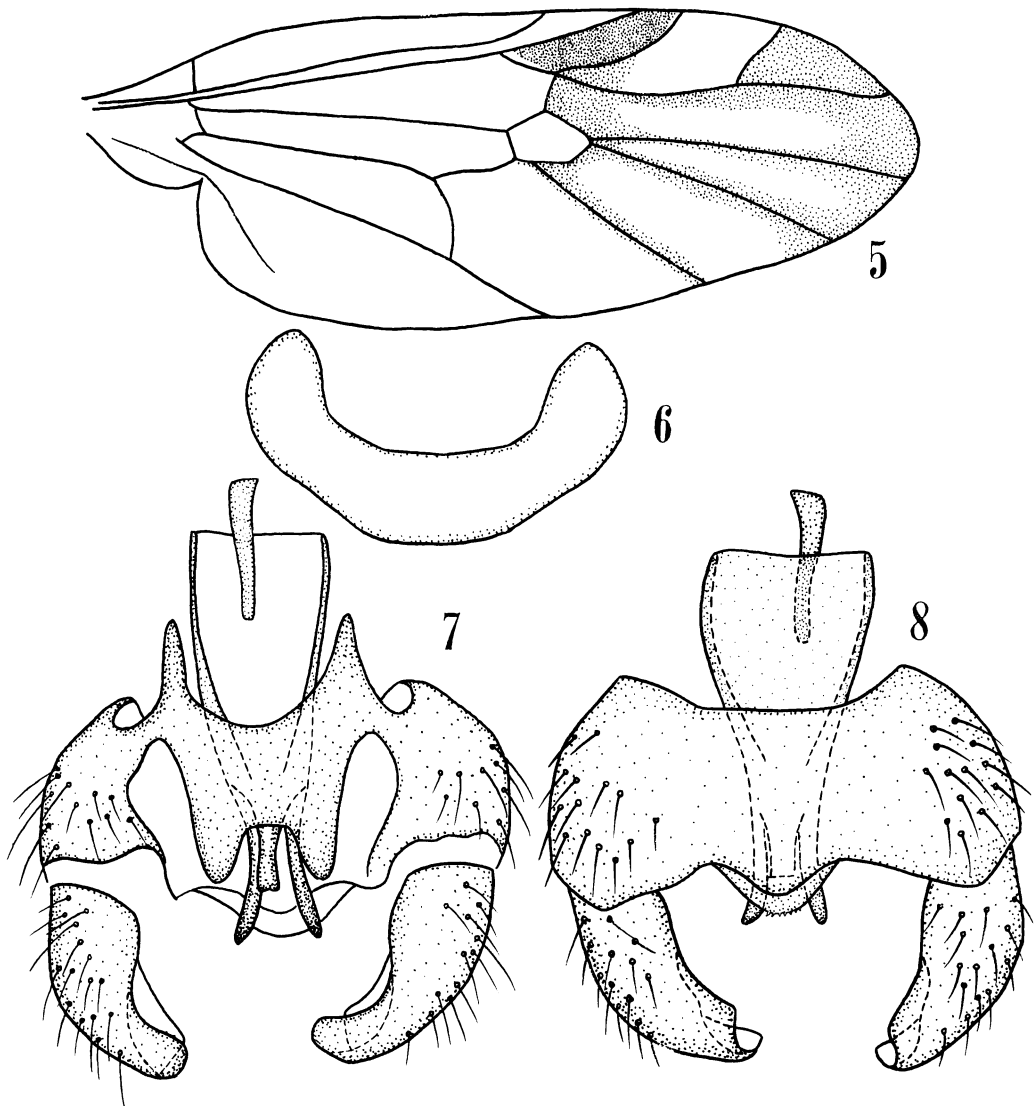
Actina flavicornis (JAMES)

Hoplacantha flavicornis JAMES, 1939, Arb. morph. taxon. Ent. Berlin, 6: 34. Type-locality: "North Paiwan Distr., Shinsinei", Taiwan.

No specimens were available for study. The male is unknown. The female of *flavicornis* may be separated from those of *acutula*, *amoena* and *varipes* as shown in the key 3.

Length (♀): Body 6 mm (after JAMES, 1939).

Distribution. Taiwan.



Figs. 5–8. *Actina maculipennis*, sp. nov., male. 5, Wing; 6, tergite 9, dorsal view; 7, genital capsule, dorsal view; 8, genital capsule, ventral view.

***Actina maculipennis* YANG et NAGATOMI, sp. nov.**

(Figs. 5–8)

Male. Body length 6.5–6.6 mm, wing length 5.0–5.3 mm. Head black, frons and vertex more or less shining metallic purple, ocellar tubercle shining metallic green; frons just above antennae, face and cheeks, pale grey pollinose. Hairs on head yellowish, but occiput with some black hairs. Head 1.5 times higher than long; width of one eye on a mid-line from a direct frontal view 1.0–1.1 times distance between antennae and median ocellus, 6.5–7.0 times width of frons just above antennae and 8.6–9.0 times width of face at narrowest point; width of frons just above antennae 0.9–1.0 times as wide as ocellar triangle, 1.3–1.5 times width of face at narrowest point and 0.3 times width of frons at median ocellus. Antenna brownish yellow, flagellum black but brownish yellow basally; scape and pedicel black haired, flagellum white, minutely pubescent; antennal ratio $c.1:0.6:3.2$. Antenna 1.6–1.9 times as long as distance between antennae and median ocellus. Proboscis yellow and yellowish pilose; palpus black.

Thorax blackish brown, mesonotum and scutellum shining metallic green; humeri, postalar calli, posterior margin of scutellum brownish yellow; pale yellowish haired, but mesopleura excluding anterior margin and posterior portion, mid-posterior part of sternopleura, lower part of pteropleura, upper part of metapleura, and hypopleura bare; posterior margin of scutellum yellow, with yellow spines. Legs yellow, but apex of hind femora brownish, hind tibiae dark brown except for base; fore tarsomeres 2–5, and mid and hind tarsomeres 3–5 brownish; hairs on legs yellow, coxae and femora with some longer pale hairs; tarsi, hind femora and tibiae with some black and brownish hairs. Wing hyaline with dark brown stigma; tinged with brown along veins M_1 , M_2 and M_4 ; 2nd submarginal cell and bases of 1st submarginal cell and 1st posterior cell brown; discal cell 0.3 times as long as vein M_1 , 0.4 times as long as vein M_2 . Halter yellow.

Abdomen subshining dark brown. Hairs on abdomen pale yellowish, but longer on sternite 1 and sides of dorsum. Male genitalia (Figs. 6–8): Dorsal bridge broad and with a larger concavity on posterior margin; gonostyli without inner lobe, but inner margin concave apically; aedeagal complex with slender lateral lobes longer than median lobe.

Female. Unknown.

Holotype ♂, paratype 1 ♂, CHINA, Tianlin, Guangxi, 29. v. 1982, Chi-kun YANG.

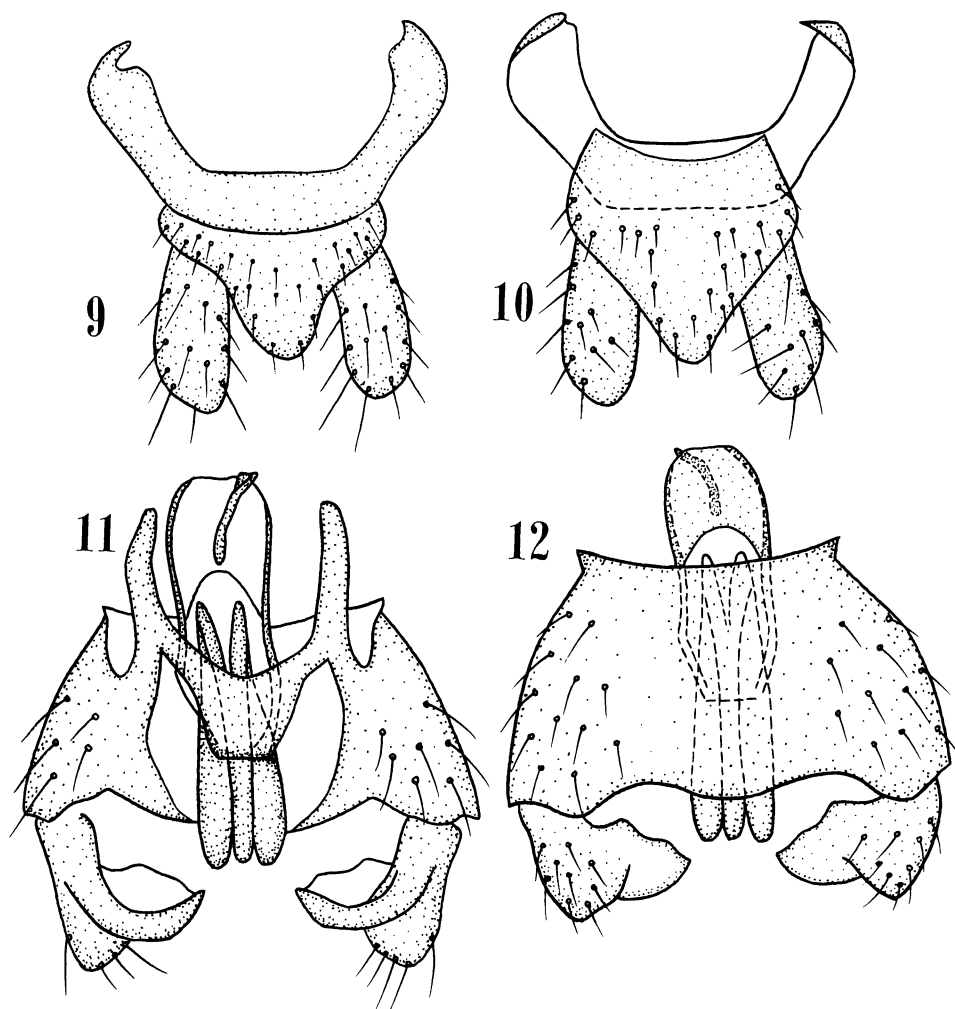
Distribution. China (Guangxi).

Remarks. This species is somewhat similar to *xizangensis*, but may be distinguished from it by the leg coloration. It can be easily identified by the peculiar male genitalia as shown in Figs. 6–8.

***Actina spatulata* YANG et NAGATOMI, sp. nov.**

(Figs. 9–12)

Male. Body length 5.5 mm, wing length 4.8 mm. Head black, frons and vertex including



Figs. 9–12. *Actina spatulata*, sp. nov., male. 9, Tergites 9–10 and cerci, dorsal view; 10, tergite 9, sternite 10 and cerci, ventral view; 11, genital capsule, dorsal view; 12, genital capsule, ventral view.

ocellar tubercle more or less shining metallic green, frons just above antennae, face and cheeks, pale grey pollinose; head long blackish haired, lower occiput and cheeks yellowish pilose, eyes with short pale brownish pilosity. Head 1.4 times higher than long; width of one eye on a mid-line from a direct frontal view 1.1 times distance between antennae and median ocellus, 3.5 times width of frons just about antennae and 4.2 times width of face at narrowest point; width of frons just above antennae 1.5 times as wide as ocellar triangle, 1.2 times width of face at narrowest point and 0.5 times width of frons at median ocellus. Antenna (flagellum missing) black, black haired; antennal ratio *c.* 1:0.5:?. Proboscis yellowish, yellowish pilose; palpus brown.

Thorax blackish brown, mesonotum, scutellum and pleura (except posterior part) shining metallic green, humeri and postalar calli brownish yellow; pale yellowish pilose, but mid-posterior part of sternopleura, pteropleura excluding antero-upper portion, hypopleura and

upper part of metapleura bare; spines on scutellum yellow, black basally. Legs (mid tibiae and tarsi missing) yellow, but coxae and trochanters blackish; apical half of fore tibiae possibly brownish yellow, fore tarsi brown; apex of hind femora, hind tibiae excluding base, and tarsomeres 3–5 (as well as apices of tarsomeres 1–2) brown; hairs on legs yellow, coxae and femora with some longer pale hairs; tarsi, hind femora and tibiae with some black hairs. Wing hyaline with dark brown stigma; discal cell 0.4 times as long as vein M_1 , 0.48 times as long as vein M_2 . Halter yellow.

Abdomen dark brown, tinged with shining metallic green. Hairs on abdomen pale yellowish, but longer on sternites 1–4 and sides of dorsum. Male genitalia (Figs. 9–12): Gonostyli with a larger inner lobe near apex; aedeagal complex with rather broad lateral lobes nearly as long as median lobe.

Holotype ♂, CHINA, Nyingchi (3,050 m), Xizang, 2. v. 1978, Fasheng LI.

Female. Unknown.

Distribution. China (Xizang).

Remarks. This species is similar to *diadema* (= *japonica*) (from Siberia and Japan) and *acutula*, but may be distinguished from them by having the coxae dark brownish to blackish. It differs from *diadema* by having the gonostyli with a larger inner lobe and from *acutula* by having the lateral lobe (in aedeagal complex) nearly as long as median lobe.

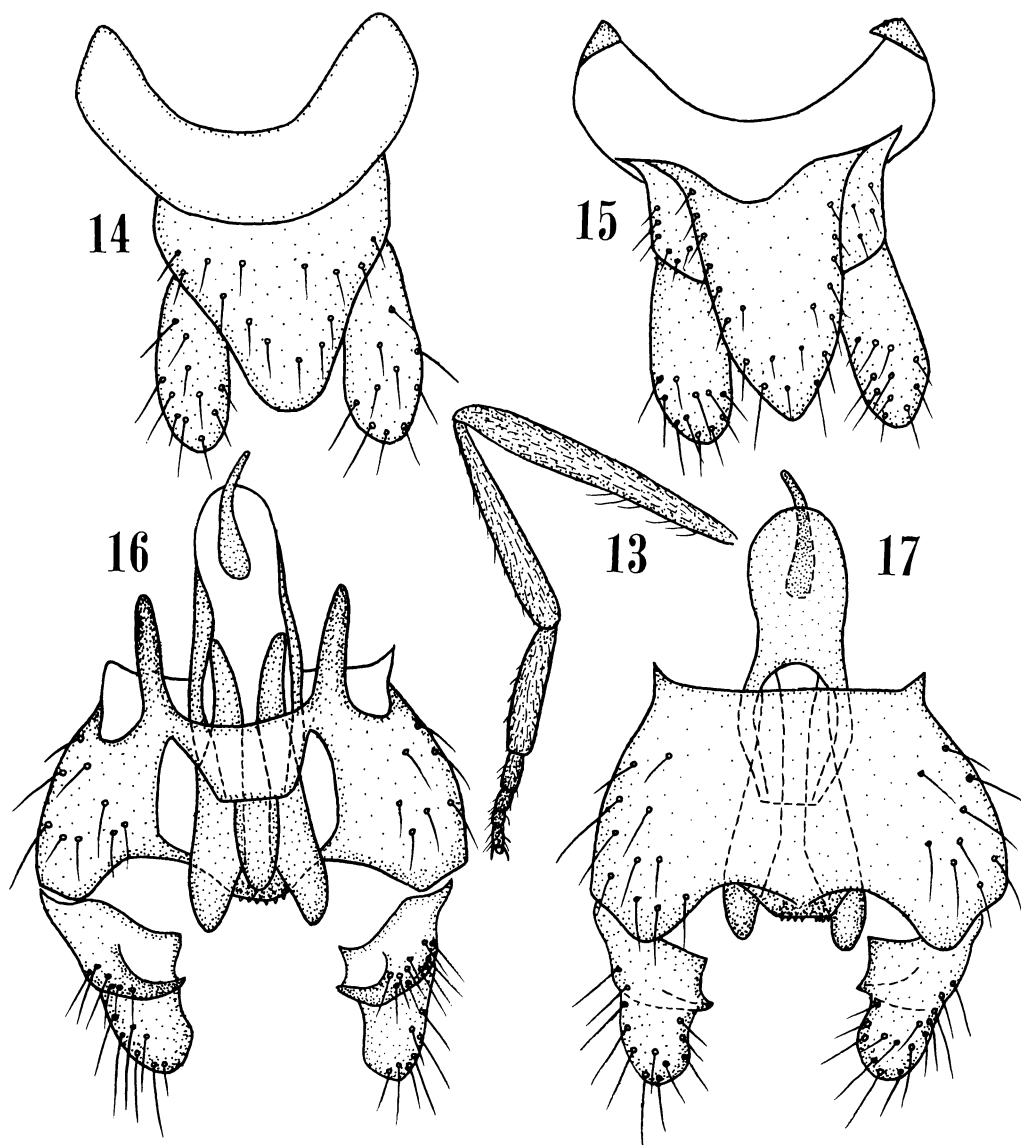
Actina varipes LINDNER

(Figs. 13–17)

Actina varipes LINDNER, 1940, Deut. ent. Z. 1939: 21. Type-locality: "Cheu-men", Gansu.

Male. Body length 5.0–5.4 mm; wing length 4.0–4.2 mm. Head black, frons, vertex, and median occipital region more or less shining metallic purple, ocellar triangle shining metallic green; frons just above antennae, face and cheeks pale grey pollinose. Head with long black hairs; eyes with brownish pile which is shorter than on frons and face but longer and denser than in other Chinese species of the genus. Head 1.4 times higher than long; width of one eye on a mid-line from a direct frontal view 1.1–1.5 times distance between antennae and median ocellus, 4.8–5.5 times width of face at narrowest point and 4.8–5.5 times width of frons just above antennae; width of frons just above antennae 1.0–1.2 times as wide as ocellar triangle, 1.0 times width of face at narrowest point and 0.4 times width of frons at median ocellus. Antenna black; scape and pedicel black haired, flagellum with white minute pubescence; antennal ratio *c.* 1:0.4:2. Antenna 1.2–1.3 times as long as distance between antennae and median ocellus. Proboscis yellow and yellowish pilose; palpus black. Data based on 3 individuals.

Thorax black, shining metallic green; spines on scutellum brownish yellow, and black basally; hairs pale yellowish, but mesonotum and scutellum with some long erect black hairs; pteropleura (except antero-upper part), hypopleura, and upper part of metapleura bare. Legs blackish brown, but knees of femora brownish yellow; tibiae brownish yellow, some-



Figs. 13–17. *Actina varipes* LINDNER, male. 13, Hind leg, posterior view; 14, tergites 9–10 and cerci, dorsal view; 15, tergite 9, sternite 10 and cerci, ventral view; 16, genital capsule, dorsal view; 17, genital capsule, ventral view.

times brown with brownish yellow base; mid tarsomere 1 and hind tarsomeres 1–2 brownish yellow; hind tarsomere 1 more swollen than in other Chinese species of the genus, 0.2 times as wide as long, 0.8 times width of tibia; hairs on legs pale yellowish, tibiae with several long pale yellowish hairs, tarsi with some black hairs. Wing nearly hyaline with dark brown stigma; discal cell 0.4 times as long as vein M_1 and 0.55 times as long as vein M_2 . Halter yellow.

