

Oriental Lauxaniidae (Diptera) Part 3

Fauna of the Lauxaniidae in Japan (Ryukyus) and Formosa

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Abstract: This paper presents the new or little-known species of the Lauxaniidae in the Ryukyu Islands and Formosa. Fourteen new species (7 species of the Lauxaniinae and 7 of the Homoneurinae) are described, with illustrations of the male genitalia, and 8 species are recorded newly. An account is given of the zoogeographic distribution of the genera in those islands.

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Key words: Taxonomy, Lauxaniidae, Ryukyu Islands, Formosa, new species.

The lauxaniid flies of the Ryukyu Islands, Japan, have been studied by myself since 1982, and those of Formosa had mainly been made clear out by Kertész (1913 & 1915). The present paper is based on a material collected by myself and staff of the Bishop Museum of the 1963 and 1964 Expeditions in the Ryukyu Islands and Formosa under the Japan-U. S. Co-operative Science Program, and by the late Dr. T. Shiraki from the Ryukyu Islands in 1953. It consists of 24 species from the Ryukyu Islands and 36 from Formosa, of which 5 and 9 species, respectively, are new to science, and 4 and 4 species, respectively, are recorded for the first time.

Abbreviations for certain setae or bristles, abdominal segments and wing vein indices are followed after my previous paper (1998). Collector's names are abbreviated to the initials, excepting the data of new species: G. B.-G. E. Bohart, J. G.-J. L. Gressitt, J. H.-J. Harrell, K. L.-K. S. Lin, T. M.-T. C. Maa, B. P.-B. D. Perkins, E. S.-E. I. Schlinger, G. S.-G. A. Samuelson, M. S.-M. Sasakawa, T. S.-T. Shiraki, C. Y.-C. M. Yoshimoto.

The holotypes of new species are deposited in the collection of the Bishop Museum, Honolulu, Hawaii, U.S.A.

I. Ryukyu Islands

Eight species of the Lauxaniinae and 21 species of the Homoneurinae have hitherto been recorded from the Ryukyu Islands (Sasakawa and Ikeuchi, 1982 & 1985; Sasakawa, 1997 & 1998; Azuma *et al.*, 2002).

The distribution of the genera in the Ryukyus is on the whole similar to that in the Oriental Region. A total of 38 species, including 5 new species and 4 newly recorded species, is recorded for the fauna of the lauxaniid flies at the present time. The largest number of *Homoneura* species is known in any widespread Oriental genus, but 8 of 21 known species occur also in the Palaearctic Region.

Subfamily Lauxaniinae

Six genera, *Drepanephora* (including one species), *Melinomyia* (1), *Minettia* (1), *Protrigonometopus* (1), *Sapromyza* (2) and *Steganopsis* (2), are known to occur on the Ryukyu Islands. In this paper, 6 species of 5 genera, *Cerataulina*, *Maquilingia*, *Minettia*, *Pachycerina* and *Trigonometopus*, are added to the fauna, of which two

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species, *Minettia ryukyuensis* and *Trigonometopus japonica*, are new to science, and four species, *Cerataulina subapicalis*, *Maquilingia hirticeps*, *Pachycerina javana* and *Trigonometopus brunneicosta*, are recorded newly from the Ryukyus, Japan.

1. *Cerataulina subapicalis* Hendel

Cerataulina subapicalis Hendel, 1913: 103 (♀, Formosa)

This testaceous yellow species is characterized by having a large velvety-black spot between base of antenna and eye (just below of lower *or*-base); glossy brownish black and bulbous face excepting dorso-lateral part testaceous narrowly; densely short-haired arista; minute *oc*; 1+2 *dc*; a pair of black, round spots on shiny T7.

Following characters are added to the original description: first flagellomere (3rd antennal segment) darkened distinctly on dorsal one-half; mesoscutum whitish pollinose, especially densely at middle and also on disk of scutellum, with pale brown vittae running just inside of *dc*-lines, slightly broadened posteriorly and extending to lateral margins of scutellum (to bases of apical *sc*); *acr* arranged in two sparse rows; anepisternum (mesopleuron) with whitish pollinose, yellow band at about dorsal quarter; wing 3.6-3.8 mm in length; fore femur with 5-6 *pv*, of which median 2-3 long, without ctenidium of spinulae; all tibiae with *pd* (those on fore and hind tibiae weak, that on mid tibia strong but shorter than a spur); fore tarsomeres brown-tinged (one female examined with brown-tinged fore tibia).

Specimens examined. 2 ♀, Mt. Yuwan-dake (300-600 m), Amami-Ooshima I., 17 & 31 July 1963 (J. G. & C. Y.).

Distribution. Formosa, Japan (Ryukyus). New to Japan (Ryukyus).

2. *Maquilingia hirticeps* Malloch

Maquilingia hirticeps Malloch, 1929: 36 (♀, Philippines)

This species has the elongate eye (about 1.5 times as long as high) as seen in the species of *Trigonometopus*, and three brown vittae on the pale testaceous mesoscutum which is provided with 1+2 *dc*.

Following characters are added to the original description: frons 1.3 times as wide as eye, with narrow (linear) brown median stripe; brown parafacial spot laterad of antennal base pale, narrow and transverse; face with pale brown spots ventrad of antennal bases in a form of inverted narrow V; pedicel of antenna with four long bristles, which are distinctly longer than the length of first flagellomere, on antero-ventral margin; gena with 14-22 long but slender bristles in two irregular rows along its ventral margin; wing 2.1 mm in length, with r-m beyond middle of discal cell, 4V-index 2.85.

Specimen examined. 1 ♀, Mt. Yuwan-dake (550 m), Amami-Ooshima I., 18 July 1963 (C.Y.).

Distribution. Philippines, Japan (Ryukyus). New to Japan (Ryukyus).

3. *Melinomyia flava* Kertész

See Sasakawa (1997), p. 34.

Specimens examined. 1 ♂ 1 ♀, Kara-yama, Ishigaki-jima I., 14 Mar. 1964 (C. Y. & J. H.). 1 ♂, Ushiku-mori, Iriomote-jima I., 11 Mar. 1964 (C. Y. & J. H.).

Distribution. Formosa, Japan (Honshu, Ryukyus).

4. *Minettia (Frendelia) ryukyuensis* n. sp. (Fig. 1)

Diagnosis. This is the second Ryukyuan species of the genus, and is characterized by the yellowish brown first flagellomere of antenna, presence of an anterior row of bristles on anepisternum, and by the large surstylus and tabulate aedeagus. The known *M. tubifera* Malloch, 1927, has not the ventro-lateral swellings on face.

Male & female. Black; head densely whitish gray pollinose except for sparsely pruinose ventral and ventro-lateral margin of frontalia and orbit; frontalia fuscous but pale brown to testaceous along ventral margin; antenna dark testaceous, first flagellomere and arista darkened; palpus black; thorax brownish black but postpronotal lobe (humerus), lateral side of mesoscutum and pleura brownish; mesoscutum densely brownish gray dusted, weakly shining, quadrivittate narrowly when viewed from front (one pair just inside of *dc*-lines and the other between *dc* and *ia*-lines); scutellum densely and pleura sparsely whitish gray dusted; abdomen weakly

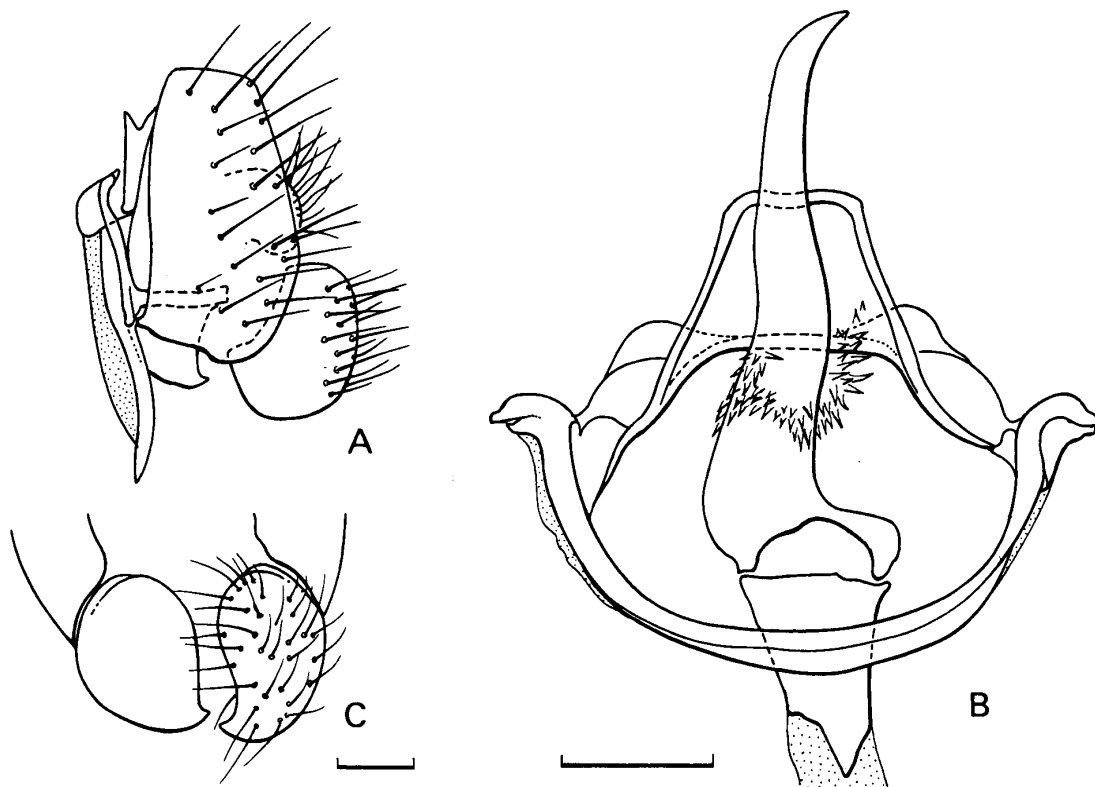


Fig. 1. Male genitalia of *Minettia (Frendelia) ryukyuensis* n. sp. (paratype).

A, lateral view; B, hypandrium and aedeagus, ventral view; C, surstylus, posterior view. Scale 0.1 mm.

shining, densely gray dusted. Wing hyaline, tinged with brownish yellow; calypter with fringe yellowish brown; halter with stalk yellow and knob brown. Legs with coxae and femora dark brown to brownish black, all tibiae with bases narrowly testaceous, all tarsi testaceous yellow.

Frons slightly wider than long or eye (2.4 : 2), with brown minute setulae ventrally; *oc* longer than upper *or*; lower *or* shorter than the upper; orbital hairs 3-4, distinctly longer than frontal setulae; parafrofrontalia with ventral part projecting above eye margin in profile; face with carina very short, only raised just below antennal bases and ventro-lateral swellings subshiny and distinct; gena about 1/5 of eye height; antenna with first flagellomere almost twice as long as wide; arista plumose, with dorsal longest hair as long as width of first flagellomere.

Mesoscutum with 0+3 *dc*, distance between first and second postsutural *dc* shorter than that between first *dc* and transverse suture, *acr* in 6-7 irregular rows, *prsc* as long as first *dc*, *ia* long; anepisternum with a vertical row of three bristles along its anterior margin and one or two short bristles above its ventral margin in addition to *mspl*; anterior *stpl* shorter than the posterior. Wing with C-index 3.3-3.5, r-m slightly before middle of discal cell, 4V-index 1.7, 5V-index 0.17-0.18, R_{4+5} slightly convergent with M, m-cu weakly sinuate at middle. Legs: Fore femur with 6-8 *pv*, mid femur with 5-6 *a*, hind femur with 1 *a*; fore and mid tibiae with *pd*, mid tibial *pd* strong and slightly shorter than spur; first to fourth tarsomeres of mid leg each with a pair of combs which are consisted of 4-5 spine-like setulae at ventro-distal end.

Male genitalia: Protandrium horseshoe-shaped, as long as epandrium in dorsal side; surstylus large, suborbicular in lateral view, minutely pointed at inner postero-distal end, densely setose on posterior side; hypandrium semicircular; both pregonites united ventrally as a shield and pointed at each ventro-lateral corner; aedeagus well-sclerotized tube-like, with a clustered spinulae on basal membrane; aedeagal apodeme short.

Body length 4.0 mm, wing length 4.0 (holotype)-4.2 mm.

Holotype male (BISHOP No. 16381), Kara-yama, Ishigaki-jima I., 14-18 Mar. 1964, C. M. Yoshimoto & J. Harrell. Paratypes: Amami-Ooshima I.- 1 ♂ 2 ♀, Mt. Yuwan-dake (300-600 m), 29 & 31 July 1963 (J. G.).

Tokunoshima I.- 1 ♀, Mikyo (200 m), 27 July 1963 (J. G.). Okinawa-jima I.- 1 ♀, Nannan-Gusuku, Nago, 21 Mar. 1964 (C. Y. & J. H.); 4 ♀, Izumi-gogayama, 22 Mar. 1964 (C. Y. & J. H.); 3 ♀, Shoshi, 23 Mar. 1964 (C. Y. & J. H.); 1 ♀, Nago, 11 Apr. 1965, T. Takara. Iriomote-jima I.- 27 ♀, Mt. Ushiku (350 m), 2, 3-7 & 7-10 Nov. 1963 (G. S.), Malaise trap; 1 ♀, Upper Nakara River (1-50 m), 6 Nov. 1963 (G. S.), Malaise trap; 1 ♀, nr. Utara Bridge, Urauchi River (3 m), 8 Nov. 1963 (G. S.), Malaise trap; 1 ♀, Ushiku-mori (425 m), 11 Mar. 1964 (C. Y. & J. H.); 1 ♂ 5 ♀, Nakara-gawa (0-200 m), 12 Mar. 1964 (C. Y. & J. H.). Ishigaki-jima I.- 3 ♂ 19 ♀, Kara-yama, 14 & 18 Mar. 1964 (C. Y. & J. H.); 1 ♂ 1 ♀, Yonehara, 15 Mar. 1964 (C. Y. & J. H.); 2 ♂, Torogawa, 17 Mar. 1964 (C. Y. & J. H.); 1 ♂ 1 ♀, Mt. Banna (100 m), 28 Oct. 1963 (G. S.), Malaise trap; 1 ♂ 1 ♀, Omoto-dake (100-250 m), 16 Mar. & 22 May, 1964 (C. Y., J. H. & J. G.).

Distribution. Japan (Ryukyus).

Remarks. This species resembles *M. multisetosa* (Kertész), known from Formosa, in having the additional bristles on anepisternum, but is distinguishable by its long hair on arista (pubescent in *multisetosa*), dark knob of halter (yellowish white in *multisetosa*) and small size (wing 4.82 mm long in *multisetosa*). Also, it differs from Formosan *M. nigrohalterata* Malloch, with dark knob of halter and vittate mesoscutum, in the length of arisal hairs (hardly more than half as long as width of the first flagellomere in *nigrohalterata*) and shape of aedeagus (bifurcate in *nigrohalterata*).

5. *Pachycerina javana* (Macquart)

Sapromyza javana Macquart, 1851: 247 (♀, Java).

Pachycerina javana (Macquart): Kertész, 1915: 512; Malloch, 1929: 20.

This yellowish to pale testaceous species is distinctive in the coloration of body, that is, frons with a large velvety-black ocellar spot, glossy face with two round spots, which are smaller and paler than ocellar spot, at middle of lateral sides, and parafrontalia with small brown spots at bases of *or* (indistinct at upper *or*-base); arista with black short hairs densely; palpus yellow but black on apical one-third; mesoscutum faintly brownish and narrowly quadrivittate: median pair between rows of *dc* and *acr*, and anterior part of lateral pair extended before *prs* and the posterior part behind suture on a row of *ia*-setulae; T6 with a pair of brown small round spots; second to fifth tarsomeres of fore leg brown (those of mid and hind legs faintly brown-tinged). Tarsus of fore leg is 1.3 times as long as tibia (first tarsomere nearly 2/3 length of tibia), and third to fourth tarsomeres well expanded and each nearly twice as wide as that of hind leg. Surstylus of male genitalia is projected downward as stated by Malloch (1929), but not extended forward; aedeagus is provided with two teeth projecting ventrally. Body length 3.2 mm and wing length 4.0 mm in male.

Specimens examined. 1 ♂ 1 ♀, Mt. Yuwan-dake (550 m), Amami-Ooshima I., 17 Dec. 1963 (C. Y.); 1 ♂, Shirahama (3 m), Iriomote-jima I., 13 Nov. 1963 (G. S.), light trap.

Distribution. Java, Philippines, Formosa, Japan (Ryukyus), India, Nepal. New to Japan (Ryukyus).

6. *Sapromyza zebra* (Kertész)

See Sasakawa (1998), p. 72.

Specimen examined. 1 ♀, Mt. Yuwan-dake (550 m), Amami-Ooshima I., 18 July 1963 (C. Y.).

Distribution. Formosa, Japan (Ryukyus), Nepal.

7. *Trigonometopus (Luzonomyia) japonicus* n. sp. (Fig. 2)

Diagnosis. This new species is easily distinguishable from *T. bakeri* Bezzi, 1913, known from the Philippines, by the shape of epandrium without postero-dorsal projection and by its bifurcate aedeagus (those of *bakeri* illustrated by Malloch, 1927, fig. 28).

Male & female. Frons pale testaceous, with a faint dark median line ventrad of ocellar triangle; parafacialia with a blackish triangle between antenna and eye; face and gena yellow, postgena with a brown horizontal stripe extending above level of ventralmost margin of eye; antenna yellowish brown, arista brown except for base; palpus yellow; thorax testaceous yellow; mesoscutum with three (-4) brown vittae: median one between lateralmost *acr*-rows before transverse suture but broadened laterally to *dc*-rows behind about level of second *dc* (in males, vitta separated narrowly into two vittae behind suture, and in females, separated entirely

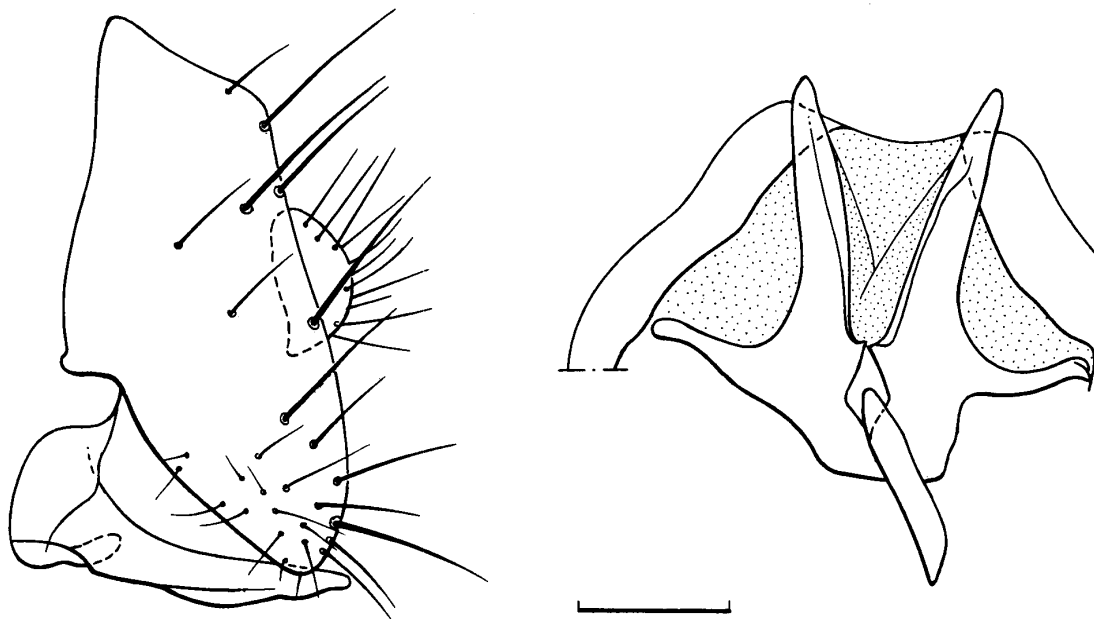


Fig. 2. Male genitalia of *Trigonometopus (Luzonomyia) japonicus* n. sp. (paratype).

throughout the whole length in a distance between median two rows of *acr*) and posterior two vittae extending to scutellum but ending before base of apical *sc*; lateral pair interrupted by transverse suture (anterior vitta extended to notopleuron and posterior one along postsutural *ia*-setulae rows); pleura with a broad horizontal vitta along both ventral margin of anepisternum and dorsal margin of katepisternum, extending anteriorly to propleuron; abdominal T1-6 each with a brown posterior band which is about one-half as long as whole length of tergite but interrupted distinctly at middle, band on T6 very narrow or indistinct; sternites, male epandrium and female T7 yellow. Wing hyaline, very faintly yellow-tinged along anterior margin, without dark clouds around cross veins; calypter with margin and fringe pale brown; halter yellow, with knob very faintly brown-tinged. Legs yellow, third (or fourth) to fifth tarsomeres very slightly brown-tinged.