Abdomen black, tinged with shining metallic green. Hairs on abdomen pale yellowish, but long on sides of dorsum. Male genitalia (Figs. 14–17): Gonostyli with a larger inner

lobe near base; aedeagal complex with broader lateral lobes longer than median lobe.

Female: Body length 4.8–5.0 mm, wing length 4.4–4.6 mm. Similar to male, but differing as follows: Pile on head (except appendages) and eyes shorter than in ♂ and pale yellowish. Eyes widely separated. Width of one eye on a mid-line from a direct frontal view 0.8–0.9 times distance between antennae and median ocellus, 1.1–1.2 times width of frons just above antennae and 1.0–1.1 times width of face at lowest point from a direct frontal view; width of frons just above antennae 2.7–2.8 times as wide as ocellar triangle, 0.9–1.0 times width of face at lowest point from a direct frontal view and 0.9–1.0 times width of frons at median ocellus. Antenna yellow, but apical portion of flagellum brown to dark brown. Antenna 1.8 times as long as distance between antennae and median ocellus. Palpus yellow. Pile on thorax shorter than in ♂; mesonotum and scutellum without long erect pile. Legs yellow, but fore tarsi brown, mid tarsomeres 2–5, hind tarsomeres 3–5, apices of hind femora and tibiae brown. Data based on 3 individuals.

Specimens examined. 5 ♂♂, 3 ♀♀, Qinglongqiao, Beijing, 6. v. 1986, Ying WANG and Xiangxian WANG; 1 ♂, 1 ♀, Jinshan, Beijing, 3. vi. 1986, Ying WANG.

Distribution. China (Beijing, Gansu).

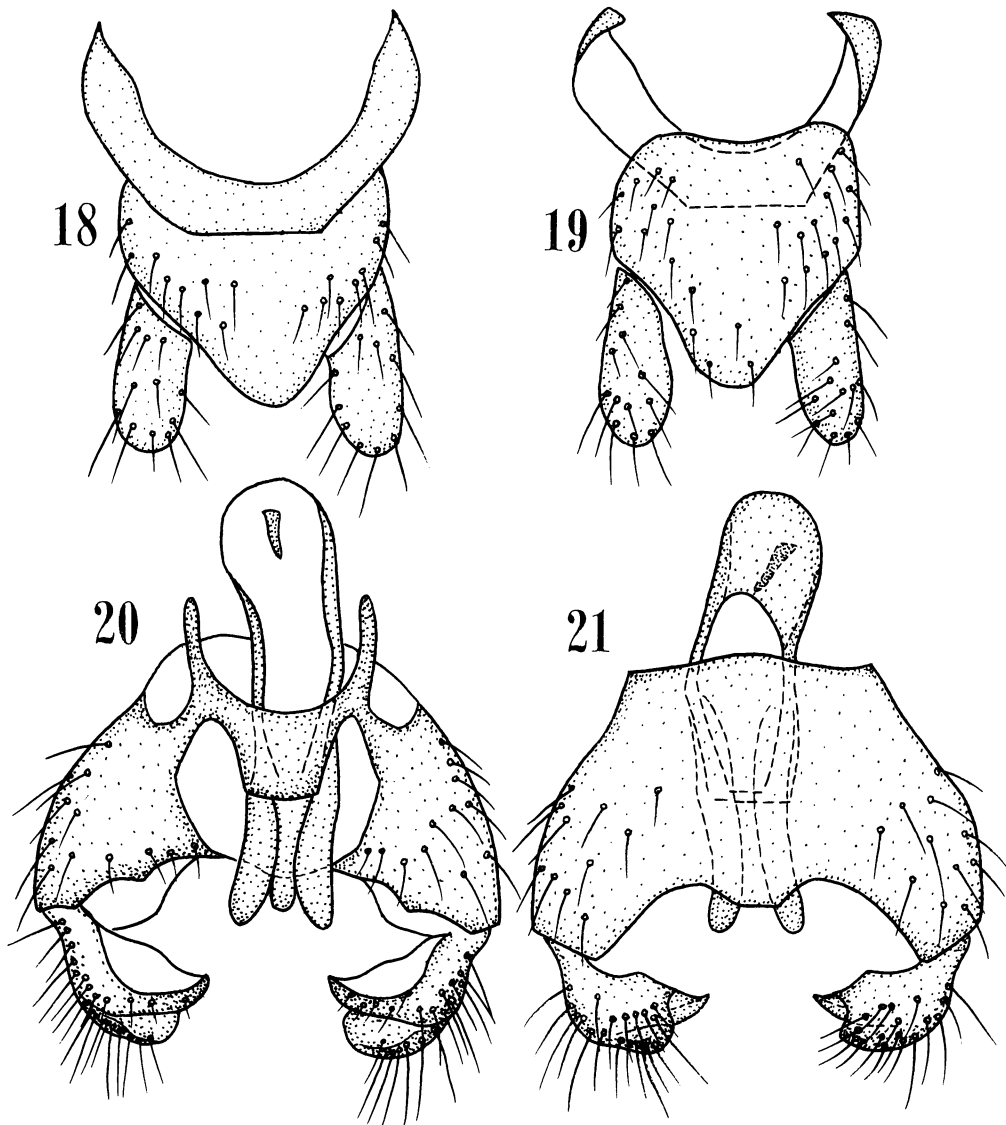
Remarks. Among the Chinese species, *varipes* (♂) is characterized as follows: Wing hyaline (except for stigma) and without markings; legs brown to dark brown except for bases of tibiae, and hind tarsomeres 1–2 (which may be yellow); hind tarsomere 1 more swollen than in other Chinese species of the genus; gonostyli with inner lobe near base; aedeagal complex with wide lateral lobe distinctly longer than median lobe.

***Actina xizangensis* YANG et NAGATOMI, sp. nov.**

(Figs. 18–21)

Male. Body length 6.0–6.3 mm, wing length 5.0–5.1 mm. Head black, frons and vertex more or less shining metallic purple, ocellar tubercle shining metallic green; frons just above antennae, face and cheeks pale grey pollinose; long black haired, cheeks with yellowish pilosity, eyes with pale brownish pilosity. Head 1.6 times higher than long; width of one eye on a mid-line from a direct frontal view 0.9–1.0 times distance between antennae and median ocellus, 2.5–2.6 times width of frons just above antennae and 2.8–3.0 times width of face at narrowest point; width of frons just above antennae 2.0 times as wide as ocellar triangle, 1.1 times width of face at narrowest point and 0.5–0.7 times width of frons at median ocellus. Antenna brownish yellow, flagellum either brownish yellow (except last flagellomere) or dark brown (except 1 or 2 basal flagellomeres); scape and pedicel with black hairs which are longer than in other Chinese species of the genus, flagellum with minute white pubescence; antennal ratio *c.* 1:0.5:2.2. Antenna 2.0–2.1 times as long as distance between antennae and median ocellus. Proboscis yellow, pale yellowish pilose; palpus brownish yellow.

Thorax blackish brown, mesonotum and scutellum shining metallic purple with metallic green tinge, humeri and postalar calli often brownish; pale yellowish haired, but mesonotum



Figs. 18–21. *Actina xizangensis*, sp. nov., male. 18, Tergites 9–10 and cerci, dorsal view; 19, tergite 9, sternite 10 and cerci, ventral view; 20, genital capsule, dorsal view; 21, genital capsule, ventral view.

intermixed with long erect hairs which may be black; pteropleura (except antero-upper part), postero-lower part of sternopleura, hypopleura and upper part of metapleura bare; spines on scutellum yellow, and black basally. Legs dark brown to black; apical portion of femora, and hind tarsomeres 1–2 yellow; fore and mid tibiae and mid tarsomere 1 brown; hairs on legs yellowish, femora with some long pale yellowish hairs; tarsi, mid tibiae, hind femora and tibiae with some brownish or black hairs. Wing hyaline with stigma dark brown; veins $R_4 + R_5$, M_1 , M_2 , and M_4 with brownish borders; 2nd submarginal cell and bases of 1st submarginal cell and 1st posterior cell brownish; discal cell 0.4 times as long as vein M_1 and 0.5 times as long as vein M_2 , bases of veins M_1 and M_2 connected with each other. Halter

pale yellow.

Abdomen brown to dark brown, tinged with shining metallic purple. Hairs on abdomen pale yellowish, but long on sternites 1–4 and sides of dorsum. Male genitalia (Figs. 18–21): Gonostyli with a larger inner lobe near apex; aedeagal complex with broader lateral lobes slightly longer than median lobe.

Female. Unknown.

Holotype ♂, paratypes 2 ♂♂, CHINA, Bomi (2,700 m), 7–8. vii. 1978, Fasheng LI.

Distribution. China (Xizang).

Remarks. *A. xizangensis* appears to be very similar to *apicalis* (FREY, 1960) from Burma (Kambaiti, 2,000 m) in the wing markings and the leg coloration. In *xizangensis* (♂), the antennae are longer than length (not height) of head. However, in *apicalis*, “Fühler kürzer als die Kopflänge” (after FREY, 1960).

Among the Chinese species of the genus, *xizangensis* may be easily separated from *maculipennis* in the leg coloration and the structure of the male genitalia.

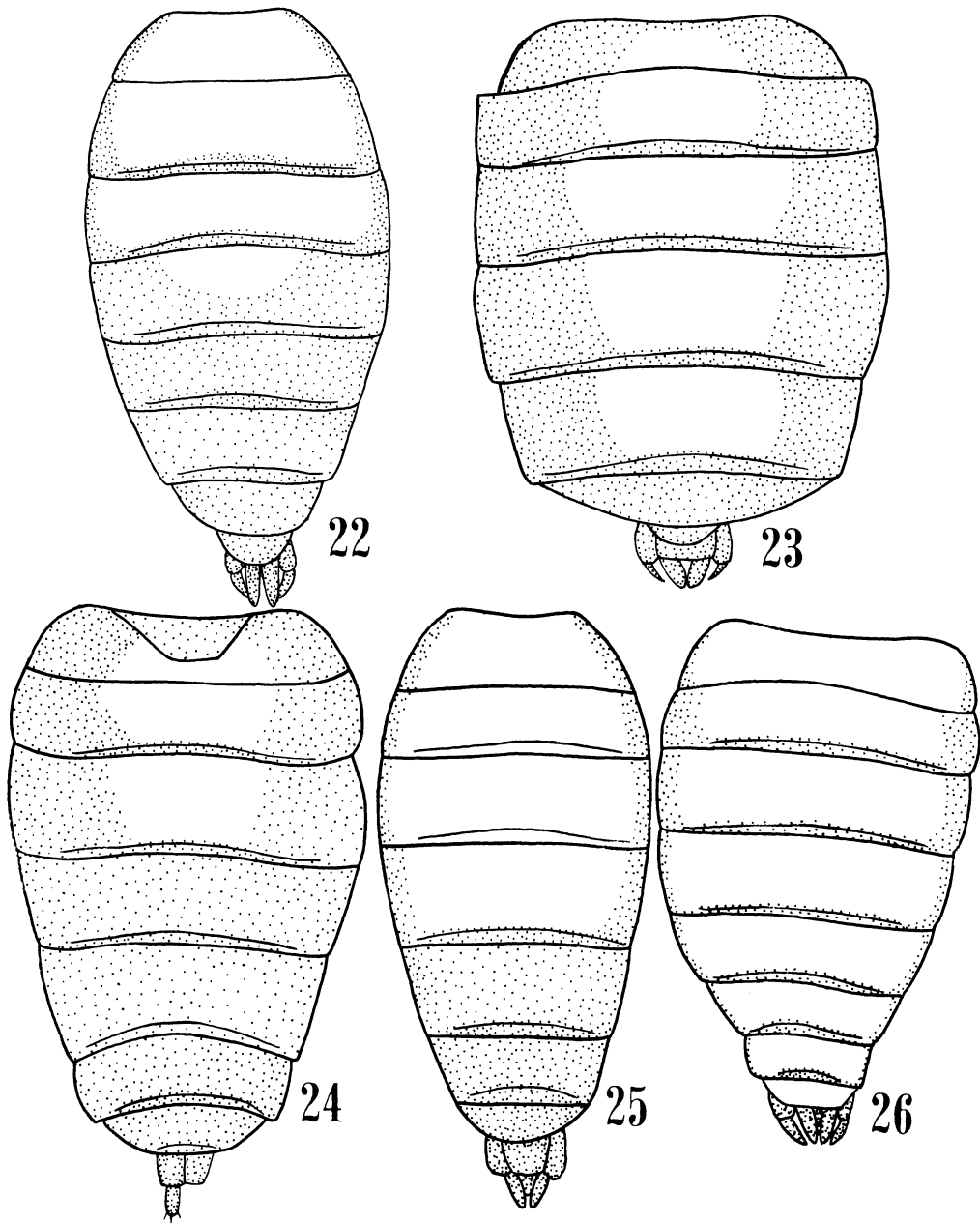
Allognosta OSTEN-SACKEN

Allognosta OSTEN-SACKEN, 1883, Berl. ent. Z., 27: 297. Type-species: *Beris fuscitarsis* SAY, 1823 from N. America.

Diagnosis. Head and thorax brownish black to black, without metallic reflections; abdomen widely depressed, tergites 2–6 with subapical grooves. Eyes nearly bare to densely haired; males holoptic and females dichoptic. Antennal scape and pedicel subequal in length; flagellum distinctly longer than scape + pedicel, with flagellomere 1 abruptly widened and as wide as or wider than pedicel. Palpus well developed, two-segmented. Scutellum without spines. Mid tibiae with one apical spur. Wing with vein M_3 absent.

Distribution. Palaearctic region (9 species), Oriental region (25 species, of which 3 species extend to the Palaearctic region), Nearctic region (3 species), Neotropical region (1 species), Afrotropical region (3 species).

The genus *Allognosta* contained 35 known species. Nine species from China and Taiwan are treated here. Among them 3 species seem to be new to science and 1 species (*Allognosta maculipleura* FREY 1960) is recorded from China for the first time.



Figs. 22–26. *Allognosta* species, abdomen. 22, *A. basiflava*, sp. nov., male; 23, *A. flavofemoralis* PLESKE, male; 24, *A. maculipleura* FREY, female; 25, *A. orientalis*, sp. nov., male; 26, *A. sichuanensis*, sp. nov., male.

Key (4) to the species of *Allognosta* from China based on males

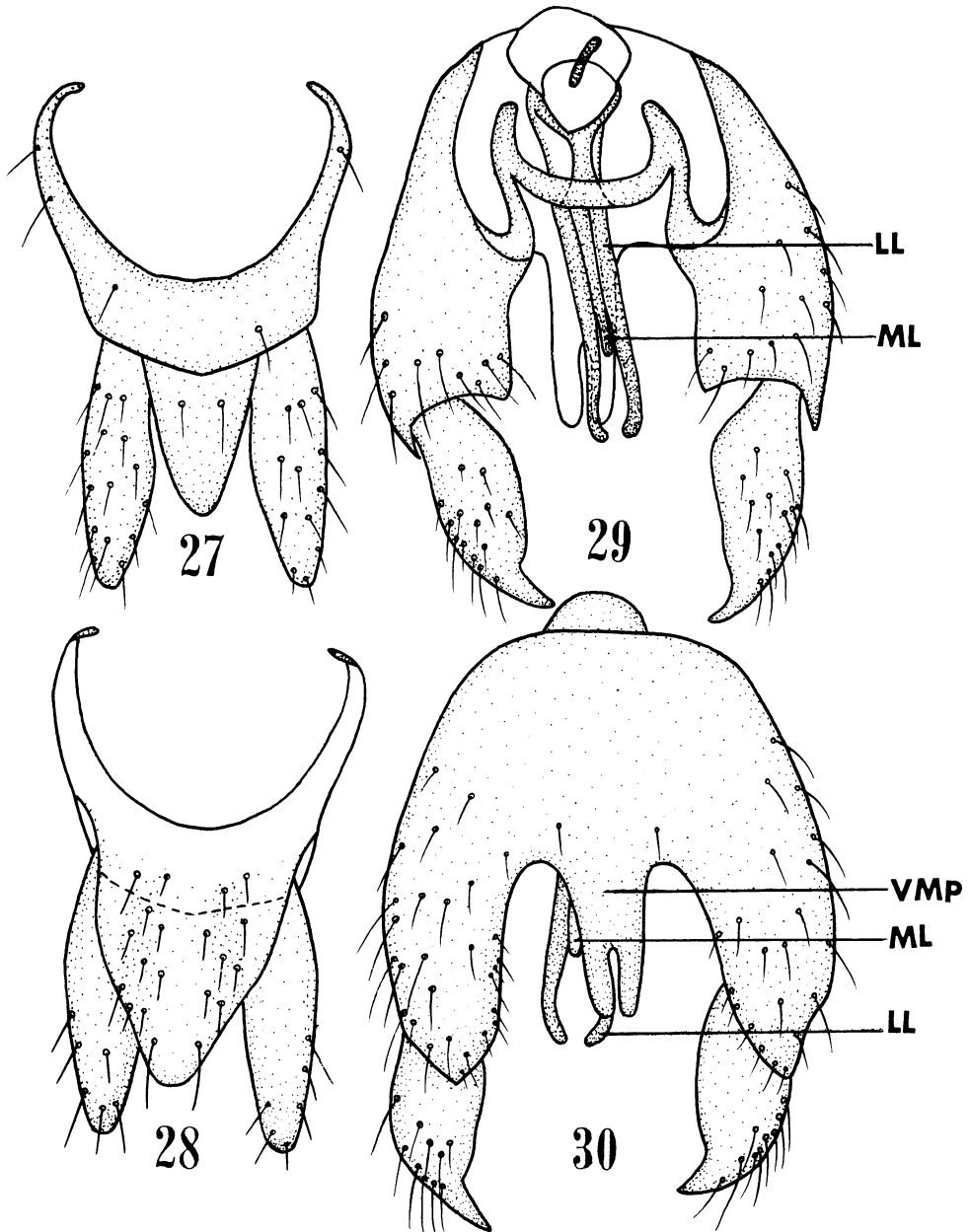
- 1. Eyes bare or sparsely short haired 2
- Eyes densely long haired; abdomen brown to dark brown with large median yellow markings; femora yellow; mesonotum and scutellum with long, erect,

- pale hairs. Southern China *flavofemorialis*
- 2(1). Abdomen largely yellow or some tergites with yellow markings..... 3
 - Abdomen wholly brown to black; femora (except base and apex) dark brown to black; mesonotum and scutellum pale recumbent shorter pilose. Southern China; Europe, Siberia, Japan..... *vagans*
- 3(2). Pleura wholly yellow or partly dark 4
 - Pleura wholly dark brown to black (sometimes excepting brownish yellow spot below wing base) 7
- 4(3). Pleura partly dark 5
 - Pleura wholly yellow 6
- 5(4). Abdominal tergites 1-4 with larger yellow markings; hind tibiae wholly brown to dark brown; basal 1/2 of wing partly tinged with brownish; upper facets conspicuously larger than lower ones. Southern China *orientalis*
 - Yellow markings of abdominal dorsum confined to tergites 2-3 (or 1-3); hind tibiae yellow at base; basal 1/2 of wing hyaline; (after FREY, 1960). Northern China, Burma *maculipleura*
- 6(4). Abdomen brown to dark brown, but middle of tergites 1-3 somewhat yellowish; wing somewhat dark brown (stigma darker), but basal 1/4 whitish; halter dark brown, stem somewhat paler; "Beine mit den Coxen hell rostgelb; schwarzbraun ist: an den Vorderbeinen Schienen und die nur beim ♂ verbreiterten Tarsen (beim ♀ dünn und schlank); an der Mittelbeinen die Schiene ohne das Basaldrittel und die 4 letzten Tarsenglieder; an der Hinterbeinen die Schiene und die 2 letzten Tarsenglieder;" (after ENDERLEIN, 1921). Taiwan..... *fuscipennis*
 - Abdomen largely yellow; wing hyaline (or with light brown tinge) and stigma light brown; halter yellow; legs yellow, but tibiae (except base) and tarsi brown to dark brown; upper facets conspicuously larger than lower ones. Southern China..... *sichuanensis*
- 7(3). Halter yellow; at least palpal segment 2 yellow 8
 - Halter dark brown, but stem yellow; palpus black; coxae brown, but mid coxae paler; femora, basal 1/2 of tibiae yellow, and tarsi and apical 1/2 of tibiae dark brown; wing pale brownish, stigma darker (after ENDERLEIN, 1921). Taiwan..... *maxima*
- 8(7). Legs including coxae [mid leg missing] yellow with following dark brown parts: fore tibiae (except base), fore tarsi, apical 1/2 of hind tibiae, and hind tarsomeres 4-5; wing yellowish, apical 1/2 pale brown (stigma etc., apparently not darker); (after ENDERLEIN, 1921). Taiwan *partita*
 - Mid and hind tarsomeres 2-5 including apex of tarsomere 1 brown to dark brown [fore tarsi missing]; wing light brownish but basal 1/2 of wing paler; stigma, subcostal cell above stigma, apex of costal cell, and 2nd submarginal cell darker. Southern China *basiflava*

Allognosta basiflava YANG et NAGATOMI, sp. nov.

(Figs. 22, 27-30)

Male. Body length 5.0 mm, wing length 5.0 mm. Head black, with pale grey pollen which is absent on narrow median area of occiput. Hairs on head pale, longer on ocellar



Figs. 27-30. *Allognosta basiflava*, sp. nov. male. 27, Tergites 9-10 and cerci, dorsal view; 28, tergite 9, sternite 10 and cerci, ventral view; 29, genital capsule, dorsal view; 30, genital capsule, ventral view.

tubercle, lower occiput and cheeks; hairs on vertex may be black; pile on eyes pale and sparse. Head 1.8 times higher than long; contiguous portion of eyes 6.7 times as long as ocellar triangle; width of one eye on a mid-line from a direct frontal view 0.7 times distance between antennae and median ocellus, 1.4 times width of frons just above antennae and 0.9 times width of face at lowest point from a direct frontal view; width of frons just above antennae 5.0 times as wide as ocellar triangle and 0.5 times distance between antennae and median ocellus; distance between ventral base of proboscis and antennae 0.5 times that between antennae and median ocellus. Antenna [flagellum missing] yellow, black haired; antennal ratio 1:1.1:?. [Proboscis missing]; palpus with two segments subequal in length, first segment brownish yellow to brown, second yellow.

Thorax blackish, but humeri and postalar calli brownish yellow; hairs on thorax pale; pleura with pale grey pollen which is absent on sternopleura. Legs [fore tarsi missing] yellow, but tibiae brown to dark brown with yellow base; mid and hind tarsi brown to dark brown with tarsomere 1 (except apex) brownish yellow; legs with yellow and black hairs. Wing membrane tinged with light brownish, but basal half paler; stigma brown; subcostal cell above stigma, apex of costal cell, and 2nd submarginal cell brownish. Halter yellow.

Abdomen (Fig. 22) brownish, but tergites 1–4 (except posterior margins of tergites 2–4 and sides) yellow; sternites 1–4 yellow, but sternite 4 with lateral and posterior areas darker; hairs on abdomen chiefly pale. Male genitalia (Figs. 27–30): Gonocoxites rather long with ventral apex acute; gonostyli simple with acute tip; ventral median process of fused gonocoxites long, with a deep and thin median concavity; aedeagal complex with three long lobes, lateral lobes much longer than median lobe.

Female. Unknown.

Holotype ♂, CHINA, Emeishan Mountain (630 m), Sichuan, 14. ix. 1978, Fasheng LI.

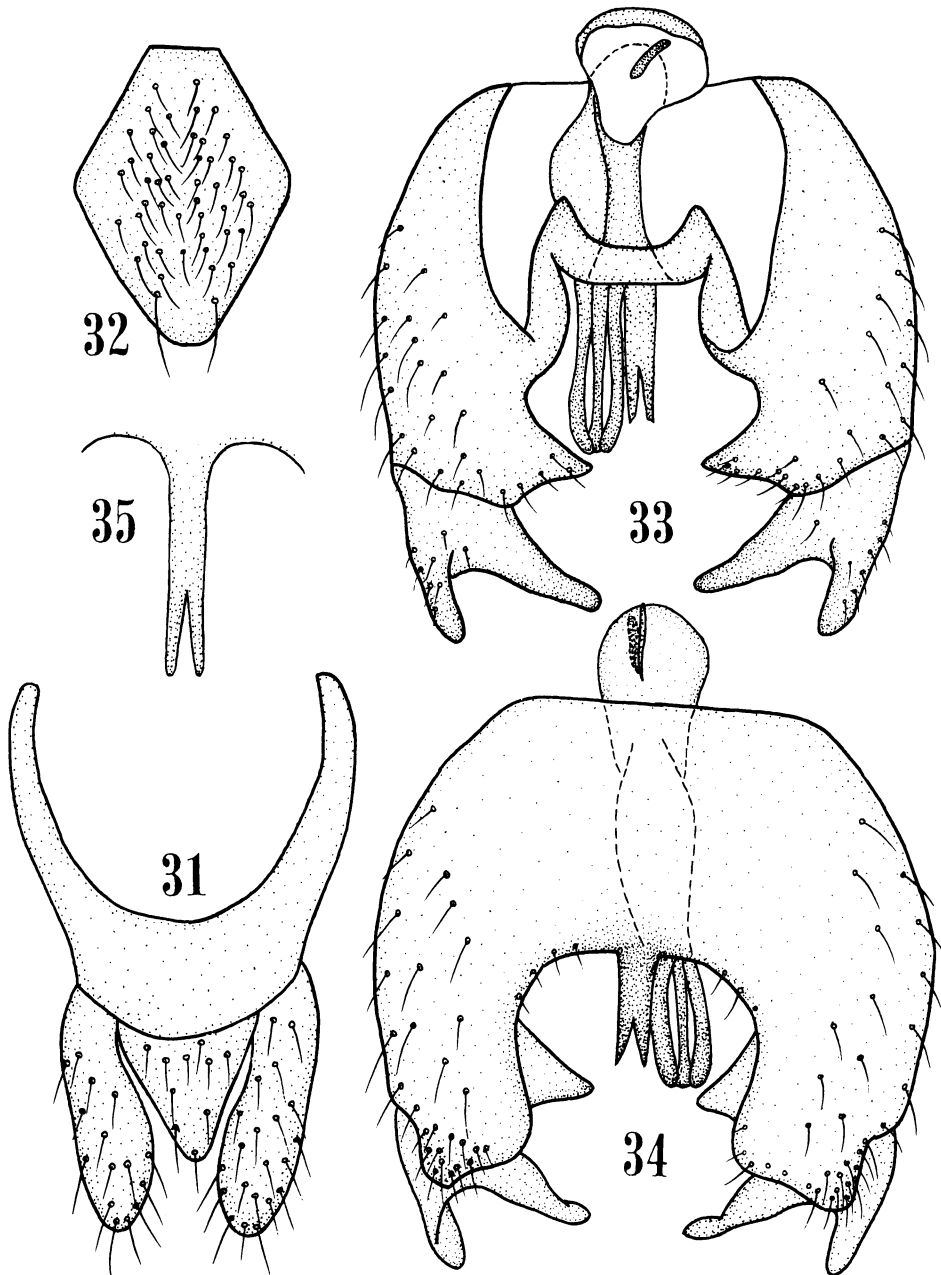
Distribution. China (Sichuan).

Remarks. *A. basiflava* (♂) is similar to *japonica* FREY, 1960 (♂) from Japan, but differs from it in the following points: Halter wholly yellow; 2nd submarginal cell darker than 1st submarginal cell or concolorous with stigma; gonocoxites without large apical inner process; ventral median process of fused gonocoxites with a deep and thin concavity. *A. basiflava* (♂) is similar to *shibuyai* NAGATOMI et TANAKA, 1969 (♂) from Japan in the structure of the male genitalia, but is easily separated from it by having the palpal segments 1–2 subequal in length, gonostylus more simple, and median lobe (in aedeagal complex) much shorter than the lateral ones.

Allognosta flavofemoralis PLESKE

(Figs. 23, 31–35)

Allognosta flavofemoralis PLESKE, 1926, Eos, 2: 417. Type-locality: "Ta-dzienlou, Sy-chouane", Sichuan.



Figs. 31–35. *Allognosta flavofemoralis* PLESKE, male. 31, Tergites 9–10 and cerci, dorsal view; 32, sternite 10, ventral view; 33, genital capsule, dorsal view; 34, genital capsule, ventral view; 35, ventral median process of fused gonocoxites, ventral view.

Male. Body length 5.3 mm, wing length 5.0 mm. Head blackish, with pale grey pollen which is absent on narrow median area of occiput. Hairs on head black, longer on ocellar tubercle and cheeks, pale on lower occiput and cheeks; pile on eyes black and dense, facets almost of the same size. Head 1.9 times higher than long; contiguous portion of eyes 4.3

times as long as ocellar triangle; width of one eye on a mid-line from a direct frontal view 0.7 times distance between antennae and median ocellus, 1.3 times width of frons just above antennae and 0.9 times width of face at lowest point from a direct frontal view; width of frons just above antennae 3.2 times as wide as ocellar triangle and 0.5 times distance between antennae and median ocellus; distance between ventral base of proboscis and antennae 0.5 times that between antennae and median ocellus. Antennal scape blackish, pedicel and flagellum yellow but apical portion and outer surface of flagellum darker; scape and pedicel black haired; flagellum with minute white pubescence, but apical portion of flagellomere 1 with black hairs and flagellomeres 7–8 with brown hairs; antennal ratio *c.* 1:1:4. Antenna 0.55 times as long as distance between antennae and median ocellus. Proboscis brownish yellow, black haired; palpus with two segments subequal in length, first segment brownish yellow to brown, second dark brown to black.

Thorax blackish, humeri and postalar calli dark brownish yellow, upper portion of pteropleura yellow; thorax with pale hairs which are erect, long and dense; pleura with pale grey pollen which is absent on lower portion of sternopleura. Legs yellow, but fore and hind coxae brownish yellow; tibiae brown to dark brown with extreme base yellow; tarsi brown to dark brown, hind tarsomeres 1–2 yellow; hairs on legs mainly pale. Wing nearly hyaline, base yellow, with brownish stigma. Halter yellow.

Abdomen (Fig. 23) brown to dark brown, but tergites 1–5 with yellow median markings; sternites 1–5 light brownish yellow, darker laterally, sternites 4–7 brownish; hairs on abdomen chiefly pale. Male genitalia (Figs. 31–35): Gonocoxites rather wide with inner projection pointed at apex, ventral posterior margin wide; gonostyli bifurcate; ventral median process of fused gonocoxites long and narrow, and with deep narrow median concavity; aedeagal complex with three thin lobes which are equal in length.

Female. Known but no material available.

Specimen examined. 1 ♂, Emeishan Mountain (630 m), Sichuan, 14. ix. 1978, Fasheng Li.

Distribution. China (Sichuan).

Remarks. *A. flavofemoralis* was originally described from China (Sichuan) based on 1 ♀. NAGATOMI & TANAKA (1969) described and illustrated one species from Japan (based on 7 ♂♂, 10 ♀♀) as *flavofemoralis*. The Chinese species (1 ♂) is very similar to the Japanese material mentioned above in the structure of the male genitalia but may be separated specifically or subspecifically from the latter by having the following characters: pile on thorax wholly pale (without longer black pile on mesonotum and scutellum); femora yellow (not black); abdominal dorsum with yellow median markings (not wholly dark brownish to black); eyes from a direct frontal view circular in shape (not somewhat rhombic); dorso-apical inner process of gonocoxites shorter than in the Japanese specimens. Unfortunately, no Chinese female specimen was available for study.

The Japanese specimens described by NAGATOMI & TANAKA (1969) as *flavofemoralis* will be named as new to science in the near future.

Allognosta fuscipennis ENDERLEIN

Allognosta fuscipennis ENDERLEIN, 1921, Mitt. zool. Mus. Berlin, 10: 183. Type-locality: "Toyenmon-gai", Taiwan.

No specimens were available for study. This species may be separated from *sichuanensis* by the characters given in couplet 6 of key 4. It may be distinguished from *japonica* from Japan by having the pleura yellow (not black) and the female fore tarsi widened (after ENDERLEIN, 1921).

Length (♂, ♀): Body 4.5 mm; wing 3.5 mm (after ENDERLEIN, 1921).

Distribution. Taiwan.

Allognosta maculipleura FREY

(Fig. 24)

Allognosta maculipleura FREY, 1960, Notul. ent., 40: 83. Type-locality: "Kambaiti", Burma.

Female. Body length 4.2 mm, wing length 4.1 mm. Head shining black, with pale grey pollen along transverse suture above antennae, along eye margins on sides of face and on cheeks and lower occiput. Hairs on head short and pale; eyes bare and widely separated. Head 1.7 times higher than long; width of one eye on a mid-line from a direct frontal view 0.4 times distance between antennae and median ocellus, 0.4 times width of face at lowest point from a direct frontal view; width of frons at transverse suture 5.5 times as wide as ocellar triangle, 1.2 times width of frons at median ocellus and 0.7 times distance between antennae and median ocellus; distance between ventral base of proboscis and antennae 0.6 times that between antennae and median ocellus. Antenna yellow, scape and pedicel black haired; flagellum with minute white pubescence, but flagellomere 8 and apical portion of flagellomere 1 with some black hairs; antennal ratio *c.* 1:1:4. Antenna 0.65 times as long as distance between antennae and median ocellus. Proboscis dark brownish yellow, brown haired; palpus with the two segments subequal in length, first segment brownish with pale hairs, second yellow with black hairs.

Thorax black, humeri and postalar calli yellow; pleura yellow, but sternopleura shining black, metapleura and postscutellum brown to dark brown, and pteropleura partly brown; hairs on thorax pale yellow, and those on mesonotum and scutellum short and recumbent; pleura with pale grey pollen which is absent on sternopleura. Legs yellow, but fore and hind tibiae (except bases), tarsi (except a little more than basal 1/2 of mid and hind tarsomere 1) brown to dark brown; hairs on legs chiefly pale. Wing membrane slightly tinged light brownish, basal half paler, stigma brownish. Halter brown to dark brown, but stem yellow.

Abdomen (Fig. 24) [right cercus missing] brown to dark brown, tergites 1–3 with yellow median markings, venter wholly yellow; hairs on abdomen chiefly pale.

Male. Known but no material available.

Specimen examined. 1 ♀, Yigong (2,300 m), Xizang, 29. vii. 1978, Fasheng Li.

Distribution. China (Xizang); Burma.

Remarks. According to FREY's key (1960: 80–82), the Chinese species (1 ♀) falls into couplet 9 and is probably identical with *maculipleura* FREY, 1960 (♂, ♀) from Burma. The original description of *maculipleura* FREY says "Fühler gelb, die äusserste Spitze braun" (on p. 83) and "f₃ vor den Spitze mit einem braunen Ring" (on p. 81). In the Chinese specimen (1 ♀), the antennae are wholly yellow and the hind femora have no darkened ring before the apex. However, the differences between the specimens from Burma and China are slight and they seem to be conspecific.

Allognosta maxima ENDERLEIN

Allognosta maxima ENDERLEIN, 1921, Mitt. zool. Mus. Berlin, 10: 183. Type-locality: "Toyenmongai", Taiwan.

No specimens were available for study. This species may be separated from *partita* and *basiflava* by the characters given in couplet 7 of key 4.