Frons 2-2.5 times as long as wide, 1.3-1.5 times as wide as eye, almost parallel-sided, setulose below level of upper *or* arranged in four irregular rows but densely below level of lower *or* and those longer than dorsal ones; upper *or* growing at mid-level of eye in profile, lower *or* slightly shorter than the upper; *oc* short, subequal to ventral frontal setula in length; *pvt* nearly twice length of *oc*; eye 1.2-1.3 times as long as high, with microscopic hairs very sparsely; face with median carina distinct in dorsal half of the facial height in male but in dorsal quarter in female; parafacialia with a row of 3-4 setulae just below eye in addition to an anterior parafacial row of 3-5 setulae; *pm* usually 4 (or 3), long; antenna with first flagellomere narrowing apically but not pointed apically, slightly longer than width at middle (8 : 7), arista thrice length of first flagellomere, microscopically pubescent.

Mesoscutum with 0+3 *dc*, four rows of *acr* but lateralmost row very sparse or ending at level of first postsutural *dc*, *prsc* short; katepisternum with anterior seta shorter than *prsc*. Wing with C-index 5.25, r-m almost at middle of discal cell, 4V-index 2.0, 5V-index 0.25. Fore femur with 4 *pv*, all tibiae with *pd*, mid tibia with a spur which is stronger than *pd*.

Male genitalia: Protandrium undeveloped; epandrium with both ventral sides united with each other by membrane, setose on posterior part; surstylus not projected; aedeagus bifurcate, well sclerotized, and closely united with hypandrium at base.

Body length 2.5-3.0 (holotype) mm, wing length 2.5-2.7 (holotype) mm.

Holotype female (BISHOP No. 16383), Mt. Yuwan-dake (300-600 m), Amami-Ooshima I., 31 July 1963, J. L. Gressitt. Paratypes: 2 ♂ 1 ♀, same locality as holotype, 17 July 1963, C. M. Yoshimoto.

Distribution. Japan (Ryukyus).

8. *Trigonometopus (Trigonometopus) brunneicosta* Malloch

Trigonometopus brunneicosta Malloch, 1927: 165 (♀, Formosa).

This testaceous species is distinctive in the following characters: frons narrow (about 1.7 times as long as wide) and densely setulose below level of upper *or*, and indistinctly brownish between two median rows of setulae; mesoscutum and scutellum gray dusted, faintly brownish, the former with three yellowish vittae (median one broad and extended between four rows of *acr* before transverse suture, but narrowed between two median rows of *acr* behind suture and posteriorly extending to scutellum; lateral ones along *dc*-lines and extended to lateral margins of scutellum); wing 3.5 mm long, with brown anterior margin; abdominal tergites each with brown posterior margin (interrupted at middle on T5-6) and T5 with brown antero-lateral margins; second to fifth tarsomeres of fore leg brownish. Male genitalia: See Sasakawa and Tho (1990), p. 124.

Specimen examined. 1 ♀, Ishigaki-jima I., Feb.-Mar. 1962 (G. B.).

Distribution. Formosa, Japan (Ryukyus), Malaya. New to Japan (Ryukyus).

Subfamily Homoneurinae

Four genera, *Homoneura*, *Prosopophorella*, *Trypetisoma* and *Wawu*, of the 13 Oriental genera are known to occur on the Ryukyu Islands (Sasakawa and Ikeuchi, 1982 & 1985; Sasakawa, 1997 & 1998). Species diversity is apparently great in the genus *Homoneura* as well as in other islands of Oriental Region, and most of the species are widely distributed throughout the islands. In this paper, two new species, *Homoneura nigroantennata* and *H. protandriifera*, are described. In other genera, only one or two species are known at present.

The known species of *Prosopophorella* and *Wawu* show remarkable sexual dimorphism, that is, the male has a median process or horn on the ventral margin of face. However, a new species, *Wawu japonicus*, described below, is aberrantly not provided with a facial horn. The genus *Trypetisoma* differs distinctly from other genera in the presence of an extra bristle at middle of anepisternum (mesopleuron) in addition to a normal posterior *mspl* bristle. Only one Oriental species, *T. fenestrata*, is known to occur on the Ryukyu Islands.

9. *Homoneura (Homoneura) acrostichalis* (de Meijere)

See Sasakawa and Ikeuchi (1985), p. 494, and Sasakawa (1997), p. 142.

Specimens examined. Ishigaki-jima I.: 1 ♂ 2 ♀, Ohama, 3-7 Feb. 1953 (T. S.); 2 ♀, Kabira, 12 Feb. 1953 (T. S.); 2 ♀, Kainan, 24 Feb. 1953 (T. S.); 1 ♂ 1 ♀, Yonehara, 15 Mar. 1964 (C. M. & J. H.); 1 ♂ 3 ♀, Torogawa, 17 Mar. 1964 (C. Y. & J. H.); 1 ♀, Yonabaru (35 m), 21 May 1964 (J. G.); 1 ♀, Hirano (15 m), 27 Oct. 1963 (G. S.); 1 ♂, Ibaruma (50 m), 27 Oct. 1963 (G. S.). Iriomote-jima I.: 1 ♂ 1 ♀, Ushiku-mori (425 m), 11 Mar. 1964 (C. Y. & J. H.); 1 ♂, Mt. Ushiku (200-350 m), 7 Nov. 1963 (G. S.), Malaise trap.

Distribution. Cocos Is., Ceylon, Formosa, Japan (Ryukyus, Ogasawaras); Solomon Is.

10. *Homoneura (Homoneura) bistrinata* (Kertész)

See Sasakawa and Ikeuchi (1982), p. 484; Sasakawa (1997), p. 142, and (1998), p. 61.

Specimens examined. Okinawa-jima I.: 1 ♂ 1 ♀, Shoshi, 23 Mar. 1964 (C. Y. & J. H.); 2 ♀, Nakijin, 12 Apr. 1964, T. Takara. Miyako-jima I.: 2 ♀, Hirara, 9 Mar. 1953 (T. S.). Ishigaki-jima I.: 1 ♂ 5 ♀, Ishigaki, 30 Jan.-5 Feb. 1953 (T. S.); 2 ♂ 4 ♀, Yonehara, 15 Mar. 1964 (C. Y. & J. H.); 1 ♂ 5 ♀, Torogawa, 17 Mar. 1964 (C. Y. & J. H.); 1 ♀, Yonabaru (35 m), 21 Apr. 1964 (J. G.); 10 ♀, Mt. Banna (SE, 100 m), 27-28 Oct. 1963 (G. S.), Malaise trap.

Distribution. Formosa, Japan (Ryukyus).

11. *Homoneura (Homoneura) brevicornis* (Kertész)

See Sasakawa and Ikeuchi (1982), p. 487, and Sasakawa (1998), p. 61.

Specimens examined. Ishigaki-jima I.: 1 ♀, Kabira, 12 Feb. 1953 (T. S.); 1 ♀, Oct. 1951 (G. B.). Iriomote-jima I.: 2 ♂ 1 ♀, Sirahama-Sonai (1-15 m), 5 Nov. 1963 (G. S.).

Distribution. Formosa, Japan (Ryukyus).

12. *Homoneura (Homoneura) discoglauca* (Walker)

See Sasakawa and Ikeuchi (1982), p. 492; Sasakawa (1997), p. 142, and (1998), p. 62.

Specimens examined. Okinawa-jima I.: 2 ♀, Hentona, 6 Apr. 1953 (T. S.); 3 ♂ 2 ♀, Mt. Yonaha, 9 Apr. 1953 (T. S.); 1 ♂ 1 ♀, Chizuka, 2 Sept. 1945 (J. G.); 1 ♂ 1 ♀, Yona, 26 Nov. 1963 (G. S.). Ishigaki-jima I.: 1 ♂, Torogawa, 17 Mar. 1964 (G. S.), Malaise trap; 12 ♂, Kara-yama, 18 Mar. 1964 (C. Y. & J. H.); 13 ♂ 1 ♀, Mt. Banna (200 m), 22-23 May 1964 (J. G.) and 27-28 Oct. 1963 (G. S.); 1 ♂, Omoto-dake, 14 Nov. 1963 (G. S.), Malaise trap. Iriomote-jima I.: 1 ♀, Shirahama-Sonai, 8 Mar. 1964 (J. H.); 6 ♀, Nakara-gawa (0-200 m), 12 Mar. 1964 and 6 Nov. 1963 (C. Y. & J. H., and G. S.); 1 ♀, nr. Komi (50 m), 1 Nov. 1963 (G. S.); 1 ♂ 4 ♀, Mt. Ushiku (350 m), 3 & 7-10 Nov. 1963 (G. S.), Malaise trap.

Distribution. Java, Krakatau, Lombok, Celebes, Formosa, Japan (Ryukyus); Solomon Is.

13. *Homoneura (Homoneura) furcistylis* Sasakawa

See Sasakawa (1998), p. 62.

Specimens examined. 1 ♂ 1 ♀, Hentona, Okinawa-jima I., 25 Mar. 1964 (C. Y.).

Distribution. Japan (Ryukyus).

14. *Homoneura (Homoneura) latifrons* Malloch

See Sasakawa and Ikeuchi (1982), p. 486.

Specimen examined. New record from Ishigaki-jima I.: 1 ♀, Nov.-Dec. 1952 (G. B.).

Distribution. Formosa, Japan (Ryukyus).

15. *Homoneura (Homoneura) nigroantennata* n. sp. (Fig. 3)

Diagnosis. This testaceous species is characterized by the bicolor antenna, pubescent arista, anteriorly smoky brown wing, and long surstylus of epandrium.