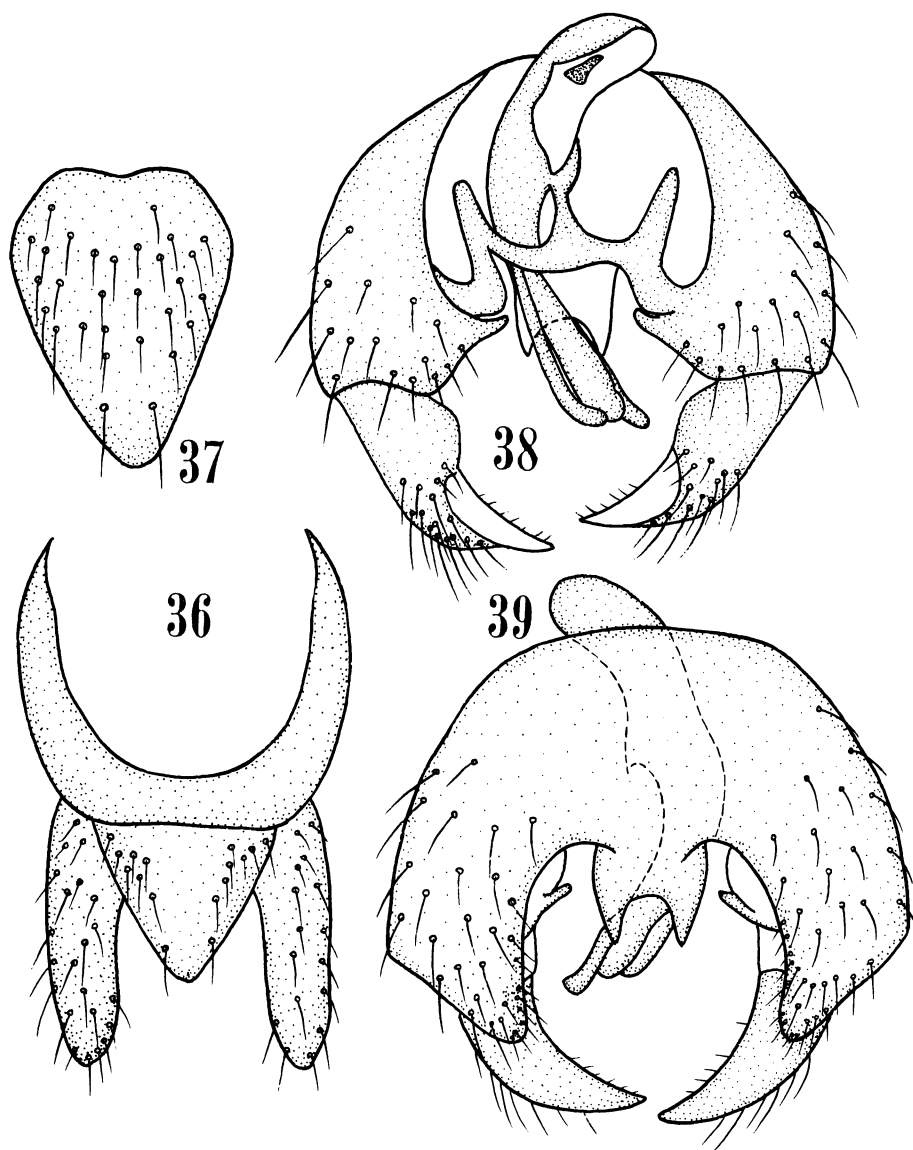
Length (♂, ♀): Body 7 mm; wing 6.5 mm; antenna 0.9 mm. (after ENDERLEIN, 1921).

Distribution. Taiwan.

Allognosta orientalis YANG et NAGATOMI, sp. nov.

(Figs. 25, 36–39)

Male. Body length 4.9–5.1 mm, wing length 4.4–4.8 mm. Head blackish, with pale grey pollen which is absent on frons except just above antennae, sides of face and narrow median area of occiput. Hairs on head pale, longer on cheeks and lower occiput, bare on frons and sides of face; eyes nearly bare, upper facets much larger than lower ones; head 1.5–1.8 times higher than long; contiguous portion of eyes 3.7–4.0 times as long as ocellar triangle; width of one eye on a mid-line from a direct frontal view 0.6–0.7 times distance between antennae and median ocellus, 1.1–1.4 times width of frons just above antennae and 0.9–1.0 times width of face at lowest point from a direct frontal view; width of frons just above antennae 3.0 times as wide as ocellar triangle and 0.5 times distance between antennae and median ocellus; distance between ventral base of proboscis and antennae 0.5 times that between antennae and median ocellus. Antenna yellow, but apical portion of flagellum dark brown; scape and pedicel blackish haired, flagellum with minute white pubescence, but flagellomeres 7–8 and apical portion of flagellomere 1 with some black hairs; antennal ratio *c.* 1:1:5.7. Antenna *c.* 0.5 times as long as distance between antennae and median ocellus. Proboscis brownish yellow, with longer brownish hairs; palpus with two segments subequal in length, first segment brownish yellow, second brown to dark brown with black hairs.



Figs. 36-39. *Allognosta orientalis*, sp. nov., male. 36, Tergites 9-10 and cerci, dorsal view; 37, sternite 10, ventral view; 38, genital capsule, dorsal view; 39, genital capsule, ventral view.

Thorax blackish, but humeri and postalar calli brownish yellow; pleura brown to dark brown, but mesopleura (except postero-ventrally) and propleura yellow; hairs on thorax pale; pleura with pale grey pollen which is absent on lower portion of sternopleura. Legs yellow, but fore tibiae except base, fore tarsi, mid tarsomeres 3-5, less than apical 1/2 of hind femora, hind tibiae and hind tarsomeres 4-5, brown to dark brown; hairs on legs chiefly pale. Wing membrane tinged with light brownish, but 1st submarginal cell (except base and apex), 2nd basal cell, anal cell and axillary cell (except apex) paler; stigma, 2nd submarginal cell and apex of 1st submarginal cell brown to dark brown; subcostal cell above stigma and apex of costal cell brownish. Halter brown to dark brown, basal portion of stem yellow.

Abdomen (Fig. 25) brown to dark brown, tergites 1–4 with larger yellow markings; sternites 1–5 yellow, but darker laterally; hairs on abdomen chiefly brown to black. Male genitalia (Figs. 36–39): Gonocoxites rather wide, with ventral apex bluntly pointed; gonostyli curved inward, with apical portion pointed; ventral median process of fused gonocoxites short, wide, and with a wide median concavity; aedeagal complex with median lobe nearly as long as lateral lobes.

Female. Unknown.

Holotype ♂, CHINA, Mengla (800 m), Yunnan, 11. iv. 1981, Chi-kun YANG. Paratype 1 ♂, CHINA, Pingxiang, Guangxi, 17. v. 1963, Chi-kun YANG.

Distribution: China (Yunnan, Guangxi).

Remarks. This species is similar to *maculipleura* FREY, 1960, from Burma and China. It may be distinguished from the latter by having abdominal tergites 1–4 with larger yellow markings, hind tibiae wholly brown to dark brown, and basal half of wing partly tinged brownish. In *maculipleura* (after FREY, 1960), the yellow abdominal markings are confined to tergites 2–3, the hind tibiae are yellow basally, and the wings are hyaline on the basal half. Among the Chinese species, *orientalis* may be separated from *fuscipennis* as shown in key 4.

Allognosta partita ENDERLEIN

Allognosta partita ENDERLEIN, 1921, Mitt. zool. Mus. Berlin, 10: 184. Type-locality: "Toyenmongai", Taiwan.

No specimens were available for study. This species may be separated from *basiflava* by the characters given in couplet 8 of key 4. The female is unknown.

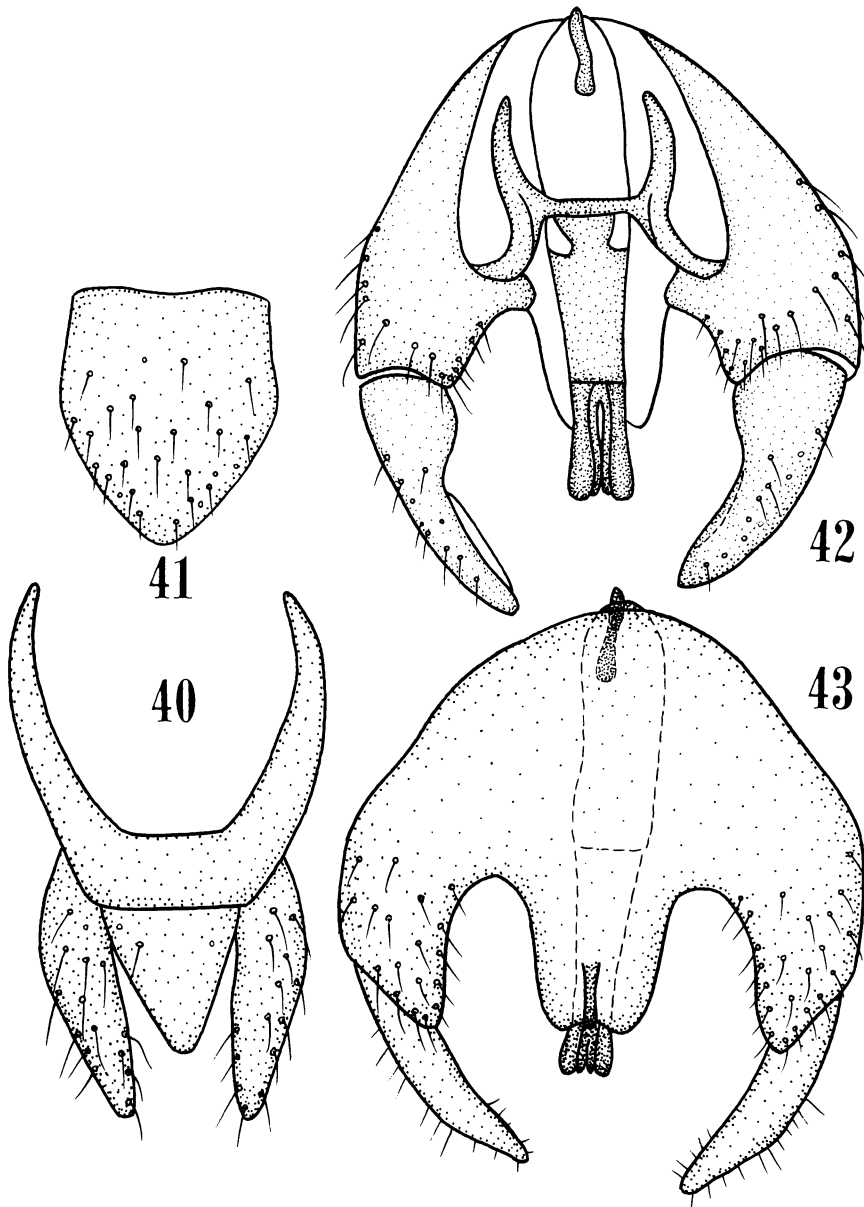
Length (♂): Body 4.8 mm; wing 4 mm (after ENDERLEIN, 1921).

Distribution. Taiwan.

Allognosta sichuanensis YANG et NAGATOMI, sp. nov.

(Figs. 26, 40–43)

Male. Body length 5.5 mm, wing length 5.3 mm. Head blackish, with pale grey pollen which is absent on narrow median area of occiput; hairs on head pale. Eyes bare, upper facets distinctly larger than lower ones. Head 1.4 times higher than long; contiguous portion of eyes 4.0 times as long as ocellar triangle; width of one eye on a mid-line from a direct frontal view 0.8 times distance between antennae and median ocellus, 1.5 times width of frons just above antennae and equal to width of face at lowest point from a direct frontal view; width of frons just above antennae 2.6 times as wide as ocellar triangle and 0.5 times distance between antennae and median ocellus; distance between ventral base of proboscis and antennae 0.7 times that between antennae and median ocellus. Antenna yellow, scape



Figs. 40–43. *Allognosta sichuanensis*, sp. nov., male. 40, Tergites 9–10 and cerci, dorsal view; 41, sternite 10, ventral view; 42, genital capsule, dorsal view; 43, genital capsule, ventral view.

and pedicel blackish haired; flagellum with minute white pubescence, but flagellomere 8 and apical portion of flagellomere 1 with blackish hairs; antennal ratio c. 1:1:4. Antenna 0.7 times as long as distance between antennae and median ocellus. [Proboscis missing]; palpus yellow with the two segments subequal in length, with pale pile which changes into black on apical portion of segment 2.

Thorax black, but humeri and postalar calli yellow; pleura wholly yellow, and pale grey pollinose; hairs on thorax pale and those on mesonotum and scutellum almost wholly

recumbent. Legs yellow, but tibiae (except base) and tarsi brown to dark brown; hairs on legs chiefly pale. Wing hyaline or with a light brown tinge, stigma light brown. Halter yellow.

Abdomen (Fig. 26) yellow, posterior and lateral margins of tergites 2–7 brown to dark brown; chiefly black haired. Male genitalia (Figs. 40–43): Gonocoxites rather short, apex bluntly pointed ventrally; gonostyli long, narrow, and gradually tapering apically; ventral median process of fused gonocoxites large and wide, with a narrow ridge; aedeagal complex with median lobe bifurcate.

Female. Unknown.

Holotype ♂, CHINA, Jiajiang, Sichuan, 21. ix. 1978, Fasheng LI.

Distribution. China (Sichuan).

Remarks. According to FREY's key (1960: 80–82), *sichuanensis* falls into couplet 6 and is similar to *flavopleuralis* FREY, 1960 (♀) from Burma. In *sichuanensis* (♂), the halter is wholly yellow, tibiae (except base) yellow, wing stigma light brown, and body length 5.5 mm. In *flavopleuralis* (♀), the halter (except yellow stem) is black, fore and hind tibiae brown to dark brown, wing stigma dark brown, and body length 3–4 mm. It should be noted that the female of *sichuanensis* and the male of *flavopleuralis* are unknown.

A. sichuanensis is characterized by the structure of the male genitalia as follows: gonostyli simple; ventral median process of fused gonocoxites with a median narrow ridge before posterior margin.

Allognosta vagans (LOEW)

Metoponia vagans LOEW, 1873, Besch. europ. Dipt., 3: 71. Type-locality: "Das nordliche Russland, Galizien".

Allognosta sapporensis MATSUMURA, 1916, Thousand Ins. Japan. Add. 2: 371. Type-locality: "Sapporo", Hokkaido.

Allognosta wagneri PLESKE, 1926, Eos. 2: 416. Type-locality: "Kransnojarsk; l'embouchure du fleuve Matour, systeme de l'Abakan", USSR.

Allognosta sinensis PLESKE, 1926, Eos. 2: 418. Type-locality: "Chodzigou, Loungan-fou, Sychouane", Sichuan.

Specimens examined. 3 ♂♂, 6 ♀♀, Hangzhou, Zhejiang, 23. vii. 1986, Naizhong CHEN; 8 ♂♂, 2 ♀♀, Tianmushan Mountain, 22. vii. 1987, Hong WU; 1 ♂, Tianmushan Mountain, Zhejiang, 28. vi. 1957, Fasheng LI; 1 ♂, 1 ♀, Liling, Hunan, 13. viii. 1986, Naizhong CHEN; 1 ♀, Chengbu, Hunan, 20. viii. 1986, Naizhong CHEN; 1 ♂, Kunming, Yunnan, 12. viii. ?; 1 ♂, Xiyuan, Beijing, 22. vii. 1983, Qin WANG; 1 ♂, Xiyuan, Beijing, 21. vii. 1976, Chi-kun YANG; 1 ♀, Xiyuan, Beijing, 6. vi. 1973, Chi-kun YANG; 1 ♀, Xiangshan, Beijing, 27. vii. 1973, Chi-kun YANG.

Distribution. China (Sichuan, Yunnan, Zhejiang, Hunan, Fujian and Beijing); Europe, Siberia, Japan.

Remarks. For diagnosis of this species, see NAGATOMI & TANAKA (1969) (who treated it as

sapporoensis) and ROZKOŠNÝ (1982). BRUNETTI (1920: 94–95) synonymized *inermis* from Burma (based on 1 ♂) with *vagans*. However, *inermis* (♂) may be separated from *vagans* (♂) by having the tarsi wholly black (after BRUNETTI, 1920). In *vagans*, mid tarsomere 1 (or 1–2) and hind tarsomeres 1–3 are yellow. The antennae are wholly black in *inermis* (after BRUNETTI, 1920), but the flagellomeres 1–2 are yellow and the pedicel is brownish yellow in *vagans*, although the antennae may vary in coloration with individual. A direct comparison of specimens is necessary to distinguish between *inermis* and *vagans*.

***Beris* LATREILLE**

Beris LATREILLE, 1802, Hist. nat. Crust. Ins., 3: 447. Type-species: *Stratiomys sexdentata* Fabricius, 1781 (= *Musca chalybata* FORSTER, 1771), by monotypy.

Hexacantha MEIGEN, 1803, Mag. Insektenk., 2: 264. Type-species: *Musca clavipes* LINNÉ, 1767.

Octacantha LIOY, 1864, Atti Ist. vento Sci., (3)9: 586. Type-species: *Beris fuscipes* MEIGEN, 1820.

Diagnosis. Head semiglobular and subshining black; eyes pilose in both sexes, males holoptic and females dichoptic; female frons nearly parallel-sided; mid-lower face swollen with a pair of pits in upper lateral part; antennal scape distinctly longer than wide, pedicel nearly as wide as long, flagellum as long as or longer than scape + pedicel; palpus vestigial or one-segmented. Thorax shining metallic green; scutellum with 4–8 spines; no tibial spurs present, hind tarsomere 1 in male usually swollen; wing with R_{2+3} arising basal to crossvein r-m, and vein M_3 absent or at most vestigial.

Distribution. Palaearctic region (22 species, of which 2 species extend to the Nearctic region), Oriental region (7 species), Nearctic region (3 species), Neotropical region (5 species), Australasian region (5 species).

Previously the genus *Beris* contained 36 described species. Two species were known from China, i.e., *Beris fuscipes* MEIGEN, 1820 (type-locality: England) and *Beris potanini* PLESKE, 1926 (type-locality: Sichuan). Here 7 species are treated. Among them 4 species are described as new to science, and 1 species (*Beris hirotsui* OUCHI, 1943) is recorded from China for the first time.

Key (5) to the Chinese species of *Beris* based on males

1. Stigma of wing yellowish and not darker than rest of membrane 2
- Stigma of wing dark brown and distinctly darker than rest of membrane 3
- 2(1). Antenna black, but basal part of flagellum brownish yellow. Northern China *gansuensis*
- Antenna brownish yellow, but apex of flagellum brown to dark brown. Northern China *basiflava*
- 3(1). Antennal flagellum reddish yellow, and blackish apically 4
- Antennal flagellum blackish 5
- 4(3). Wing hyaline with one larger brown spot below dark brown stigma (Fig. 44).

- Northern China..... *alamaculata*
 – Wing without brown spot below stigma. Southern China; Mongolia *potanini*
 5(3). Hind tibiae yellow, brown near tip; hind tarsomere 1 distinctly swollen 6
 – Hind tibiae blackish, yellow basally; hind tarsomere 1 as wide as apex of
 tibia. Southern China *emeishana*
 6(5). Antennal flagellum thickened basally, as wide as pedicel. Northern and
 Southern China, Holarctic region *fuscipes*
 – Base of antennal flagellum not thickened, narrower than pedicel. Southern
 China, Siberia, Japan *hirotsui*

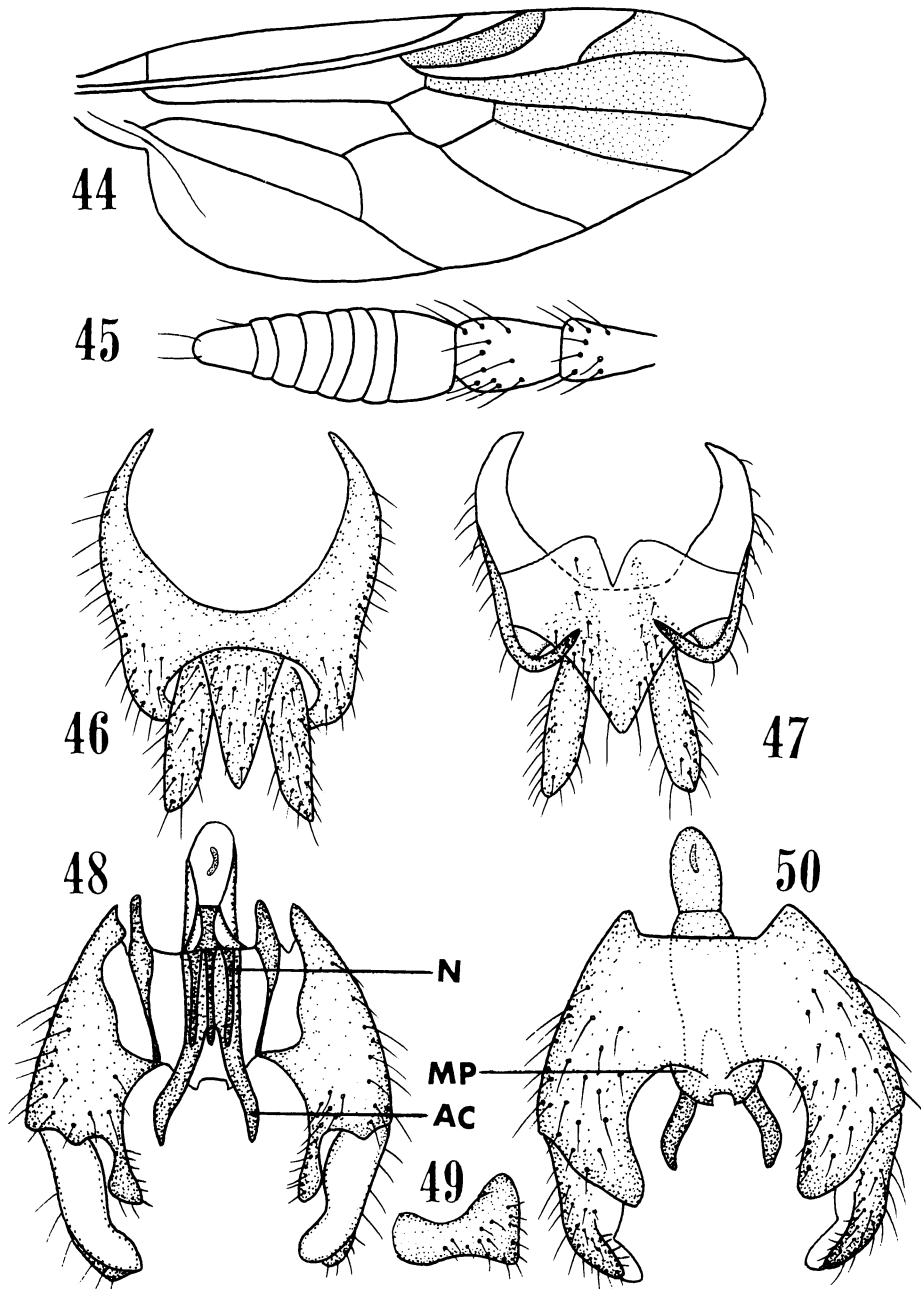
Key (6) to the Chinese species of *Beris* based on male genitalia

1. Epandrium without surstyli; aedeagal complex without dorsal needles 2
 – Epandrium with a pair of surstyli; aedeagal complex with three dorsal
 needles 3
 2(1). Mid-posterior process of fused gonocoxites low and straight *potanini*
 – Mid-posterior process of fused gonocoxites very high with a deep concavity
 *emeishana*
 3(1). Epandrium slightly longer than wide or as wide as long, with surstyli strongly
 curved inward; aedeagal complex bifurcate, with the three dorsal needles
 shorter 4
 – Epandrium much longer than wide, with surstyli weakly curved inward; ae-
 deagal complex not bifurcate with the three dorsal needles very long *fuscipes*
 4(3). Lobes of aedeagal complex strongly curved outward at tip 5
 – Lobes of aedeagal complex weakly curved outward at tip 6
 5(4). Epandrium longer than wide; cerci slender; mid-posterior process of fused
 gonocoxites with a distinct quadrate concavity *hirotsui*
 – Epandrium as wide as long; cerci shorter than in *hirotsui* and thickened
 basally; mid-posterior process of fused gonocoxites nearly straight transverse-
 ly at apical margin *gansuensis*
 6(4). Cerci shorter; lobes of aedeagal complex widened apically *basiflava*
 – Cerci longer; lobes of aedeagal complex not widened apically *alamaculata*

***Beris alamaculata* YANG et NAGATOMI, sp. nov.**

(Figs. 44–50)

Male. Body length 7.1 mm, wing length 6.0 mm. Head subshining black, upper occiput (except cerebrale) pale grey pollinose; pale brownish pilose (pile long on ocellar tubercle, upper face and cheeks); short white pilose on lower face, and short brownish pilose on eyes. Eyes holoptic, contiguous portion 3.0 times as long as ocellar triangle. Width of one eye on a mid-line from a direct frontal view 0.8 times distance between antennae and median



Figs. 44–50. *Beris alamaculata*, sp. nov., male. 44, Wing; 45, antenna, outer view; 46, tergites 9–10 and cerci, dorsal view; 47, tergite 9, sternite 10 and cerci, ventral view; 48, genital capsule, dorsal view; 49, gonostylus, lateral view; 50, genital capsule, ventral view. AC, apical part of aedeagal complex; MP, median process of fused gonocoxites; N, needle in aedeagal complex.

ocellus, 3.1 times width of frons just above antennae and 1.5 times width of face at lowest point from a direct frontal view; width of frons just above antennae 1.8 times that at median ocellus and 0.2 times distance between antennae and median ocellus; distance between dorsal

base of proboscis and antennae 0.7 times that between antennae and median ocellus; upper face 1.2 times as long as lower face and 0.7 times as long as width of face at upper margin of lower face. Antenna (Fig. 45) reddish yellow, but flagellum black apically; scape and pedicel black haired, flagellum with minute white pubescence but tip with 2–3 brownish hairs; antennal ratio *c.* 1:1:2.4. Antenna 0.65 times as long as distance between antennae and median ocellus. Proboscis pale yellowish, and with pale yellowish pilosity.

Thorax shining metallic green, postscutellum and metapleura more or less pale grey pollinose; pale yellowish pilose; scutellum with 7 (plus 1 which is shorter) spines. Legs yellow, fore and hind coxae blackish with yellow apices; apex (except tip and ventral surface) of femora, and hind tibiae (except base) blackish; tarsomeres 1–5 (except basal half of fore and mid tarsomere 1) blackened; hind tarsomere 1 swollen, 0.2 times as wide as long, 1.3 times as long as rest of tarsus, 1.1 times as wide as apex of tibia; hairs on legs yellow, but tarsi with some black hairs. Wing hyaline with dark brown stigma, apical half with one larger brown spot below stigma (Fig. 44); discal cell 0.4 times as long as vein M_2 , vein M_2 arising from discal cell. Halter yellow.

Abdomen dark brown, pale yellowish pilose (pile long on side of abdomen). Male genitalia (Figs. 46–50): Epandrium slightly longer than wide with surstyli strongly curved inward; tergite 10 rather long and triangular; cerci more or less wide; gonocoxites rather long, gonostyli curved apically; median part of fused gonocoxites rather wide, median process with a distinct quadrate concavity; aedeagal complex bifurcate and slightly curved outward at tip, and with three short dorsal needles.

Female. Body length 6.2–6.3 mm, wing length 5.8–6.0 mm. Similar to male, but differing as follows: Head shining black, occiput just behind eyes pale grey pollinose (these may be so in male); pile on ocellar tubercle, upper face, and cheek shorter than in male. Eyes widely separated. Width of frons just above antennae 1.2 times that at median ocellus, the latter 3.5 times as wide as ocellar triangle; width of one eye on a mid-line from a direct frontal view 0.6 times distance between antennae and median ocellus, 0.9–1.0 times width of frons just above antennae and 0.8 times width of face at lowest portion from a direct frontal view; distance between proboscis and antennae 0.8–0.9 times that between antennae and median ocellus; upper face 1.1–1.2 times as long as lower face and 0.6 times as long as width of face at upper margin of lower face. Antennal ratio *c.* 1:1:3.2. Antenna 0.9 times as long as distance between antennae and median ocellus. Pile on thorax recumbent and shorter than in male. Scutellum with 6–7 spines. Wing with discal cell 0.4 times as long as vein M_2 , vein M_2 sometimes arising from base of vein M_1 . Pile on abdominal dorsum shorter than in male.

Holotype ♂, paratypes 2 ♀ ♀, CHINA, Bomi (2,700 m), Xizang, 7–8. vii. 1978, Fasheng Li.

Distribution. China (Xizang).

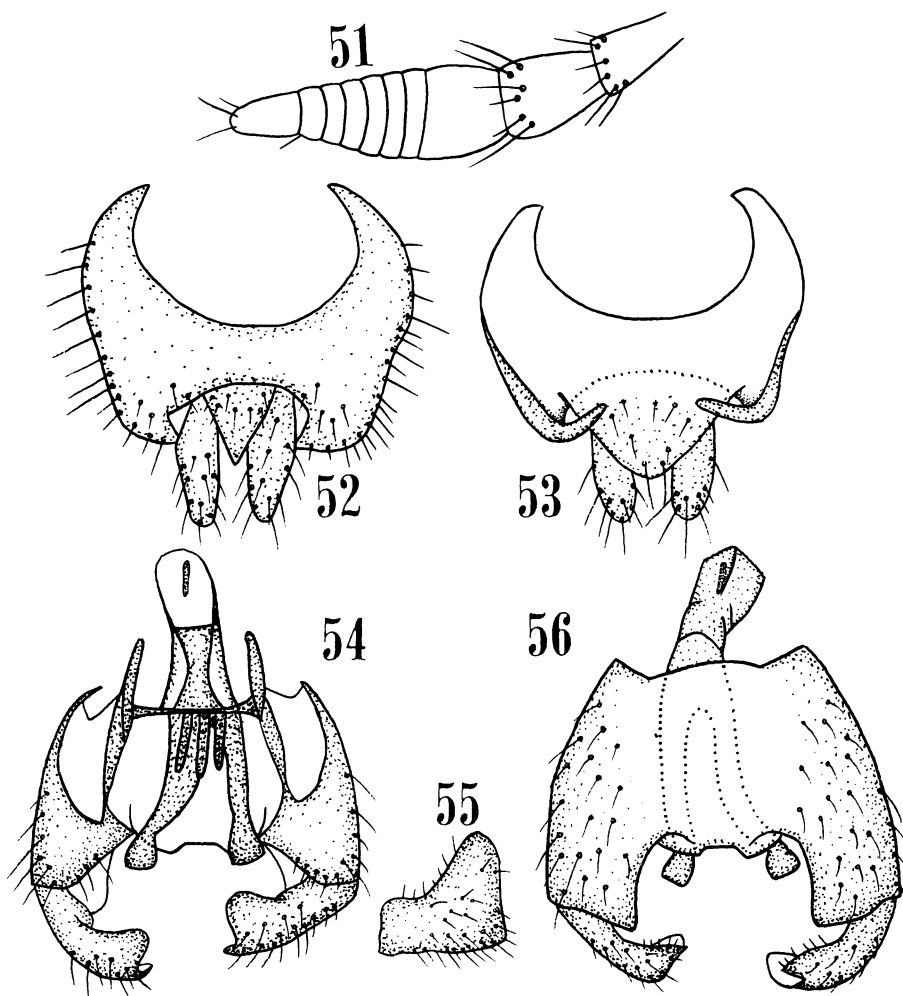
Remarks. Among the Chinese species, *alamaculata* is characterized by having the wing with one larger brown spot below the dark brown stigma (Fig. 44). The male genitalia of *alamaculata* differ markedly from those of *potanini* (see figs. 15–18 in NARTSHUK and

ROZKOŠNÝ, 1975) by having the characters shown in key 6 (couplet 1). The male genitalia of *alamaculata* are also distinguished from those of *basiflava* as shown in key 6 (couplet 6).

***Beris basiflava* YANG et NAGATOMI, sp. nov.**

(Figs. 51–56)

Male. Body length 5.2–6.0 mm, wing length 5.1–5.2 mm. Head subshining black, upper occiput (except cerebrale) pale grey pollinose; with pale yellowish pile which is longer on ocellar tubercle, upper face and cheeks; eyes with brownish pile which is shorter and sparse. Eyes holoptic, contiguous portion 2.2–2.4 times as long as ocellar triangle. Width of one eye on a mid-line from a direct frontal view 0.7–0.9 times distance between antennae and



Figs. 51–56. *Beris basiflava*, sp. nov., male. 51, Antenna, outer view; 52, tergites 9–10 and cerci, dorsal view; 53, tergite 9, sternite 10 and cerci, ventral view; 54, genital capsule, dorsal view; 55, gonostylus, lateral view; 56, genital capsule, ventral view.

median ocellus, 4.5 times width of frons just above antennae and 1.9–2.2 times width of face at lowest point from a direct frontal view; width of frons just above antennae 1.5–2.0 times that at median ocellus and 0.2–0.4 times distance between antennae and median ocellus; distance between dorsal base of proboscis and antennae 0.6–0.7 times that between antennae and median ocellus; upper face 1.1–1.2 times as long as lower face and 0.6 times as long as width of face at upper margin of lower face. Antenna (Fig. 51) brownish yellow, flagellum brownish apically; scape and pedicel black haired; flagellum with minute white pubescence, but tip with a few brownish hairs; antennal ratio c. 1:1:2.2. Antenna 0.7 times as long as distance between antennae and median ocellus. Proboscis pale yellowish, with longer pale yellowish pile.

Thorax shining metallic green, postscutellum and metapleura more or less pale grey pollinose; with longer erect and shorter recumbent pale yellowish pilosity; scutellum with 6–7 spines. Legs including coxae yellow; fore and mid tarsomeres 2–5, hind tarsomeres 3–5 dark brown, fore and mid tarsomere 1 brown at tip; hind tarsomere 1 weakly swollen, 0.2 times as wide as long, 1.4 times as long as rest of tarsus, 1.1 times as wide as apex of tibia; hairs on legs yellow, but tarsi with some black hairs. Wing hyaline and tinged with pale yellowish, stigma yellowish; discal cell 0.5 times as long as vein M_2 , vein M_2 arising from discal cell. Halter yellow.

Abdomen brownish yellow, apical portion, sternite 1 and base of tergite 1 brown; with pale yellowish pile which is long on sides of dorsum. Male genitalia (Figs. 52–56): Epandrium as wide as long, with surstyli strongly curved inward at apical portion; tergite 10 triangular with wide base; cerci rather short; gonocoxites rather short, gonostyli rather long and curved with concavity at tip; median part of fused gonocoxites rather wide, median process short with a distinct quadrate concavity; aedeagal complex bifurcate and widened apically, with three shorter dorsal needles.

Holotype ♂, paratype 1 ♂, CHINA, Bomi (2,700 m), Xizang, 8–9. vii. 1978, Fasheng Li.

Female. Unknown.

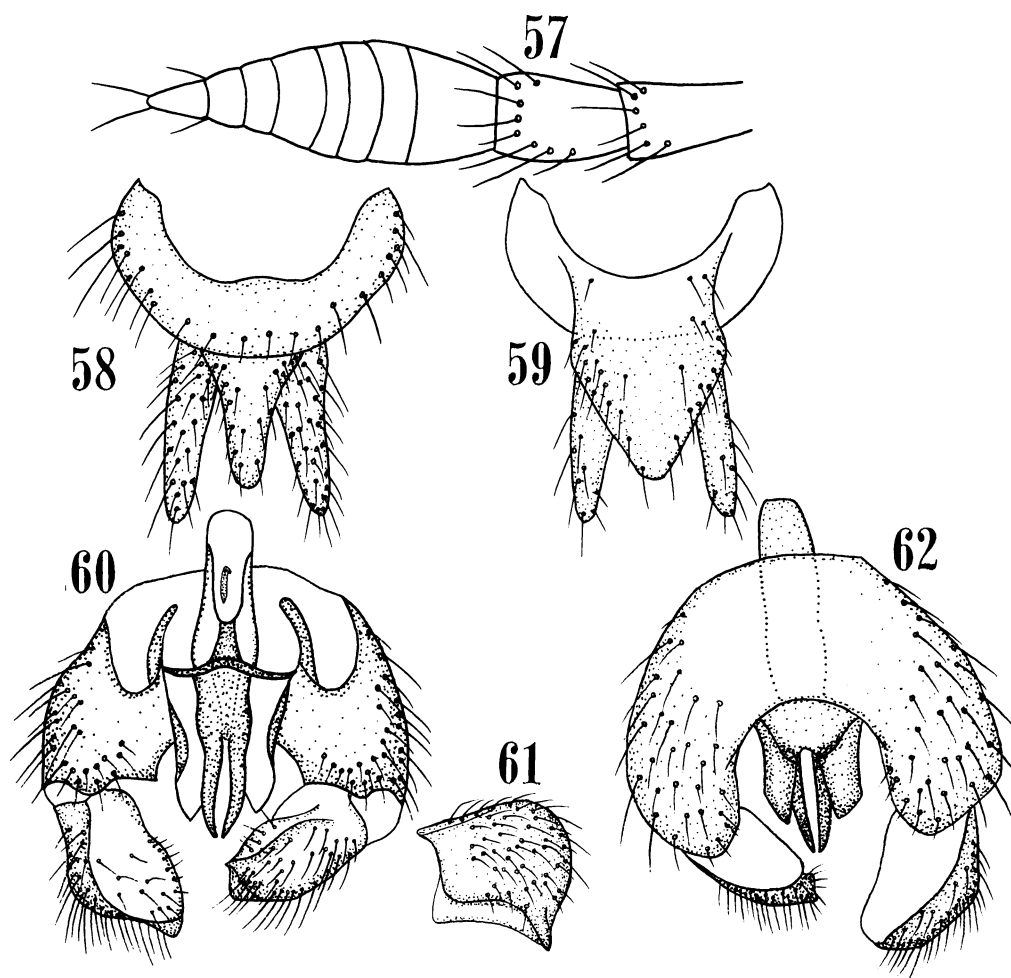
Distribution. China (Xizang).

Remarks. This species is similar to *gansuensis* sp. nov., but differs from it by having the antenna brownish yellow and flagellum brown at apex, and the abdomen chiefly brownish yellow. The male genitalia of *basiflava* are distinguished from those of *hirotsui*, *gansuensis*, and *basiflava* as shown in key 6 (couplets 4–6).