Male. Testaceous; ocellar triangle brown; antenna with scape and pedicel testaceous, first flagellomere

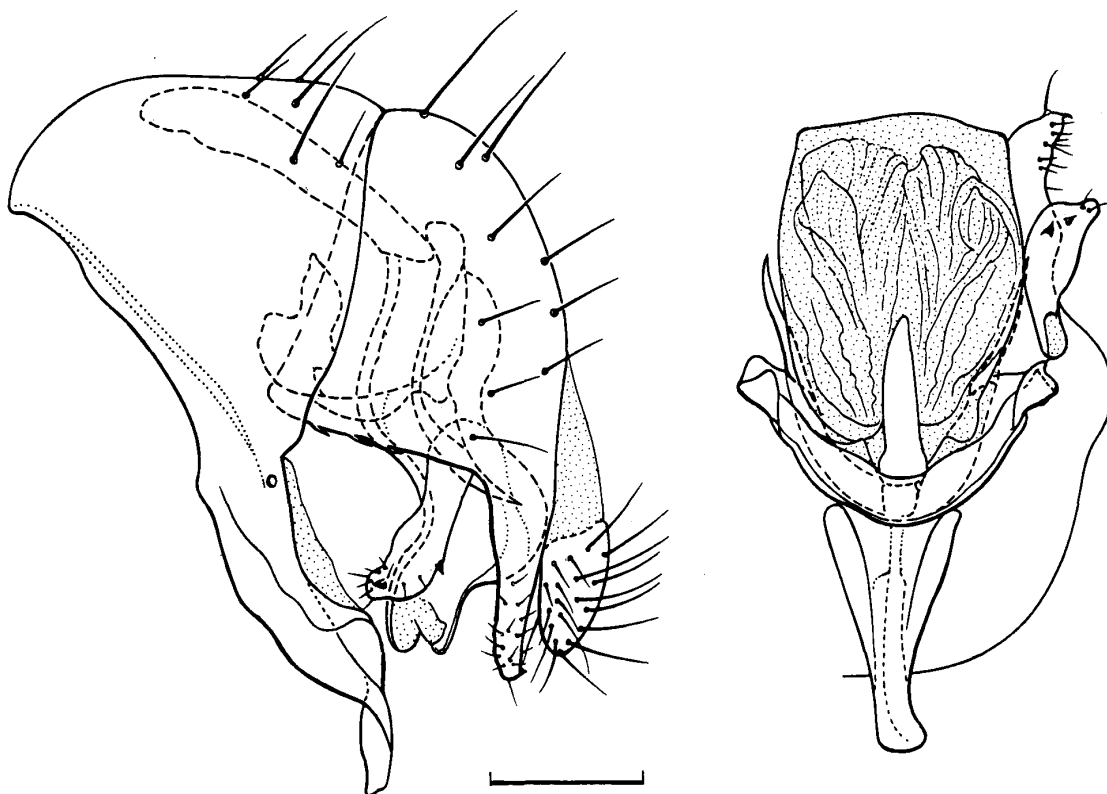


Fig. 3. Male genitalia of *Homoneura (H.) nigroantennata* n. sp. (holotype).

brownish black except for dorso-basal corner and base of arista; arista blackish; gena yellowish; palpus yellow or with apex narrowly brownish; thorax weakly shining, very sparsely grayish dusted; T3-6 brownish, mat; epandrium shiny brown. Wing hyaline, with costal cell distinctly and cell R_3 faintly brown-tinged, and faintly clouded around m-cu. Legs testaceous yellow.

Frons nearly twice as wide as eye, distinctly wider than long and converging ventrally; parafacialia not projecting above eye in profile; lower *or* slightly shorter than the upper (*oc* broken); face flat; gena 1/7 eye height; *pm* 4-5; antenna with first flagellomere orbicular and almost as long as wide, arista shorter than eye height, microscopically pubescent.

Mesoscutum with 0+3 *dc* (anteriormost *dc* close to suture), six rows of *acr*, *prsc* short; katepisternum with anterior *stpl* shorter than the posterior. Wing with C-index 2.7, r-m at middle of discal cell, 4V-index 2.5, 5V-index 0.3. Fore femur with 3-4 *pv*, mid femur with 5 *a*, all tibiae with *pd*, mid tibia with a spur.

Genitalia: Protandrium ringed, very long on dorsal side, with a narrow bridge ventrally; epandrium small but with long surstylus which is pointed minutely at distal end and short-haired; hypandrium semicircular, pregonite broader than surstylus and with two minute teeth, postgonite gradually narrowed toward apex and pointed; aedeagus largely membranous, apodeme almost 1/2 length of aedeagus.

Body and wing length 2.1 mm, respectively

Female unknown.

Holotype male (BISHOP No. 16379), Yonehara (0-100 m), Ishigaki-jima I., 15 Mar. 1964, C. M. Yoshimoto & J. Harrell; abdomen and genitalia in a polyethylene tubule with glycerol and pinned with the specimen.

Distribution. Japan (Ryukyus).

Remarks. This species is similar to *H. laticosta* (Thomson) in the wing coloration and to *H. nigroapicata* Malloch in the presence of long, downwardly projected surstylus. However, it is distinguishable from them by its bicolor antenna and well-developed gonites of male genitalia.

Etymology. The specific name refers to the blackish first flagellomere of antenna.

16. *Homoneura (Homoneura) ornatifrons* (Kertész)

See Sasakawa (1998), p. 64.

Specimens examined. New records from Tokunoshima I. and Okinawa-jima I.: 2 ♀, Mikyo (200 m), Tokunoshima, 27 July 1963 (J. G.); 3 ♂ 6 ♀, Yona (100 m), Okinawa-jima, 26 Nov. 1963 (G. S.). Amami-Ooshima I.: 1 ♀, Yuwan-dake (300-600 m), 29 July 1963 (J. G.). Ishigaki-jima I.: 5 ♂ 6 ♀, Yonehara (0-100 m), 15 Mar. 1964 (C. Y. & J. H.); 3 ♂ 6 ♀, Omoto-dake, 16 Mar. 1964 (C. Y. & J. H.); 2 ♂ 6 ♀, Kara-yama, 14-18 Mar. 1964 (C. Y. & J. H.), Malaise trap; 9 ♂ 9 ♀, Kara-yama, 14, 16 & 18 Mar. 1964 (C. Y. & J. H.), swept and Malaise trap; 6 ♂ 7 ♀, Mt. Banna (70 m), 22-23 May 1964 (J. G.), Malaise trap; 16 ♂ 19 ♀, Mt. Banna (60-100 m), 27-28 Oct. 1963 (G. S.), Malaise trap; 11 ♂ 31 ♀, Mt. Omoto, 29 Oct., 17-20 Nov. 1963 (G. S.), Malaise trap. Iriomote-jima I.: 4 ♂ 7 ♀, Ushiku-mori (425 m), 9 & 11 Mar. 1964 (C. Y. & J. H.); 1 ♂, Inaba, 10 Mar. 1964 (C. Y. & J. H.); 4 ♂ 5 ♀, Nakara-gawa (0-200 m), 12 Mar. 1964 (C. Y. & J. H.); 1 ♀, nr. Komi (50 m), 1 Nov. 1963 (G. S.); 5 ♂ 15 ♀, Shirahama-Sonai (1-15 m), 5 Nov. 1963 (G. S.); 5 ♂ 21 ♀, Shirahama (15 m), 7 Nov. 1963 (G. S.), light trap; 1 ♂ 2 ♀, nr. Utara Bridge, Urauchi River (3 m), 8 Nov. 1963 (G. S.); 35 ♂ 52 ♀, Mt. Ushiku (350 m), 3-7 & 7-10 Nov. 1963 (G. S.), Malaise trap.

Distribution. Formosa, Japan (Ryukyus).

17. *Homoneura (Homoneura) paraforcipata* Sasakawa

See Sasakawa (1998), p. 65.

Some specimens examined were provided with a faint cloud around cross vein r-m as well as that around m-cu, and first flagellomere shorter than the holotype female (1.4 times as long as wide).

Specimens examined. New records from Ishigaki-jima and Iriomote-jima Is. Okinawa-jima I.: ♂, Yona, 24 Mar. 1964 (C. Y. & J. H.). Ishigaki-jima I.: 1 ♀, Kara-yama, 14-18 Mar. 1964 (C. Y. & J. H.); 2 ♂ 1 ♀, Banna (70 m), 20-23 May 1964 (J. G.), at light & Malaise trap; 1 ♂, Mt. Omoto (200 m), 17-20 Nov. 1963 (G. S.), Malaise trap. Iriomote-jima I.: 1 ♀, Kara-yama, 14-18 Mar. 1964 (C. Y. & J. H.); 2 ♀, Mt. Ushiku (350 m), 3-7 Nov. 1963 (G. S.), Malaise trap; 1 ♀, Shirahama-Sonai (1-15 m), 5 Nov. 1963 (G. S.); 1 ♀, Ohara (5 m), 15 Nov. 1963 (G. S.).

Distribution. Japan (Ryukyus).

18. *Homoneura (Homoneura) protandrifera* n. sp. (Fig. 4)

Diagnosis. This testaceous species is distinctive in having the microscopically pubescent arista, a pair of black spots on the sixth abdominal tergite, ventrally convex face as in the species of *Prosopomyia*, clear cross veins, and dorsal apodeme on protandrium.

Male. Testaceous, but parafrontalia, gena, postpronotal lobe and scutellum more or less yellowish; ocellar triangle pale brown; occiput with dorso-median part dark brown on ventral half; face with dorso-lateral corner just below base of antenna whitish-gray dusted brown and lateral margin linearly pale brown; arista brown except for base; thorax sparsely whitish-gray dusted; mesoscutum mat, with a pair of brownish stripes extending between median two rows of *acr* and from suture to level of second *dc*; T6 with a pair of black round spots which are about one-half as long as the whole length of tergite. Wing hyaline, very faintly brownish yellow tinged; halter yellow.

Frons almost as wide as long, about 1.3 times as wide as eye, diverging ventrally, and setulose on ventral half excepting central line; *oc* and lower *or* missing; face convex at level of ventralmost margin of eye in profile; gena 1/4 eye height; *pm* short, as long as parafacial setulae; antenna with first flagellomere 1.5 times as long as wide; arista minutely pubescent.