***Beris emeishana* YANG et NAGATOMI, sp. nov.**

(Figs. 57–62)

Male. Body length 7.8 mm, wing length 6.9 mm. Head subshining black, upper occiput (except cerebrale) pale grey pollinose; with pale yellowish hairs which may change into black on ocellar tubercle; hairs longer on ocellar tubercle, upper face and cheeks, and those on eyes shorter and brownish. Eyes holoptic, contiguous portion 1.7 times as long as ocellar



Figs. 57–62. *Beris emeishana*, sp. nov., male. 57, Antenna, outer view; 58, tergites 9–10 and cerci, dorsal view; 59, tergite 9, sternite 10 and cerci, ventral view; 60, genital capsule, dorsal view; 61, gonostylus, lateral view; 62, genital capsule, ventral view.

triangle. Width of one eye on a mid-line from a direct frontal view 0.8 times distance between antennae and median ocellus, 2.7 times width of frons just above antennae and 1.9 times width of face at lowest point from a direct frontal view; width of frons just above antennae 3.0 times that at median ocellus and 0.3 times distance between antennae and median ocellus; distance between dorsal base of proboscis and antennae 0.7 times that between antennae and median ocellus; upper face 1.5 times as long as lower face and 0.7 times as long as width of face at upper margin of lower face. Antenna (Fig. 57) black, scape and pedicel black haired, flagellum white minute pubescent with a few brownish hairs at tip; antennal ratio *c.* 1:0.8:2. Antenna *c.* 0.7 times as long as distance between antennae and median ocellus. Proboscis pale yellowish, with longer pale yellowish pile.

Thorax shining metallic green, postscutellum and metapleura more or less pale grey pollinose; pale yellowish haired, but intermixed blackish haired on mesonotum; scutellum

with 6 spines. Legs yellow, fore and hind coxae brownish, mid coxae brownish yellow; less than apical 1/2 (except extreme apex) of hind femora, and hind tibiae except base, blackish; tarsi dark brown, but tarsomere 1 yellow and tip of fore tarsomere 1 brownish; hind tarsomere 1 weakly swollen, 0.14 times as wide as long, 1.5 times as long as rest of tarsus, and as wide as apex of tibia; hairs on legs yellow, but tarsi with some black hairs. Wing very pale grey with dark brown stigma; discal cell 0.6 times as long as vein M_2 , M_2 arising from discal cell. Halter yellow.

Abdomen subshining brown to dark brown; with pale yellowish hairs which become long on side of dorsum and short and black in middle of dorsum. Male genitalia (Figs. 58–62): Epandrium wider than long, without surstyli; tergite 10 rather long and nearly triangular; cerci long and somewhat wider basally; gonocoxites rather short, with thick gonostyli; median part of fused gonocoxites wide, median process very high with a deep V-shaped concavity; aedeagal complex bifurcate, not directed outward at apical portion, and without dorsal needles.

Holotype ♂, CHINA, Emeishan Mountain (630 m), Sichuan, 14. ix. 1978, Fasheng Li.

Female. Unknown.

Distribution. China (Sichuan).

Remarks. This new species can be easily distinguished from other known Chinese species by having the hind tarsomere 1 weakly swollen and by the structure of the male genitalia as shown in figs. 57–61.

Beris fuscipes MEIGEN

(Figs. 63–67)

Beris fuscipes MEIGEN, 1802, Syst. Besch., 2: 8. Type-locality: England.

Beris sachalinensis PLESKE, 1926, Eos, 2: 408. Type-locality: "Sakhaline, entre Kossounai et Manoue; Kamtschatka", USSR.

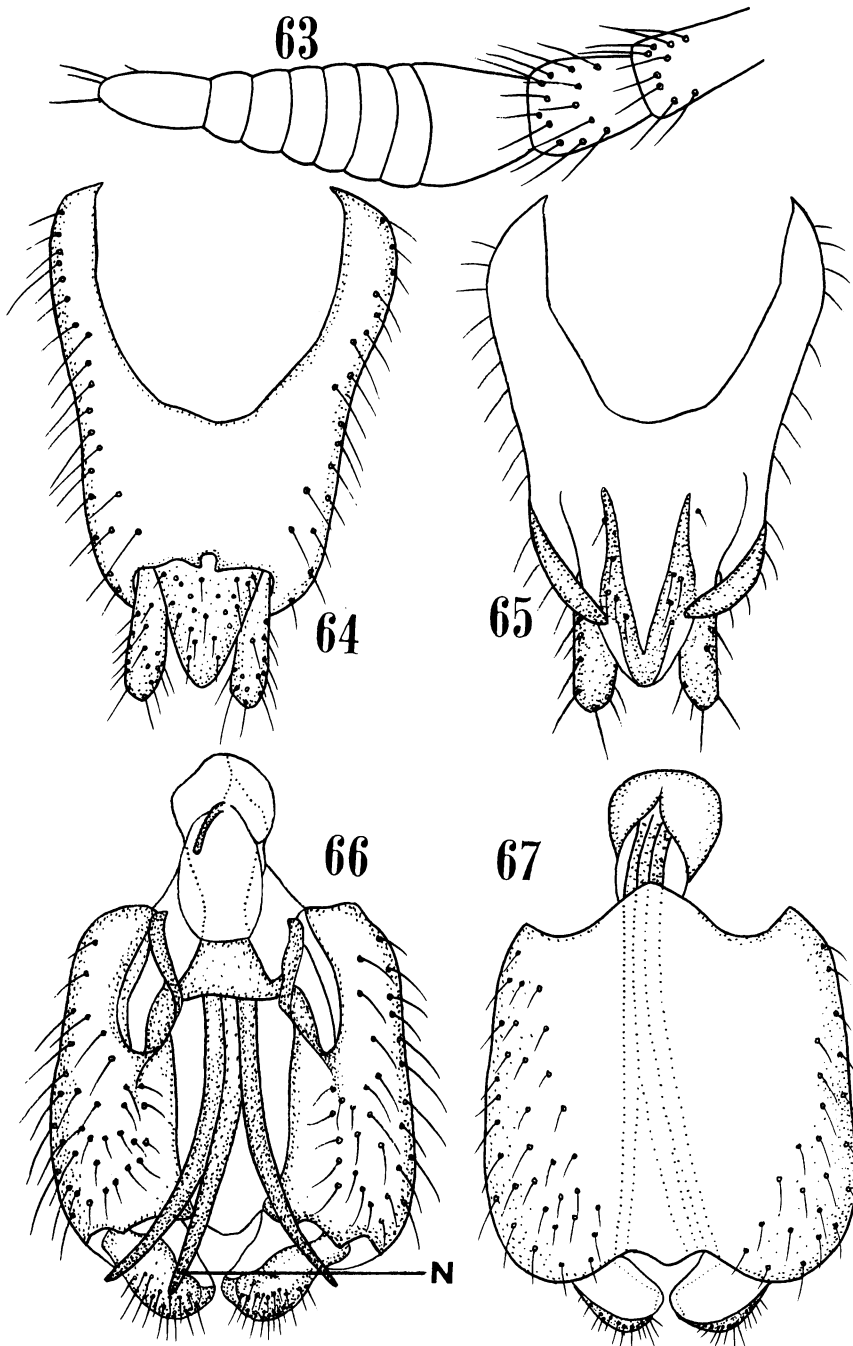
Beris fuscotibialis PLESKE, 1926, Eos, 2: 409. Type-locality: "Bassin du fleuve Abakan, dans l'Altai", USSR.

Beris sychuanensis PLESKE, 1926, Eos, 2: 411. Type-locality: "Tadzien-lou, Sy-chouane", Sichuan.

Beris mongolica PLESKE, 1926, Eos, 2: 414. Type-locality: "Ourga", Mongolia; "Nischneoudinsk, gouv. d'Irkutsk", USSR.

Beris petiolata FREY, 1960, Notul. ent. 40: 80. Type-locality: "Honsyu, Sinano, Kamikooti", Japan.

Male. Body length 6.7–7.0 mm, wing length 5.7–6.0 mm. Head subshining black, upper occiput (except cerebrale) pale grey pollinose; black pilose, but cheeks pale yellowish pilose; pile on ocellar tubercle, upper face and cheeks longer; pile on eyes longer and denser than in other Chinese species. Eyes holoptic, contiguous portion 2.5–2.6 times as long as ocellar triangle. Width of one eye on a mid-line from a direct frontal view 0.8–0.9 times distance between antennae and median ocellus, 2.2–2.4 times width of frons just above antennae and 1.5–1.6 times width of face at lowest point from a direct frontal view; width of frons just above antennae 3.0–3.2 times that at median ocellus and 0.4 times distance between



Figs. 63–67. *Beris fuscipes* MEIGEN, male. 63, Antenna, outer view; 64, tergites 9–10 and cerci, dorsal view; 65, tergite 9, sternite 10 and cerci, ventral view; 66, genital capsule, dorsal view; 67, genital capsule, ventral view. N, needle in aedeagal complex.

antennae and median ocellus; distance between dorsal base of proboscis and antennae 0.8–1.0 times that between antennae and median ocellus; upper face 1.4–1.5 times as long as lower face and 0.7 times as long as width of face at upper margin of lower face. Antenna (Fig. 63) black, scape and pedicel black haired; flagellum with minute brownish pubescence, but tip with a few brownish hairs; antennal ratio *c.* 1:0.8:2.5. Antenna 0.8 times as long as distance between antennae and median ocellus. Proboscis pale yellow with longer yellowish pile. Data based on 3 individuals.

Thorax shining metallic green, postscutellum and metapleura pale grey pollinose; humeri and postalar calli brownish; thorax pale yellowish or pale brownish pilose (pile on posterior part of mesopleura and some pile on mesonotum long); scutellum with 6 spines. Legs yellow, coxae black; apical portion (except extreme apex) of hind femora, apical portion of hind tibiae usually brown; tarsomeres 2–5 and apices of fore and mid tarsomere 1 brown; hind tarsomere 1 yellow or brown, distinctly swollen, 0.2 times as wide as long, 1.4 times as long as rest of tarsus, and 1.3 times as wide as apex of tibia; hairs on legs pale brownish, but tarsi with some black hairs. Wing brownish with dark brown stigma; discal cell 0.5–0.6 times as long as vein M_2 , vein M_2 arising from discal cell. Halter yellow.

Abdomen subshining brownish to dark brownish, pale brownish pilose (pile long on sides of dorsum). Male genitalia (Figs. 64–67): Epandrium much longer than wide with surstyli weakly curved inward; cerci nearly parallel-sided; tergite 10 triangular with wide base, sternite 10 consisting of two darker longitudinal sclerites which are divergent anteriorly; gonocoxites long, with short and thick gonostyli; median portion of fused gonocoxites wide and large, with median process simple and feebly produced; aedeagal complex with three long needles, and without bifurcate lobes.

Female. Body length 6.0–6.5 mm, wing length 5.8–6.1 mm. Similar to male, but different as follows: Head shining black, occiput just behind eyes pale grey pollinose; pile on ocellar tubercle, upper face and cheeks shorter than in male and that on eyes shorter and sparser than in male. Eyes widely separated. Width of frons just above antennae 1.2 times that at median ocellus, the latter 2.0–2.1 times as wide as ocellar triangle; width of one eye on a mid-line from a direct frontal view 0.8 times distance between antennae and median ocellus, 1.0–1.2 times width of frons just above antennae, and 0.8–0.9 times width of face at lowest portion from a direct frontal view; distance between dorsal base of proboscis and antennae 1.0–1.1 times that between antennae and median ocellus; upper face 1.2–1.3 times as long as lower face and 0.5 times as long as width of face at upper margin of lower face. Antenna black, but flagellum very often reddish yellow basally. Antenna 1.2–1.3 times as long as distance between antennae and median ocellus. Mesonotum without long and erect pile. Wing with discal cell 0.5 times as long as vein M_2 . Pile on sides of abdominal dorsum shorter than in male.

Specimens examined. 1 ♂, Emeishan Mountain (630 m), Sichuan, 14. ix. 1978, Fasheng LI; 1 ♂, 1 ♀, Liupanshan Mountain (2,100 m), Ningxia, 14. vii. 1980, Chi-kun YANG; 3 ♀ ♀, Longde (2,180 m), Ningxia, 16. vii. 1980, Chi-kun YANG; 1 ♂, Jingyuan (1,940 m), Ningxia,

13. vii. 1980, Chi-kun YANG; 1 ♂, Wenxian (1,700 m), Gansu, 7. viii. 1980, Fasheng LI.

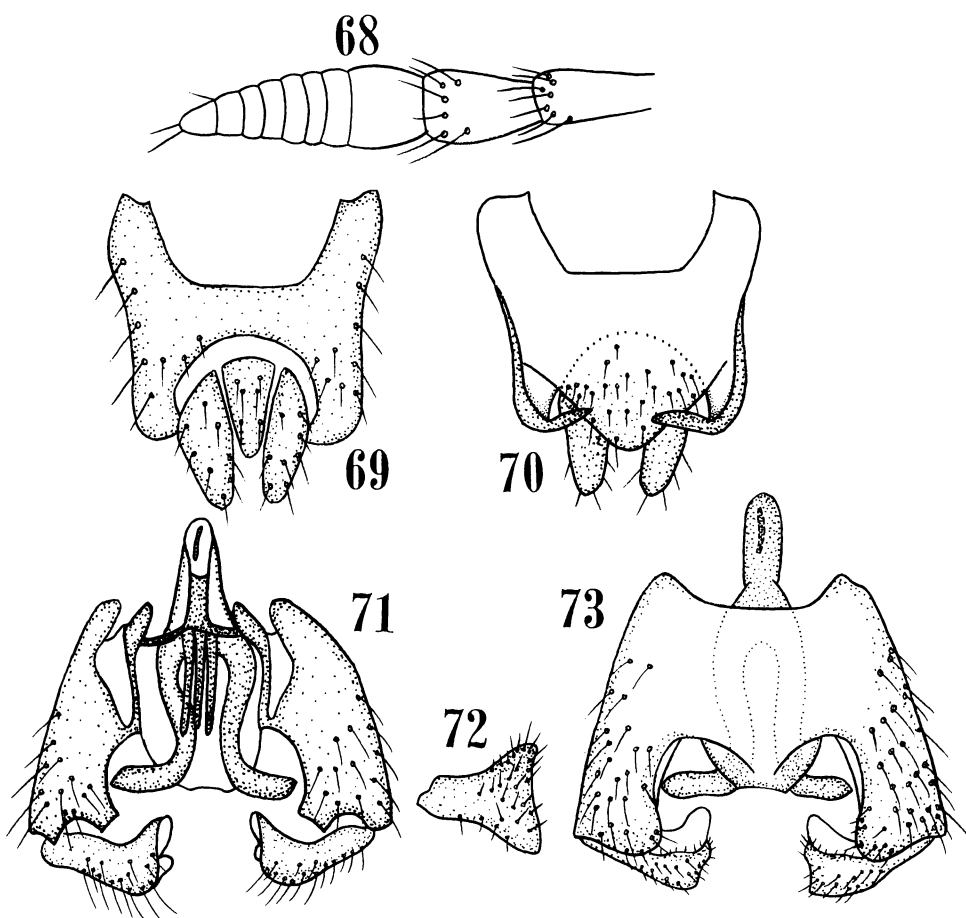
Distribution in China: Sichuan, Ningxia and Gansu. This species is widely distributed in the Holarctic region.

Remarks. This species was redescribed in detail by NAGATOMI & TANAKA (1972), WOODLEY (1981) and ROZKOŠNÝ (1983).

***Beris gansuensis* YANG et NAGATOMI, sp. nov.**

(Figs. 68–73)

Male. Body length 6.0–6.2 mm, wing length 5.2–5.3 mm. Head subshining black, upper occiput (except cerebrale) pale grey pollinose; with pale yellowish pile which is longer on ocellar tubercle, upper face and cheeks; pile on eyes shorter and brownish. Eyes holoptic, contiguous portion 2.4–2.6 times as long as ocellar triangle. Width of one eye on a mid-line



Figs. 68–73. *Beris gansuensis*, sp. nov., male. 68, Antenna, outer view; 69, tergites 9–10 and cerci, dorsal view; 70, tergite 9, sternite 10 and cerci, ventral view; 71, genital capsule, dorsal view; 72, gonostylus, lateral view; 73, genital capsule, ventral view.

from a direct frontal view 0.7–0.8 times distance between antennae and median ocellus, 4.0 times width of frons just above antennae and 2.1–2.5 times width of face at lowest point from a direct frontal view; width of frons just above antennae 1.7 times that at median ocellus and 0.2 times distance between antennae and median ocellus; distance between dorsal base of proboscis and antennae 0.7 times that between antennae and median ocellus; upper face 1.4 times as long as lower face and 0.8 times as long as width of face at upper margin of lower face. Antenna (Fig. 68) black, flagellum with brownish yellow base; scape and pedicel black haired; flagellum with minute white pubescence, but tip with a few brownish hairs; antennal ratio *c.* 1:1:2. Antenna 0.6 times as long as distance between antennae and median ocellus. Proboscis pale yellowish, with longer pale yellowish pile.

Thorax shining metallic green, postscutellum and metapleura grey pollinose; pale yellowish pilose; some pile on mesonotum and mesopleura long; scutellum with 6 or 8 spines. Legs yellow, coxae blackish with yellow apex; apex (except tip and ventral surface) of hind femora and apical portion of hind tibiae brown; tarsi dark brown, but tarsomere 1 yellow with brownish apex; hind tarsomere 1 distinctly swollen, 0.25 times as wide as long, 1.9 times as long as rest of tarsus, 1.5 times as wide as apex of tibia; hairs on legs yellowish, but tarsi with some black hairs. Wing hyaline with pale yellowish stigma; discal cell 0.4 times as long as vein M_2 , vein M_2 arising from discal cell. Halter yellow.

Abdomen subshining brown to dark brown; with pale yellowish pile which is long on sides of dorsum. Male genitalia (Figs. 69–73): Epandrium as wide as long, with surstyli strongly curved inward; tergite 10 rather narrow and nearly triangular; cerci short, and wide basally; gonocoxites rather long, with L-shaped gonostyli; median part of fused gonocoxites rather wide, median process distinctly produced and with apical margin nearly straight; aedeagal complex bifurcate and strongly curved outward at apical portion, with three shorter dorsal needles.

Holotype ♂, paratype 1 ♂, CHINA, Wenxian (1,700 m), Gansu, 7. viii. 1980, Chi-kun YANG.

Female. Unknown.

Distribution. China (Gansu).