Mesoscutum with 0+3 *dc*, six rows of *acr*, *prsc* subequal to first postsutural *dc*; katapisternum with anterior *stpl* shorter than the posterior. Wing with C-index 4.0, r-m before middle of discal cell, 4V-index 1.6, 5V-index 0.18. Legs: Fore femur with ctenidium of setulae and 4 *pv*, mid femur with 5 *a*, all tibiae with *pd*.

Genitalia: Protandrium well-developed, ringed, with a dorsal apodeme in right side only and bridge at middle; epandrium with surstylus lobate, densely setose on outer side and setulose on inner side; hypandrium narrowly crescent, with postgonite shorter than pregonite and setulose; aedeagus membranous on ventral side, sclerotized on lateral side and with a tooth at middle.

Body length 3.5 mm, wing length 3.2 mm.

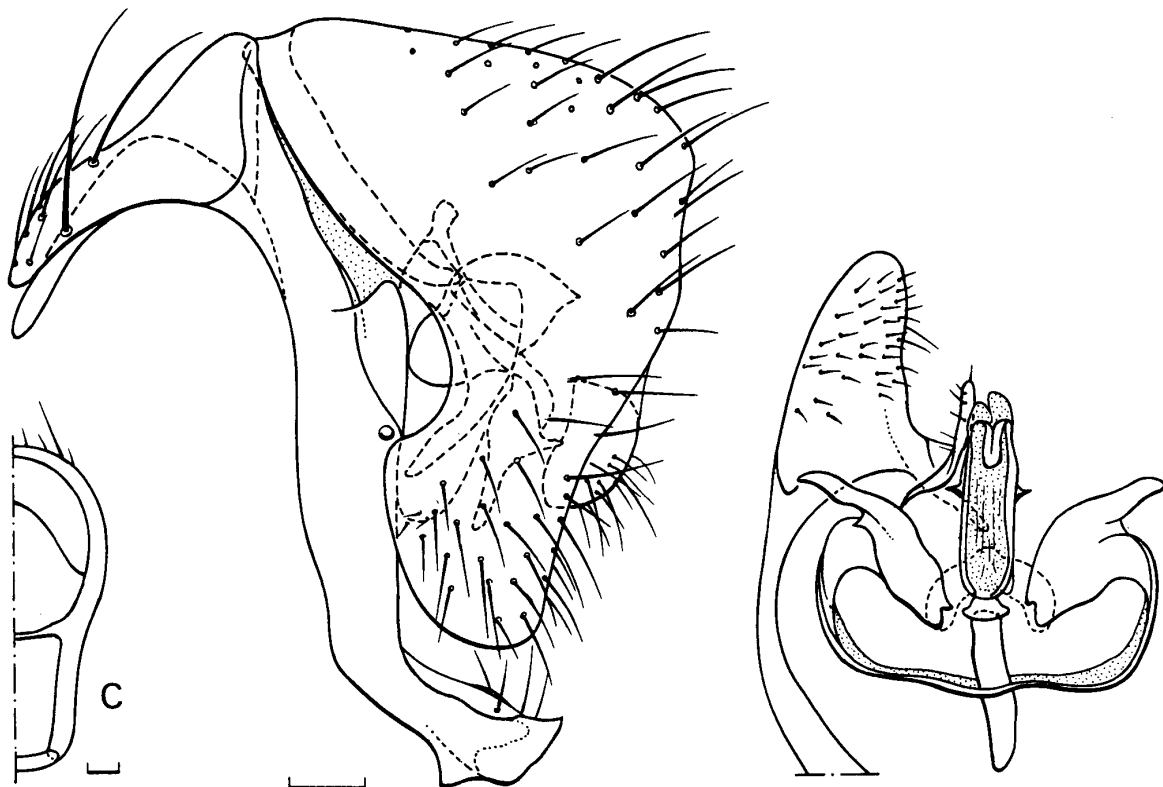


Fig. 4. Male genitalia of *Homoneura (H.) protandrifera* n. sp. (paratype).
C, right half of protandrium, posterior view.

Female unknown.

Holotype male (BISHOP No. 16380), Mt. Yuwan-dake (300-600 m), Amami-Ooshima I., 29 July 1963, J. L. Gressitt. Paratypes: 1 ♂, same data as holotype; 2 ♂, Mt. Yuwan-dake (550 m), 17 July 1963, C. M. Yoshimoto.

Distribution. Japan (Ryukyus).

Etymology. The specific name refers to the peculiar shape of protandrium.

Remarks. This species differs distinctly from *H. (H.) nudifrons* (Kertész) with a pair of black spots on T5 and without convex face.

19. *Homoneura (Homoneura) spinicauda* Sasakawa and Ikeuchi

See Sasakawa and Ikeuchi (1982), p. 490.

Specimens examined. First records from Amami-Ooshima I.: 1 ♂ 1 ♀, Nase, 14 July 1963 (C. Y.), and Ishigaki-jima I.: 1 ♀, Nov.-Dec. 1952 (G. B.).

Distribution. Japan (Honshu, Kyushu, Ryukyus), Korea (North).

20. *Homoneura (Homoneura) striatifrons* (de Meijere)

See Sasakawa and Ikeuchi (1982), p. 480.

Specimens examined. First records from Tokunoshima I.: 1 ♂, Mikyo, 26 July 1963 (C. Y.), and Ishigaki-jima I.: 1 ♀, Torogawa, 17 Mar. 1964 (G. B.). Amami-Ooshima I.: 7 ♂ 3 ♀, Mt. Yuwan, 1-4 May 1953 (T. S.); 3 ♂ 4 ♀, Shinokawa, 11 May 1953 (T. S.); 8 ♂ 1 ♀, Yuwan-dake, 29 & 31 July 1963 (J. G.). Okinawa-jima I.: 1 ♂, Mt. Yonaha, 25 Mar. 1953 (T. S.); 1 ♀, Yona, 24-25 Mar. 1964 (C. Y. & J. H.); 1 ♂, Chizuka, Sept. 1945 (G. B.).

Distribution. Java, Japan (Ryukyus).

21. *Homoneura (Homoneura) unguiculata* (Kertész)

See Sasakawa and Ikeuchi (1982), p. 494, and Sasakawa (1997), p. 144.

Specimens examined. New record from Okinoerabu-jima I.: 2 ♂ 4 ♀, Oyama (254 m), 28 July 1963 (C. Y.), Malaise trap. Okinawa-jima I.: many males and females, Chinen, Gushichan, Hentona, Izumi, Katsuyama, Misato, Nago, Nakagusuku, Nakijin, Shuri, Tamagusuku, Yona, Mt. Yonaha, 18 Mar.-23 Apr. 1953, 1963 & 1964 (T. S., G. S. & C. Y.). Miyako-jima I.: 1 ♂, Hirara, 23 Oct. 1952 (G. B.). Ishigaki-jima I.: 4 ♂ 13 ♀, Inoda, Ishigaki, Kabira, Kainan, Ohama, Takeda, 29 Jan.-27 Feb. 1953 (T. S.); many males and females, Kara-yama, Omoto-dake, Torogawa, Yonehara, 15-18 Mar. 1964 (C. Y. & J. H.); 2 ♂ 3 ♀, Mt. Omoto-dake (100-250 m), 29 Oct. & 14 Nov. 1963 (G. S.), Malaise trap. Iriomote-jima I.: 2 ♂ 8 ♀, Nakayama, Ohara, Sonai, 29 Dec. 1952-19 Jan. 1953 (T. S.); 6 ♂ 3 ♀, Shirahama-Sonai (1-15 m), 5 Nov. 1963 (G. S.).

Distribution. Formosa, Japan (Ryukyus), China, Ceylon; U.S.A. (immigrant).

22. *Homoneura (Homoneura) yamagishii* Sasakawa and Ikeuchi

See Sasakawa and Ikeuchi (1982), p. 496, and Sasakawa (1998), p. 66.

Specimens examined. Ishigaki-jima I.: 3 ♂ 5 ♀, Yonehara, 15 Mar. 1964 (C. Y. & J. H.); 8 ♂ 2 ♀, Kara-yama, 18 Mar. 1964 (C. Y. & J. H.); 3 ♂ 18 ♀, Mt. Omoto (200 m), 17-20 Nov. 1963 (G. S.), Malaise trap.

Distribution. Japan (Hokkaido, Honshu, Kyushu, Ryukyus).

23. *Trypetisoma (Trypaneoides) fenestrata* (de Meijere)

See Sasakawa (1997), p. 141.

Specimen examined. New record from Tokunoshima I.: 1 ♂, Mikyo (200 m), 27 July 1963 (J. G.).

Distribution. Java, Malaya, Japan (Ryukyus).

24. *Wawu japonicus* n. sp., (Fig. 5)

Diagnosis. This yellowish species is unique in the absence of epistomal horn in male, and in having the blackish abdomen and two brownish spots on the ultimate section of vein R_{4+5} in addition to an apical cloud.