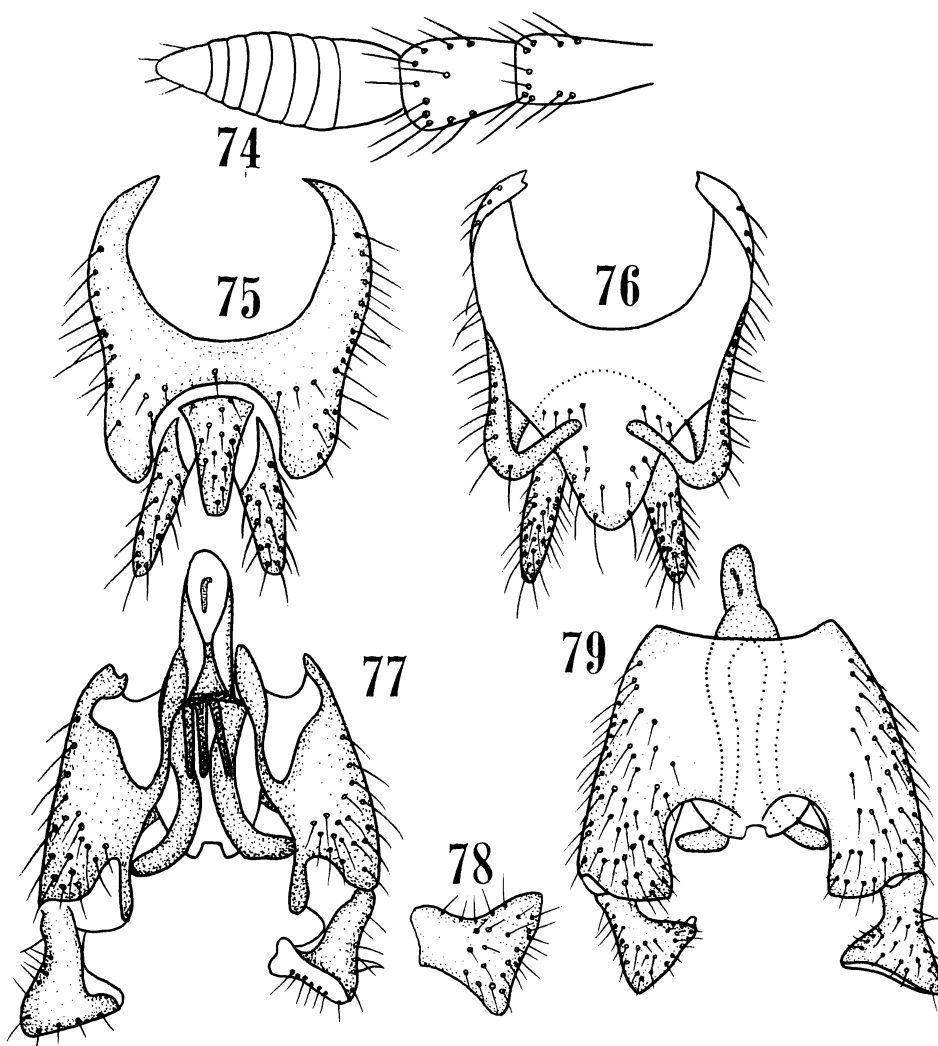
Remarks. This species is very similar to *hirotsui* OUCHI in the structure of the male genitalia, but differs from it in the following points: Cerci more robust; apical margin of median process of fused gonocoxites straight transversely. The external characters of *gansuensis* differ from those of *hirotsui* by having the head pale yellowish pilose, antennal scape as long as pedicel, wing stigma pale yellowish and not darker than the rest of membrane. In *hirotsui*, the head is black pilose, the antennal scape is longer than pedicel, and the wing stigma is dark brown and distinctly darker than the rest of the membrane.

***Beris hirotsui* OUCHI**

(Figs. 74–79)

Beris hirotsui OUCHI, 1943, Shanghai Shizen. Ken. Iho, 13: 487. Type-locality: Japan.

Male. Body length 6.2 mm, wing length 5.0 mm. Head subshining black, upper occiput (except cerebrale) pale grey pollinose; with blackish pile which is longer on ocellar tubercle and upper face; lower face shorter yellowish pilose, cheeks longer yellow pilose, eyes shorter and denser brownish pilose. Eyes holoptic, contiguous portion 2.6 times as long as ocellar triangle. Width of one eye on a mid-line from a direct frontal view 0.8 times distance



Figs. 74–79. *Beris hirotsui* OUCHI, male. 74, Antenna, outer view; 75, tergites 9–10 and cerci, dorsal view; 76, tergite 9, sternite 10 and cerci, ventral view; 77, genital capsule, dorsal view; 78, gonostylus, lateral view; 79, genital capsule, ventral view.

between antennae and median ocellus, 2.3 times width of frons just above antennae and 2.0 times width of face at lowest point from a direct frontal view; width of frons just above antennae 3.0 times that at median ocellus and 0.3 times distance between antennae and median ocellus; distance between dorsal base of proboscis and antennae 0.8 times that between antennae and median ocellus; upper face 1.2 times as long as lower face and 0.7 times as long as width of face at upper margin of lower face. Antenna (Fig. 74) black, extreme apex of pedicel and inner surface of flagellomeres 2-5 paler; scape and pedicel black haired; flagellum with minute white pubescence, but tip with two brownish hairs; antennal ratio *c.* 1:0.8:1.8. Antenna *c.* 0.6 times as long as distance between antennae and median ocellus. Proboscis yellowish, with longer yellow pile.

Thorax shining metallic green, postscutellum and metapleura pale grey pollinose; predominantly long pale yellowish pilose; scutellum with 8 spines. Legs yellow, mid and hind coxae blackish; apical portion (except extreme apex and ventral surface) of hind femora and apical portion of hind tibiae brown; tarsi brown, but tarsomere 1 yellow with brownish apex; hind tarsomere 1 distinctly swollen, 0.45 times as wide as long, 1.7 times as long as rest of tarsus, 2.8 times as wide as apex of tibia. Wing faintly brownish with dark brown stigma, apical portion of subcostal cell brownish; discal cell 0.5 times as long as vein M_2 , vein M_2 arising from discal cell. Halter yellow.

Abdomen subshining brown to dark brown; with pale yellowish pile which is long on sides of dorsum. Male genitalia (Figs. 75-79): Epandrium longer than wide with surstyli strongly curved inward; tergite 10 rather narrow and nearly triangular; cerci slender; gonocoxites rather long with L-shaped gonostyli; median portion of fused gonocoxites with median process distinctly produced and having a quadrate concavity; aedeagal complex bifurcate and strongly curved outward at apical portion, with three shorter dorsal needles.

Female. Known but no material available.

Specimen examined. 1 ♂, Emeishan Mountain (630 m), Sichuan, 14. ix. 1978, Fasheng LI.

Distribution. China (Sichuan), Japan, Siberia.

This species was originally described by OUCHI (1943). NAGATOMI & TANAKA (1972) gave a detailed redescription with figures of male genitalia. NARTSHUK and ROZKOŠNÝ (1975) recorded it from the Far East of the USSR. Here it is reported for the first time from China.

Beris potanini PLESKE

Beris potanini PLESKE, 1926, Eos, 2: 410. Type-locality: "Ta-dzien-lou", Sichuan.

Distribution. China (Sichuan); Mongolia.

No specimens were available for study. For a redescription and illustrations of *potanini*, see NARTSHUK & ROZKOŠNÝ (1975).

Genus *Chorisops* RONDANI

Chorisops RONDANI, 1856, Dipt. Ital. Prodrumus, 1: 173. Type-species: *Beris tibialis* MEIGEN, 1820 from England.

Chorisops RONDANI, 1856, ditto. 1: 228, error.

Corisops BIGOT, 1857, Anns Soc. ent. Fr., 3(5): 524, error.

Chlorisops BRAUER, 1882, Denkschr. Akad. Wiss., Wien, Kl. math.-naturw., 44: 72, error or unjustified emendation.

Diagnosis. Head with shining metallic green or purple tinge; eyes separated in both sexes, with short sparse hairs; female face narrower than one eye; distance between ridge below proboscis to antennae twice or nearly so that between antennae and median ocellus; antennal scape slender, less than twice as long as pedicel, scape + pedicel much shorter than eight-segmented flagellum; palpus well developed and two-segmented. Thorax with shining metallic green tinge; scutellum with 4 spines; no tibial spurs present; wing with vein M_3 vestigial.

Distribution. Palaearctic region (5 species, of which 1 species extends to the Oriental region) and Oriental region (3 species).

Previously the genus *Chorisops* contained 5 described species. It is now recorded from China for the first time, and contains 2 new species.

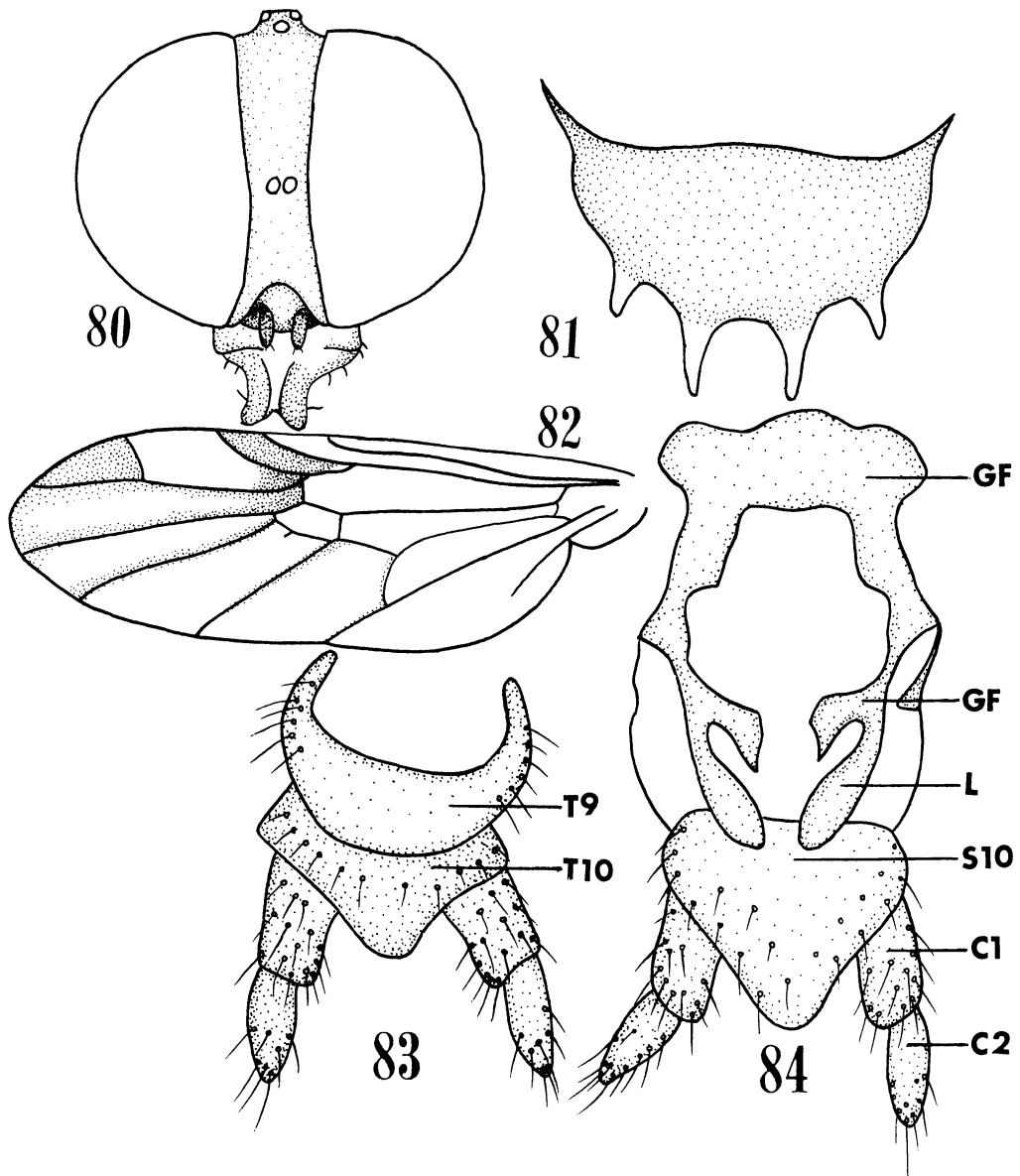
Key (7) to the species of *Chorisops* from China based on females

1. Abdomen brown to dark brown without distinct pale markings; hind tibiae (except base) brown to dark brown; inner spines on scutellum less than 1/2 as long as scutellum. Northern China *separata*
- Abdomen brown to dark brown with mid-basal areas of tergites 2–5 brownish yellow; hind tibiae (except base and apex) yellow; inner spines on scutellum distinctly more than 1/2 as long as scutellum. Southern China *unita*

Chorisops separata YANG et NAGATOMI, sp. nov.

(Figs. 80–84)

Female. Body length 5.2–5.5 mm, wing length 4.8–5.1 mm. Head black, frons and vertex subshining metallic purple; frons just above antennae and face pale grey pollinose; hairs on head pale yellowish, but occiput with some black hairs. Head 1.3 times higher than long; width of one eye on a mid-line from a direct frontal view 0.9–1.1 times distance between antennae and median ocellus, 2.3–2.4 times width of frons just above antennae and 2.0–2.4 times width of face at lowest point from a direct frontal view; width of frons just above antennae 1.5–1.7 times as wide as ocellar triangle, 0.8–0.9 times width of frons at median ocellus; distance between ridge below proboscis and antennae 1.80–1.85 times that between antennae and median ocellus. Lower margin of face in anterior view weakly



Figs. 80–84. *Chorisops separata*, sp. nov., female. 80, Head, anterior view; 81, scutellum, dorsal view; 82, wing; 83, tergites 9–10 and cerci, dorsal view; 84, genital furca, sternite 10 and cerci, ventral view. C1, segment 1 of cercus; C2, segment 2 of cercus; GF, genital furca; L, apical lobe in genital furca; S10, sternite 10; T9, tergite 9; T10, tergite 10.

curved. [Antennal flagellum missing]; scape brown with yellow apex, pedicel yellow; scape and pedicel black haired; antennal ratio 1:0.6:?. Proboscis yellow, pale yellowish pilose; palpus at least partly yellow.

Thorax black, mesonotum and scutellum shining metallic green; humeri and postalar calli yellow to brownish yellow; apical margin of scutellum brownish yellow; with 4 yellow spines of which inner ones are less than 1/2 as long as scutellum; hairs on thorax pale yellowish,

bare on anterior part of mesopleura, mid-posterior part of sternopleura, lower part of pteropleura, hypopleura and upper part of metapleura. Legs yellow, but hind coxae often brownish yellow; apex of hind femora, and hind tibiae (except extreme base) brown; fore tarsi, mid tarsomeres 4–5 and hind tarsomeres 3–5 brown to dark brown; hind tarsomere 1 more slender than in *unita*; hairs on legs chiefly pale. Wing (Fig. 82) hyaline with dark brown stigma, apical half light brownish along longitudinal veins; 2nd submarginal cell and bases of 1st submarginal cell and 1st posterior cell light brownish; discal cell 0.3 times as long as M_1 , 0.4 times as long as M_2 . Halter yellow.

Abdomen brown to dark brown with pale hairs. Female genitalia (Figs. 83–84): Cerci with first segment distinctly thicker than second one; genital furca longer than wide, separated posteriorly, and with two large lobes.

Male. Unknown.

Holotype ♀, paratypes 2♀ ♀, CHINA, Qinglin, Shaanxi, 5–6. viii. 1962, Chi-kun YANG.

Distribution. China (Shaanxi).

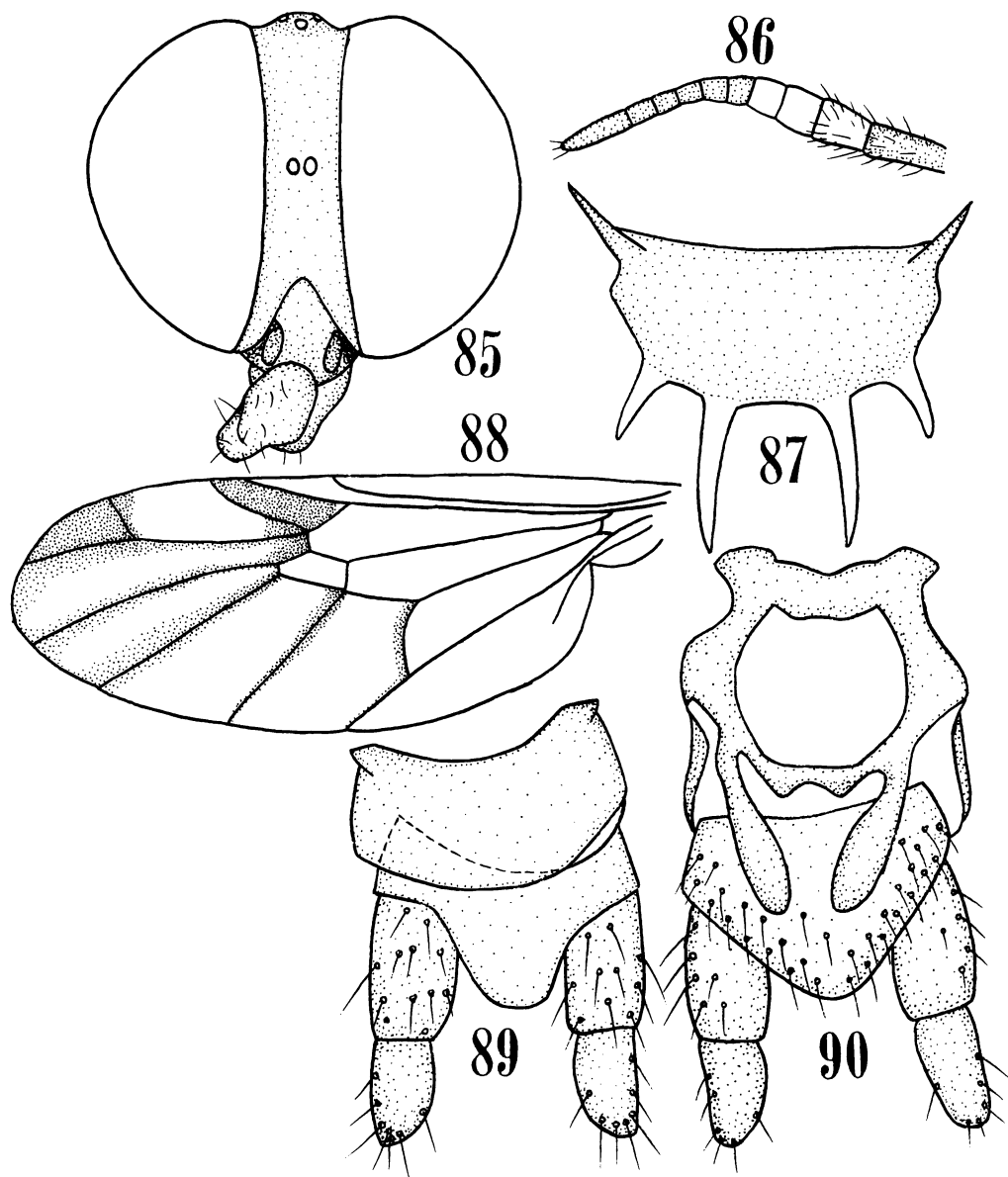
Remarks. This species (♀) is similar to *maculiala* NAGATOMI, 1964 (♀) from Siberia and Japan, but differs from it in the following points: Abdominal dorsum brown without distinct yellow markings and fore tarsi brown to dark brown. In *maculiala*, the abdomen is brown to dark brown with distinct yellow markings, and the fore tarsi are yellow.

***Chorisops unita* YANG et NAGATOMI, sp. nov.**

(Figs. 85–90)

Female. Body length 6.1 mm, wing length 5.4 mm. Head black, but frons, vertex and median occipital region subshining metallic green; frons just above antennae and face pale grey pollinose; hairs on head pale yellowish, but occiput with some black hairs. Head 1.3 times higher than long; width of one eye on a mid-line from a direct frontal view 1.1 times distance between antennae and median ocellus, 2.4 times width of frons just above antennae and 1.9 times width of face at lowest point from a direct frontal view; width of frons just above antennae 1.3 times as wide as ocellar triangle and 0.8 times width of frons at median ocellus; distance between ridge below proboscis and antennae 1.9 times that between antennae and median ocellus. Lower margin of face in anterior view strongly curved. Antenna brown to dark brown, but apex of scape, pedicel and flagellomeres 1–2 brownish yellow; scape and pedicel black haired, flagellum with minute black pubescence; antennal ratio c. 1:0.6:3.2. Antenna 2.1 times as long as distance between antennae and median ocellus. Proboscis yellowish with yellowish hairs; palpus brownish yellow.

Thorax black, mesonotum and scutellum shining metallic green; humeri and postalar calli yellow; apical margin of scutellum brownish yellow, with 4 long yellow spines of which inner ones are distinctly over 1/2 as long as scutellum; pteropleura with brownish yellow tinge; hairs on thorax pale yellowish, bare on anterior part of mesopleura, mid-posterior part of sternopleura, hypopleura and upper part of metapleura. Legs yellow, but fore tarsi, hind



Figs. 85-90. *Chorisops unita*, sp. nov., female. 85, Head, anterior view; 86, antenna, outer view; 87, scutellum, dorsal view; 88, wing; 89, tergites 9-10 and cerci, dorsal view; 90, genital furca, sternite 10 and cerci, ventral view.

tarsomeres 3-5, apex of hind femora, and probably mid tarsomeres 4-5 brown to dark brown, and hind tibiae at base and apex more or less darkened; hind tarsomere 1 more swollen than in *separata*; hairs on legs chiefly pale yellowish. Wing (Fig. 88) hyaline with dark brown stigma; apical half brownish along longitudinal veins; 2nd submarginal cell and bases of 1st submarginal cell and 1st posterior cell brownish; discal cell 0.3 times as long as vein M_1 and 0.35 times as long as vein M_2 . Halter yellow.

Abdomen brown to dark brown, but mid-basal areas of tergites 2–5 brownish yellow; chiefly pale haired. Female genitalia (Figs. 89–90): Cerci with second segment nearly as thick as first one; genital furca as wide as long, united posteriorly and with two large lobes.

Male. Unknown.

Holotype ♀, CHINA, Jinggangshan Mountain, Jiangxi, 25. iv. 1978, Chi-kun YANG.

Distribution. China (Jiangxi).

Remarks. This species more closely resembles *maculiala* than *unita* by having pale markings on the abdominal dorsum, but may be distinguished from *maculiala* by the following characters: antenna largely dark brown; fore tarsi dark brown; hind tibiae largely yellow; inner spines on scutellum long and over 1/2 as long as scutellum.

Genus *Spartimas* ENDERLEIN

Spartimas ENDERLEIN, 1921, Mitt. zool. Mus. Berl. 10: 196. Type-species: *Spartimas ornatipes* ENDERLEIN, 1921 from Taiwan.

Diagnosis. Head and thorax tinged with shining metallic purple. Male eyes holoptic, female eyes dichoptic. Female frons wide, and nearly parallel-sided; female face wider than one eye; distance between ridge below proboscis and antennae distinctly less than twice as long as distance between antennae and median ocellus. Antennal scape longer than pedicel; scape + pedicel much shorter than flagellum; flagellum distinctly eight-segmented with last flagellomere longer; palpus well developed and two-segmented. Scutellum with 4–6 spines; no tibial spurs present; vien M₃ long but ending well before wing margin.

Distribution. South China and Taiwan (2 species).

The genus *Spartimas* contains only 2 described species. It is recorded from the continent of China for the first time.

Key (8) to the species of *Spartimas* from China based on females

1. Pleura largely yellow; antenna black but scape, pedicel and flagellomeres 1–2 brownish yellow; hind tibiae wholly brown to dark brown. Southern China, Taiwan *ornatipes*
- Pleura black; antenna wholly black; basal 1/3 of hind tibiae yellow; (after ENDERLEIN, 1921). Taiwan *formosanus*

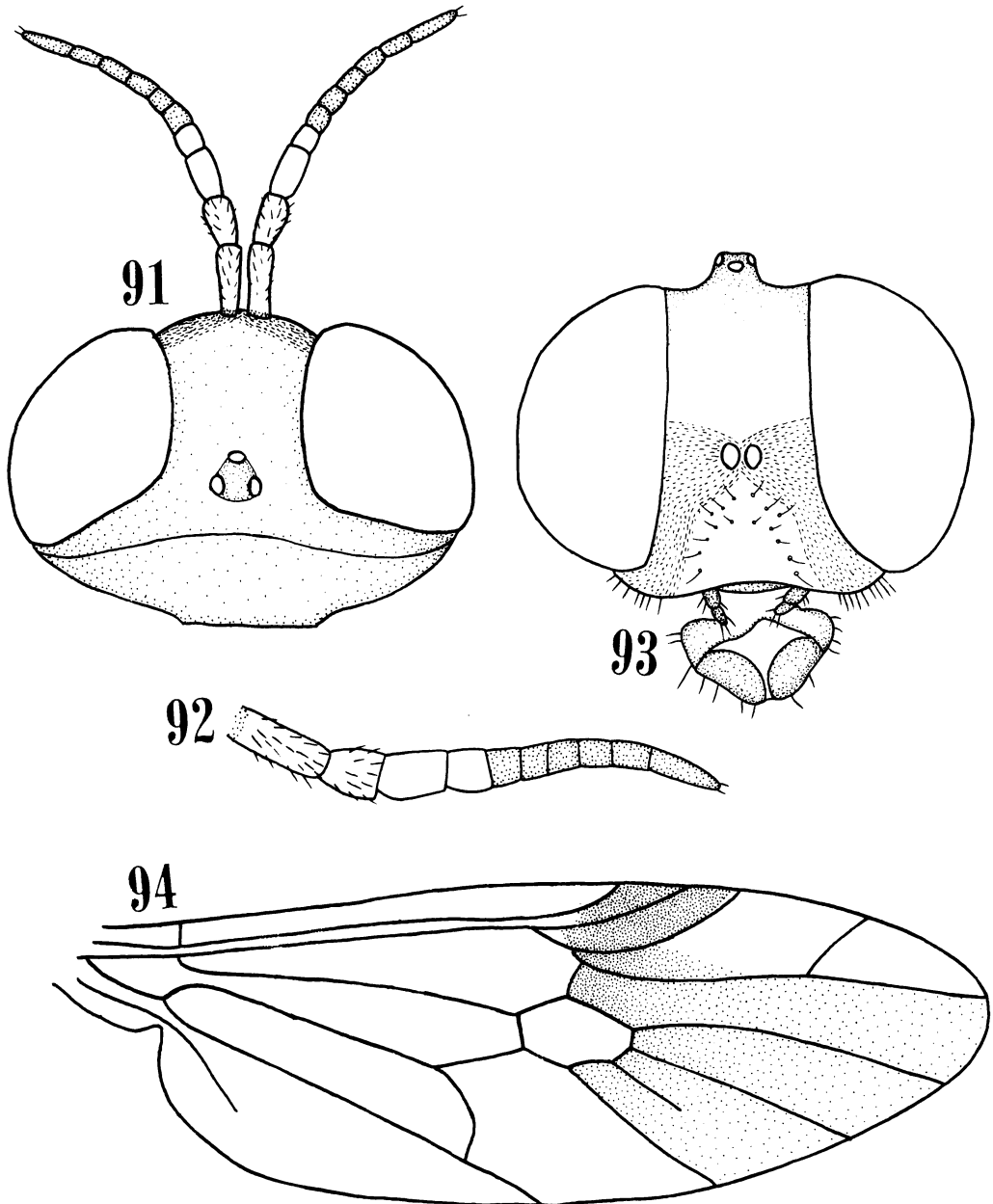
Spartimas formosanus ENDERLEIN

Spartimas formosanus ENDERLEIN, 1921, Mitt. zool. Mus. Berlin, 10: 197. Type-locality: "Mount Hoozan", Taiwan.

No specimens were available for study. This species was described from 3 ♀♀. The male is unknown.

Length (♀): Body 7 mm; antenna 1.6 mm; wing 6 mm (after ENDERLEIN, 1921).

Distribution. Taiwan.



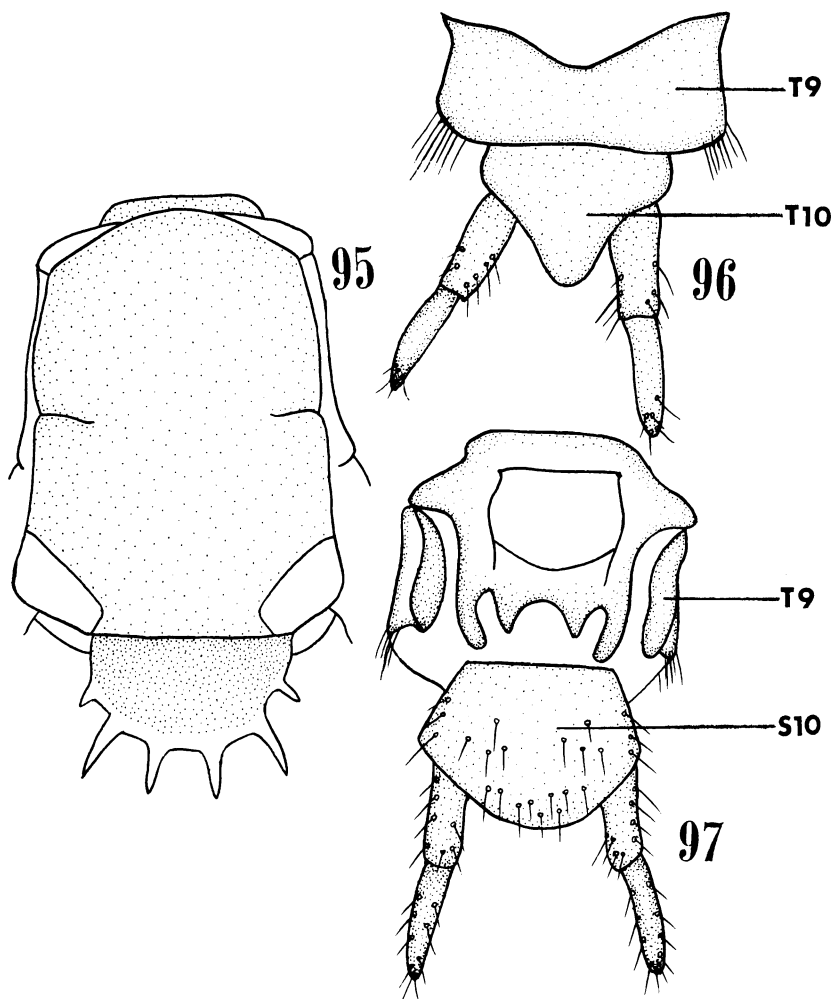
Figs. 91-94. *Spartimas ornatipes* ENDERLEIN, female. 91, Head, dorsal view; 92, antenna, outer view; 93, head, anterior view; 94, wing.

Spartimas ornatipes ENDERLEIN

(Figs. 91–97)

Spartimas ornatipes ENDERLEIN, 1921, Mitt. zool. Mus. Berlin, 10: 197. Type-locality: "Toyenmongai", Taiwan.

Female. Body length 8.4 mm, wing length 6.3 mm. Head black, frons and vertex more or less shining metallic purple; frons just above antennae and face along eye margin pale grey pollinose. Hairs on head pale. Eyes widely separated and bare. Head 1.2 times higher than long; width of one eye on a mid-line from a direct frontal view 0.7 times distance between antennae and median ocellus, 1.1 times width of frons just above antennae and 0.8 times width of face at lowest point from a direct frontal view; width of frons just above



Figs. 95–97. *Spartimas ornatipes* ENDERLEIN, female. 95, Thorax, dorsal view; 96, tergites 9–10 and cerci, dorsal view; 97, genital furca, sternite 10 and cerci, ventral view. S10, sternite 10; T9, tergite 9; T10, tergite 10.

antennae 2.7 times as wide as ocellar triangle, and 1.1 times width of frons at median ocellus; distance between ridge below proboscis and antennae 1.4 times that between antennae and median ocellus. Antenna black, but scape, pedicel and flagellomeres 1–2 brownish yellow; scape and pedicel black haired, flagellum white minute pubescent with several hairs at apex; antennal ratio *c.* 1:0.7:4.1. Antenna *c.* 1.7 times as long as distance between antennae and median ocellus. Proboscis yellow with pale hairs; palpus yellow with pale hairs.

Thoracic pronotum, mesonotum and scutellum black, shining and more or less metallic purple; humeri and postalar calli yellow; scutellum with posterior portion and spines yellow; postscutellum black, and pale grey pollinose. Pleura yellow, but mesopleura posteriorly largely (except upper border), antero-upper part of pteropleura, and metapleura, blackish. Thorax pale haired, but bare on mesopleura except for posterior part, lower part of pteropleura, mid-lower part of sternopleura, and hypopleura. Legs yellow; hind femora with a brownish narrow median band; fore and mid tibiae brownish yellow, but dorsal portion darker; hind tibiae, fore tarsi, mid and hind tarsomeres 3–5 brown to dark brown; hairs on legs chiefly pale. Wing (Fig. 94) hyaline with stigma and subcostal cell just above

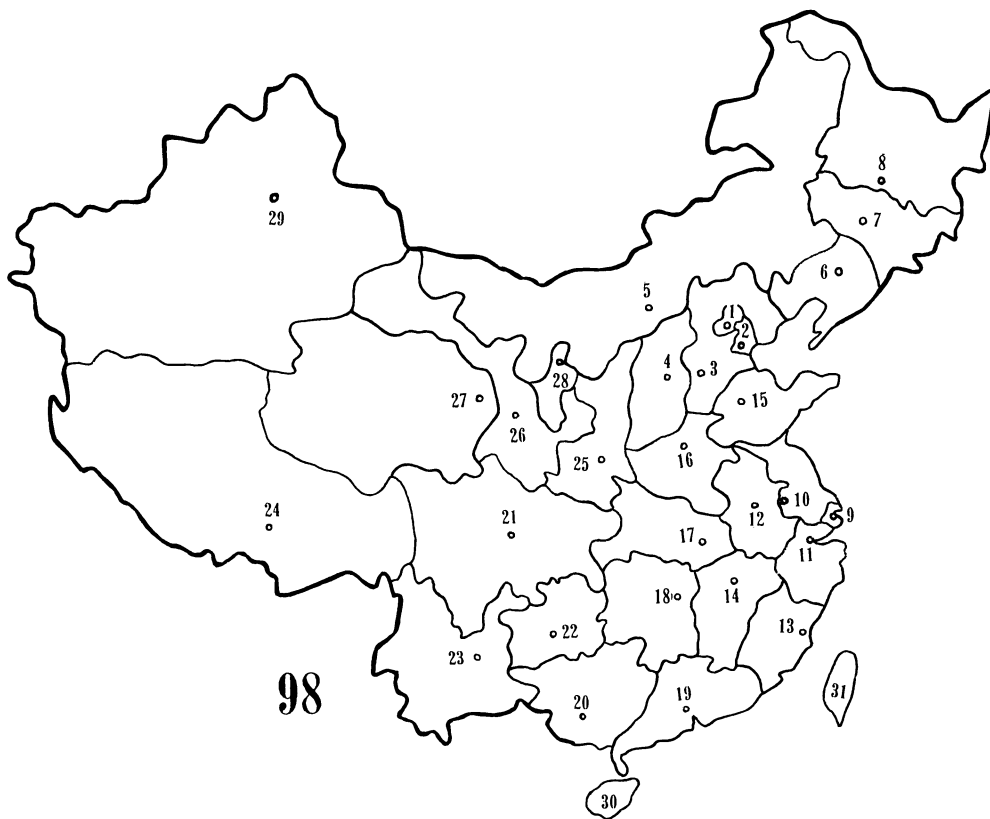


Fig. 98. Index map of the administrative division of the People's Republic of China. 1, Beijing; 2, Tianjin; 3, Hebei; 4, Shanxi; 5, Nei Mongol; 6, Liaoning; 7, Jilin; 8, Heilongjiang; 9, Shanghai; 10, Jiangsu; 11, Zhejiang; 12, Anhui; 13, Fujian; 14, Jiangxi; 15, Shandong; 16, Henan; 17, Hubei; 18, Hunan; 19, Guangdong; 20, Guangxi; 21, Sichuan; 22, Guizhou; 23, Yunnan; 24, Xizang; 25, Shaanxi; 26, Gansu; 27, Qinghai; 28, Ningxia; 29, Xinjiang; 30, Hainan; 31, Taiwan.

stigma brown to dark brown, apical portion of wing brownish except for 1st and 2nd submarginal cells; veins brown to dark brown. Halter yellow.

Abdomen brown to dark brown, tinged with shining metallic purple; tergites 2–5 with pale base; hairs on abdomen pale. Female genitalia (Figs. 96–97): Cerci with first segment slightly thicker than second; genital furca as wide as long, united posteriorly, and with two finger-like lateral lobes and a pair of pointed processes.

Male. Known but no material available.

Specimens examined. 1 ♀, Longsheng, Guangxi, 25. vi. 1982, Chi-kun YANG.

Distribution. China (Guangxi), Taiwan.

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