Male. Yellow; face pale; ocellar triangle, antenna and palpus also yellow, but arista brownish except for

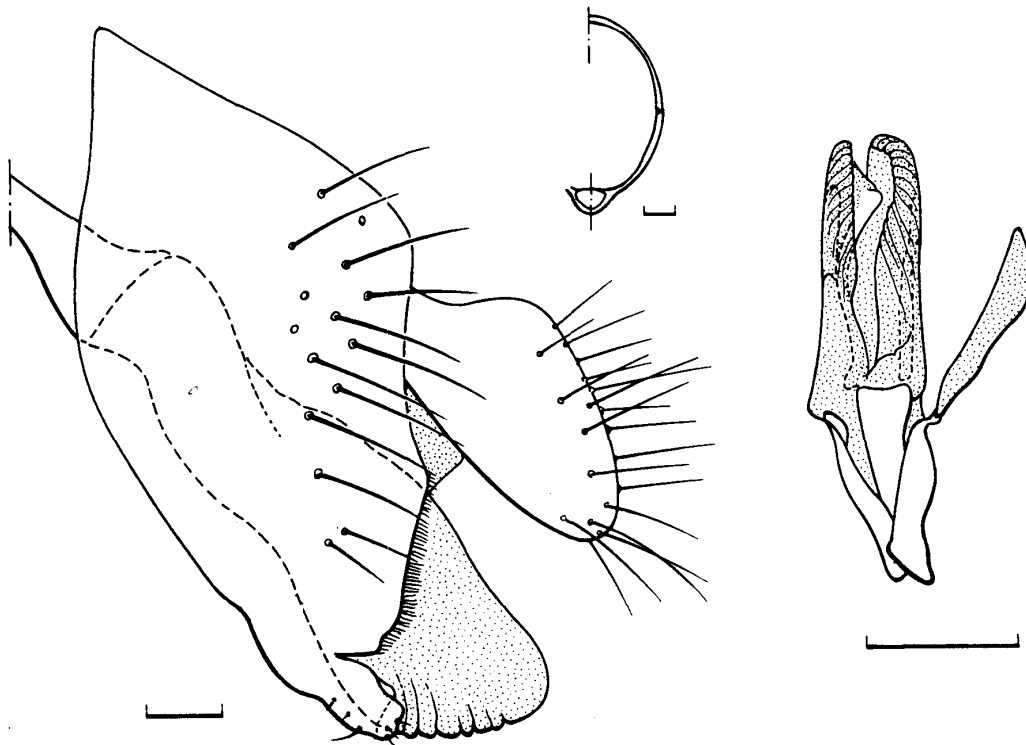


Fig. 5. Male genitalia of *Wawu japonicus* n. sp. (holotype).

base; lateral part of parafrontalia above base of lower *or* and ventral parafrontalia entirely, parafacialia, orbit and postorbit distinctly whitish pruinose; gena with a brown triangle extending to vibrissal angle under the ventralmost anterior corner of eye; proboscis yellowish brown; mesoscutum brownish quadrivittate, ending before level of posteriormost *dc*, median pair between *dc*-rows narrow and covered with a central whitish-pruinose stripe (in anteriormost part almost twice as wide as the posterior narrowest part between bases of *prsc*), and lateral pair distinctly narrowed posteriorly, with anteriormost part connected laterally with dorsal margin of postpronotal lobe but not touched to base of *prsc*; area around *dc*-rows between median and lateral vittae testaceous narrowly; lateral side of scutum and pleura very sparsely pruinose; scutellum entirely yellow; abdomen subshiny brownish black; T4 with postero-lateral margins and T5-6 with median parts including posterior margins brownish; S6 yellow posteriorly and densely whitish pruinose throughout the whole length; epandrium grayish dusted, cercus brown. Wing hyaline, faintly yellowish tinged, with three pale brown round spots on r-m and ultimate section of R_{4+5} (one basad of m-cu level and the other at middle between level of m-cu and apex of R_{4+5}), m-cu clouded but distinctly around its anterior extremity, base of R_{4+5} and apices of R_{2+3} and R_{4+5} faintly clouded; halter testaceous. Legs yellow; fore third-fourth tarsomeres pale brown.

Frons 1.5 times as wide as eye, diverging ventrally, sparsely scattered brownish minute hairs below level of upper *or*; *oc* short, about 1/2 of upper *or* and directed outwards; *pvt* parallel; parafrontalia and parafacialia projecting beyond eye in profile; upper *or* directed outwards and the lower for- and inward; face well projecting beyond parafacialia in profile, slightly convex just below antennal bases, without epistomal process but with ventral margin more projected anteriorly than the dorsal convexity in profile; eye twice as high as long, distinctly narrowed ventrally, bare; gena about 1/6 height of eye; ventral parafacial setae longer than peristomal setulae which are arranged irregularly; antenna with first flagellomere ovoid, about 1.5 times as long as broad; arista as long as eye height, bare; palpus densely setose on ventral side: pale brown to whitish setae in inner postero-ventral row distinctly more than twice length of brown outer antero-ventral setulae.

Mesoscutum with 0+3 *dc*, six rows of *acr*, *prsc* nearly 1/2 of first postsutural *dc*, *ipa* slightly shorter than *opa*; scutellum with apical *sc* subequal to the basal one in length; anterior *stpl* weaker than the posterior. Wing with C-index 3.6, r-m at apical 2/5 of discal cell, 4V-index 1.75, 5V-index 0.13. Legs: Fore femur with a row of ctenidium, all tibiae with *pd*, mid tibia with two spurs; fore first tarsomere with long, pale brown ventral hairs,

of which the longest one thrice as long as basal width of tarsomere.

Genitalia: Protandrium ringed, narrow, with ventral bridge narrow and membranous; epandrium densely hairy on ventro-caudal part just above surstylus which is somewhat papillate; hypandrium consisted of two sclerites, pregonite long and membranous; aedeagus membranous and without teeth.

Body length 3.2 mm, wing length 3.0 mm.

Female unknown.

Holotype male (BISHOP No. 16382), Ishigaki-jima I., Nov.-Dec. 1952, G. E. Bohart; abdomen and genitalia in a polyethylene tubule with glycerol and pinned with the specimen.

Distribution. Japan (Ryukyus).

Remarks. This new species differs distinctly from the known Oriental species, *Wawu cornutus* Hendel (1913), *W. nigrimanus* Malloch (1929) and *W. rhinoceros* (de Meijere, 1914) **n. comb.** in the absence of an epistomal horn.

II. Formosa

The Formosan fauna of the Lauxaniidae was studied by Hendel (1909, 1913 & 1920), Kertész (1913 & 1915) and Malloch (1927). It consists of 72 species (33 of them endemic) of 18 genera. I have examined the material in my hands and succeeded in identifying a number of the species under their useful contributions. A total of 85 species (including 9 new species described herein and 4 newly recorded species) are recorded at the present time. It makes mention of the distribution of some new species occurred on the side (2,130-2,400 m) of Mt. Alishan, Chiayi Hsien.

Subfamily Lauxaniinae

Thirty genera are known to occur in the Oriental Region, of which 13 are recorded from Formosa (Stuckenberg, 1971; Shewell, 1977): *Austrolauxania* (including 1 species), *Cerataulina* (1), *Chaetolauxania* (1), *Diplochasma* (3), *Drepanephora* (2), *Lauxaniella* (1), *Melinomyia* (1), *Minettia* (7), *Pachycerina* (3), *Panurgopsis* (1), *Sapromyza* (6), *Steganopsis* (1) and *Trigonometopus* (3). In this paper, the genus *Xangelina* Walker, which has been known to occur in the Oriental and Ethiopian regions, is recorded newly from Formosa.

Five new species, *Minettia longistylis*, *Sapromyza conjuncta* and *S. terminalis*, *Trigonometopus gressitti* and *Xangelina formosana*, are described, and *Pachycerina decemlineata* de Meijere is recorded from Formosa for the first time.

1. *Minettia (Frendelia) fuscofasciata* (de Meijere)

Lauxania fuscofasciata de Meijere, 1910: 125 (Java).

Minettia (Frendelia) fuscofasciata: Shewell, 1977: 188.

This blackish species is characterized by the yellowish brown antenna, plumose arista (dorsal longest hair as long as width of first flagellomere), five grayish (rarely yellowish gray) pollinose stripes (one on central line, two along *dc*-lines and indistinct two along *ia*-lines) on mesoscutum, presence of three (-2) setae arranged in vertical line before anterior ventral margin in addition to a normal *mspl* (the longest ventralmost one about 1/2 length of *mspl*), whitish gray dusted margin of scutellum, pale brown base of wing (4.3-4.7 mm in length) and yellowish tarsi.

Male genitalia are specific as follows: protandrium horseshoe-shaped; surstylus separated from epandrium, distinctly projected ventrally and slightly protruded on posterior ventral corner; pregonites black, unequal in length, right one about twice as long as the left and curved irregularly; aedeagal processes also unequal in length, left one about twice as long as the right, curved irregularly. I have not seen the types of *M. fuscofasciata* and *M. quadrispinosa* Malloch. The male genitalia of *quadrispinosa* (figured by Malloch, 1929, fig. 24) are quite similar to the above-mentioned description for *fuscofasciata*. He described that the difference between these species is only the presence or absence of preapical dorsal seta on the hind tibia, that is, *fuscofasciata* is provided with *pd*.

Specimens examined. 1 ♂ 1 ♀, Tsingtau, nr. Taipei, 12 Mar. 1958 (K. L.); 2 ♀, Yangmingshan (450 m), nr.

Taipei, 28 Mar. 1965 (C. Y. & B. P.); 2 ♂, Yehliu Beach, Taipei Hsien, 29-31 Mar. 1965 (C. Y.); 1 ♂, Wulai (300-500 m), 12 Apr. 1960 (T. M.); 1 ♀, 17-23 km W of Taipei, 15 Apr. 1965 (M. S.); 4 ♀, Chaochi, nr. Yilanto Pinglin, Taipei Hsien, 15-16 Apr. 1965 (C. Y.); 1 ♀, Wulai (150 m), 17 Apr. 1965 (C. Y.); 1 ♀, Tsaoshan, Taipei, 25 Apr. 1958 (K. L.); 1 ♀, Mt. Alishan (2400 m), Chiayi Hsien, 12-16 June 1965 (T. M. & K. L.); 5 ♂ 5 ♀, Tsaoshan (150-300 m), nr. Taipei, 9 July 1958 (K. L.); 3 ♀, Alishan (2130 m), 20-23 Aug. 1947 (J. G.); 1 ♂, Chito Exp. Forest (1150 m), 12-15 Oct. 1957 (T. M.); 2 ♂, Wulai Kueishan (300-500 m), 11 Nov. 1957 (T. M.); 1 ♂ 2 ♀, Santiaoling, 19 Nov. 1957 (T. M.).

Distribution. Java, Formosa.

2. *Minettia (Minettia) longistylis* n. sp. (Fig. 6)

Diagnosis. This fuscous species is readily recognized by the large size, short-haired arista, 0+1 *acr* bristle, and black long surstylus. This is the first Oriental species of subgenus *Minettia* s. str.

Male. Head brown, but frons pale, with ventral margin of frontalia yellowish, back of head except for blackish ventral half of occiput and ventro-lateral margin of epistome testaceous; antenna testaceous, arista brown except for base; palpus black. Thorax brown, mesoscutum blackened behind suture, sparsely grayish dusted but lateral side shining; anepisternum and ventral half of pleurotergite black, katapisternum darkened dorso-anteriorly. Abdomen shiny black, sparsely grayish dusted; epandrium and surstylus black. Wing faintly brown-tinged, more brownish at base, calypter with fringe brown; halter with knob brown, stalk testaceous. Legs black but bases of tibiae more or less brownish, tarsi yellowish brown.

Frons almost as wide as long, about 1.3 times as wide as eye, parallel-sided; parafrontalia linearly projecting above eye margin in profile, parafacialia laterad of antenna weakly projected anteriorly; lower *or* slightly

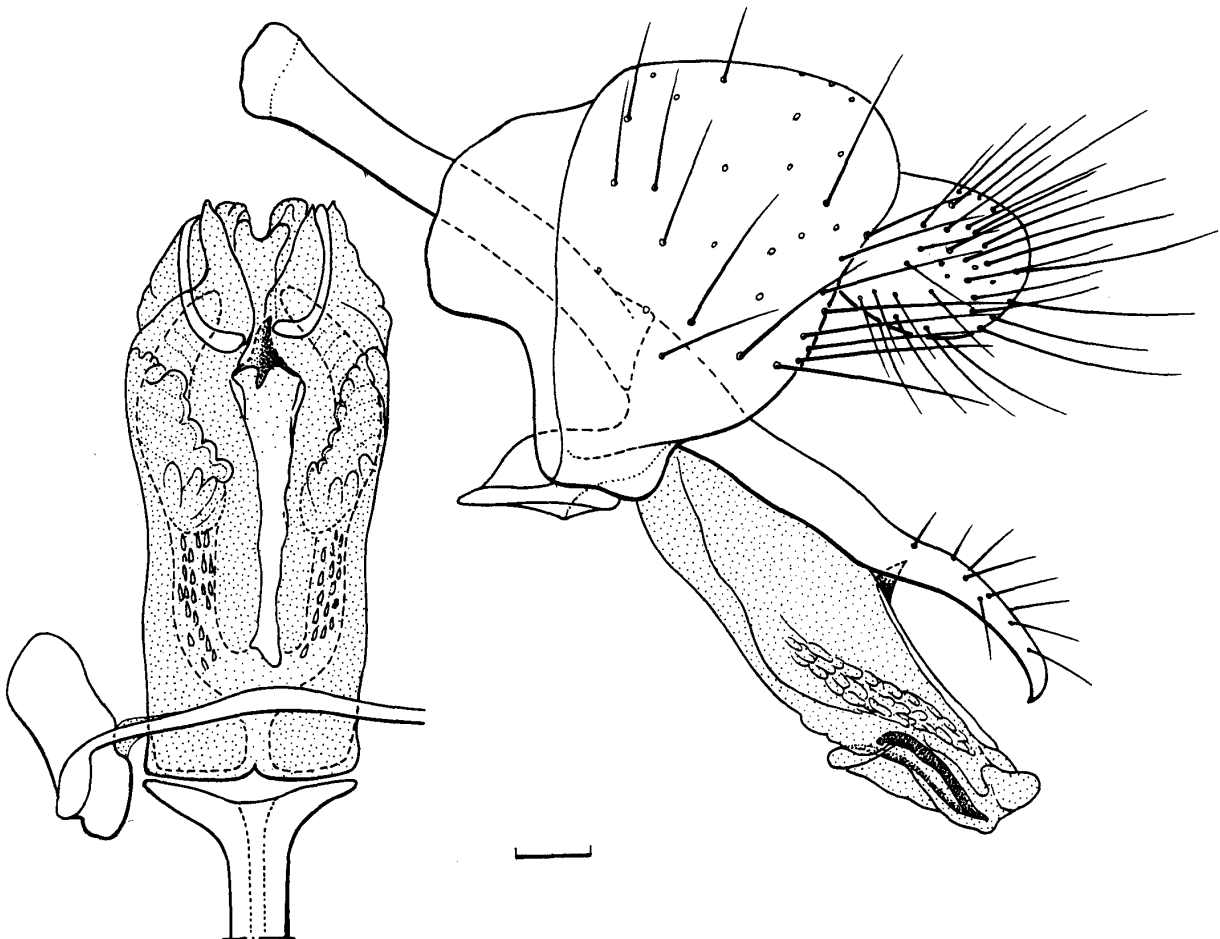


Fig. 6. Male genitalia of *Minettia (M.) longistylis* n. sp. (paratype).

shorter than the upper; setulae on ventral part of frons minute; *oc* longer than upper *or*; face flat, without ventro-lateral swelling; gena 1/7 eye height; *pm* 8-9, very short; antenna with first flagellomere oval, 1.5 times as long as wide; arista short-haired, with longest hair about 1/4 as long as width of first flagellomere; palpus with an apical ventral seta longer than others.

Mesoscutum with 0+3 *dc*, first *dc* about 1/2 of the third and far apart from suture, distance between suture and first *dc* equal to that between first and third *dc*; ten irregular rows of *acr*, one pair just behind level of second *dc* long and 2/3 length of *prsc*; *stpl* two, long. Wing: C-index 3.5, R_{4+5} and M slightly converging apically, r-m at middle of discal cell, 4V-index 1.57, 5V-index 0.2. Legs: Fore femur with 5-7 *pv*, mid femur with 5-6 *a*, all tibiae with *pd*, mid tibia with one long spur.

Protandrium ringed, with a dorso-median apodeme, setose along posterior dorsal margin; epandrium with a pair of lateral apodemes which are projected anteriorly, being nearly 1/2 the length of epandrium; surstylus extremely long, curved ventrally on tip; hypandrium black, very narrow bridge-like; pregonite small lobate; aedeagus with a pair of dorsal sclerites and a pair of narrow ventro-distal sclerites, and with a spine-like large tooth on dorsal side and many scale-like spinulae at base of ventral membrane.

Body length 7.0 mm, wing length 7.5 (holotype)-7.6 mm.

Female. Similar to male, but body length 6.3 mm, wing length 7.7 mm.

Holotype male (BISHOP No. 16464), Mt. Alishan (2130 m), 23 Aug. 1947, J. L. & M. Gressitt (right arista, left mid and hind legs missing). Paratypes: 1 ♂ 5 ♀, same locality as holotype but coll. 17 Aug. 1947; 1 ♀, same locality as holotype, 3-9 July 1972, T. C. Maa.

Distribution. Formosa.

Etymology. The specific name refers to the long surstylus.

3. *Pachycerina decemlineata* de Meijere

Pachycerina decemlineata de Meijere, 1914: 236 (Java).

This testaceous species is distinctive in having the five pairs of brown lines on mesoscutum: two lines on *acr*-rows (mesal one narrowest), one on *dc*-row, one on postsutural *ia* setula-line and one on presutural *prs*-line, and two brown stripes along dorsal margins of anepisternum and katepisternum; antenna with first flagellomere elongate, about five times as long as its basal width; arista with black hairs densely, of which longest hair slightly longer than 1/2 the basal width of first flagellomere; abdomen with T1-4 dark brown, T5-6 and lateral side of T1-6 strongly shining, yellowish brown; wing length 2.8 mm.

Specimens examined. 1 ♂, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.); 2 ♂, Mt. Alishan (2400 m), 3-9 July 1972 (T. M.).

Distribution. Java, Flores, Lombok, Formosa, Nepal. New to Formosa.

4. *Pachycerina javana* (Macquart)

See p. 36.

Specimens examined. 1 ♂, Taipei, 7 Mar. 1961 (E. S.); 1 ♂, Kuaninshan (200 m), 10 Nov. 1957 (T. M.).

Distribution. India, Ceylon, Nepal, Philippines, Sunda, Formosa, Japan (Ryukyus).

5. *Sapromyza (Sapromyza) conjuncta* n. sp. (Fig. 7)

Diagnosis. This testaceous species is distinct in having the brown ventral margin on face, hyaline wing, two brown spots on T5 and 6, connective surstyli (derivation of specific name), left well-developed sclerite of aedeagus.

Male. Testaceous, but postpronotal lobe and margin of scutellum yellowish and pleura paler; occiput brown basally; face with ventral margin above epistome narrowly brown; mesoscutum and abdomen very sparsely grayish pollinose, weakly shining; T5-6 each with a pair of brown spots. Wing hyaline, very faintly tinged with brownish yellow; halter yellow. Legs testaceous yellow.

Frons as long as wide, almost as wide as eye, slightly converging ventrally; *oc* slender, distinctly shorter than *or*; ventral half of parafrontalia projecting above eye in profile; eye about 1.2 times as high as broad; face flat, epistome narrowly transverse and slightly swollen throughout its whole width; gena about 1/7 height of eye; *pm*

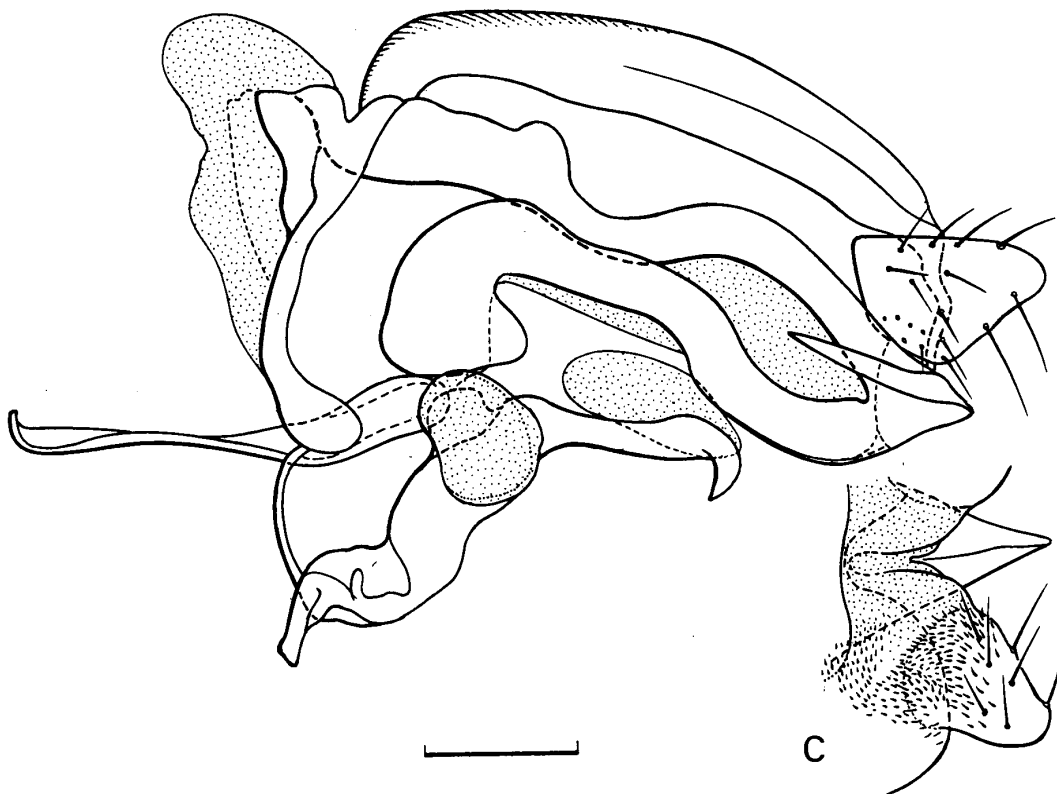


Fig. 7. Male genitalia of *Sapromyza* (*S.*) *conjuncta* n. sp. (paratype).
C, surstylus, posterior view.

6-7 (3-4 setulae above vibrissal angle); antenna with first flagellomere 1.3 times as long as wide, arista 1.3-1.5 times as long as eye height and pubescent.

Mesoscutum with 0+3 *dc*, four rows of *acr*; anterior *stpl* shorter than the posterior. Wing: C-index 4.2, r-m at middle of discal cell, 4V-index 2.35, 5V-index 0.24. Legs: Fore femur with 5 *pv*, without ctenidium; mid femur with 5 short *a*; mid tibia with *pd* stronger than those on other tibiae.

Protandrium large, semicircular when viewed from rear; epandrium small; surstylus suboval, both styli connected with each other by membrane; hypandrium separated into two asymmetric sclerites; aedeagus consisted of two asymmetric sclerites, of which left one distinctly well-developed, composed of two sclerites connected on distal ends, distinctly darkened distally and blackish on tip, and right one simple, short and with black hook on tip; aedeagal apodeme flattened vertically, about 3/4 length of right aedeagal sclerite; ejaculatory apodeme 200 μ m long.

Body length 3.0 (holotype)-3.3 mm, wing length 3.2 (holotype)-3.5 mm.

Female unknown.

Holotype male (BISHOP No. 16465), Taipei (suburbs), 21 Oct. 1957, T. C. Maa. Paratype: 1 ♂, Keelung, 4-8 Oct. 1957, T. C. Maa.

Distribution. Formosa.

Remarks. This species differs distinctly from *S. hyalipennis* (de Meijere), known from Java, in the length of *oc*, presence of *prsc* and number of dark spots on T5 and 6.

6. *Sapromyza* (*Sapromyza*) *terminalis* n. sp. (Fig. 8)

Diagnosis. This testaceous species is unique in the coloration of abdominal tergites, and shapes of male distal sternites and aedeagus.

Male. Head including antenna and palpus testaceous, occiput brownish basally; antenna with first flagellomere brown-tinged along dorsal margin. Thorax yellowish brown, very sparsely grayish dusted; dorso-caudal margin of postpronotal lobe, central line and outer margin of scutellum pale; mesoscutum with a

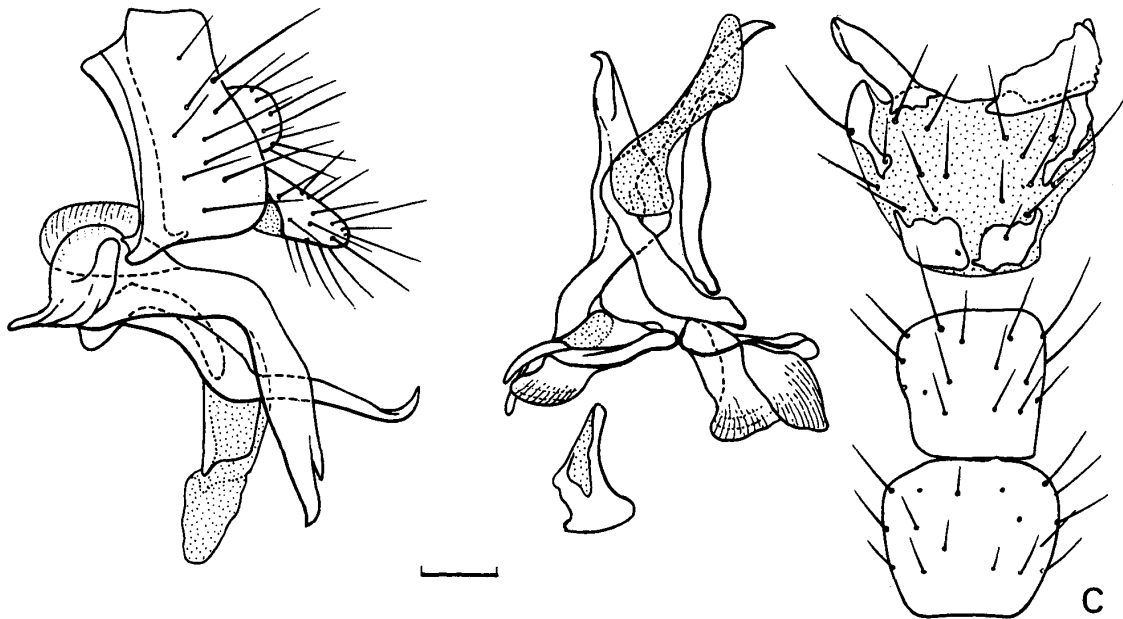


Fig. 8. Male genitalia and 4th-7th sternites (C) of *Sapromyza* (*S.*) *terminalis* n. sp. (holotype).

pair of brownish vittae between two rows of *acr* when viewed from front. Abdomen dark testaceous, subshiny, T2-6 with brownish black posterior margins, T4-6 each with a pair of dark brown suboval or quadrate markings. Wing hyaline, very faintly tinged with brownish yellow; halter with stalk brownish and knob yellow. Legs testaceous yellow, third (or second) to fifth tarsomeres tinged with brown.

Frons slightly wider than long, 1.5 times as wide as eye, converging ventrally; *oc* subequal to *or*; parafrentalia slightly projecting above eye margin in profile; eye slightly higher than broad; gena $1/5$ eye height; *pm* 5-6, minute; face flat; epistome narrow transversely; antenna with first flagellomere 1.3 times as long as wide, arista slightly longer than height of eye, pubescent.

Mesoscutum with 0+3 *dc*, four rows of *acr*, *prsc* subequal to first *dc*; anterior *stpl* shorter than the posterior. Wing: C-index 3.57, r-m almost at middle of discal cell, 4V-index 1.85, 5V-index 0.19. Legs: Fore femur with 4-5 long *pv*, without ctenidium; mid femur with 4-5 short *a*; all tibiae with *pd* distinct; mid tibia with a long spur.

S4-5 subquadrate; S6 broadened posteriorly, weakly sclerotized at base and posterior lateral corners only; S7 black, each sclerite connected with posterior margin of S6. Protandrium lower than semicircle, about twice as long as epandrium, with two irregular rows of setae marginally; epandrium protruded on anterior dorso-lateral parts, surstylus rather long and setose; hypandrium separated into two narrow sclerites and each with ill-sclerotized plate basally; right aedeagal sclerites consisted of two narrow ones and with a membranous lobe between sclerites, left aedeagal sclerite bifurcated distally; ejaculatory apodeme 115 μ m in length.

Body length 3.3 mm, wing length 3.5 mm.

Female. Similar to male; wing length 4.0 mm.

Holotype male (BISHOP No. 16466), Mt. Alishan (2,270 m), 8-9 Apr. 1965 C. M. Yoshimoto, Malaise trap; distal part of abdomen and genitalia in polyethylene tubule with glycerol and pinned with the specimen. Paratype: ♀, same locality as holotype, 12-16 June 1965, T. C. Maa & K. S. Lin.

Distribution. Formosa.

Etymology. The specific name refers to the terminal segments of male abdominal sternites.

7. *Steganopsis convergens* Hendel

See Sasakawa (1998), p. 68.

Specimen examined. 1 ♂, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.).

Distribution. Formosa, Philippines, Flores, Lombok, Sunda; Australia (NE).

8. *Trigonometopus (Trigonometopus) brunneicosta* Malloch (Fig. 9)

Trigonometopus brunneicosta Malloch, 1927: 165 (♀, Paroe)

This species was described by only a single female. The male differs from the female in the following points: frons about 1.3 times as long as wide, with median brownish stripe indistinct; thorax brown except for yellowish narrow vittae on mesoscutum and scutellum, margin of postpronotal lobe and dorsal margin of anepisternum, and testaceous anepimeron, katepimeron and meron; abdominal tergites broadly blackish brown, shining, very sparsely gray-dusted, with median part yellowish brown (about 1/5 as wide as the dorsal width of T2, about 1/3 the width on T3-4, and anterior median 1/2 on T5), and lateralmost margins of T1-5 yellowish; protandrium and epandrium testaceous but posterior margin of the former narrowly brownish and posterior dorsal process of the latter dark brown; all tibiae with pale brown apical rings; fifth tarsomeres of mid and hind legs brown-tinged; protandrium horseshoe-shaped, setose along posterior margin; epandrium with a pair of conical processes at posterior dorsal corners; surstylus short; hypandrium basally U-shaped, with sclerites very narrow but posterior sclerite broad and connected with pregonite; aedeagus weakly sclerotized at base, membranous distally and with a crescent sclerite before ventral apex; aedeagal apodeme slender; body length 4.8 mm, wing length 4.3 mm.

Specimens examined. 2 ♀, Tsingtan, nr. Taipei, 12 Mar. 1958 (K. L.); 1 ♂, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.); 1 ♀, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.); 2 ♀, Fenchihu, Chiai Hsien, 10 Apr. 1965 (M. S.).

Distribution. Formosa.

9. *Trigonometopus (Trigonometopus) gressitti* n. sp. (Fig. 10)

Diagnosis. This testaceous species is characterized by the quadrivittate mesoscutum, brown triangular markings on abdominal tergites, hyaline wing with clouded cross veins, and triangular epandrium in lateral view.

Male. Testaceous; frontalia faintly brownish-fasciated centrally; parafacialia with pale brown triangle

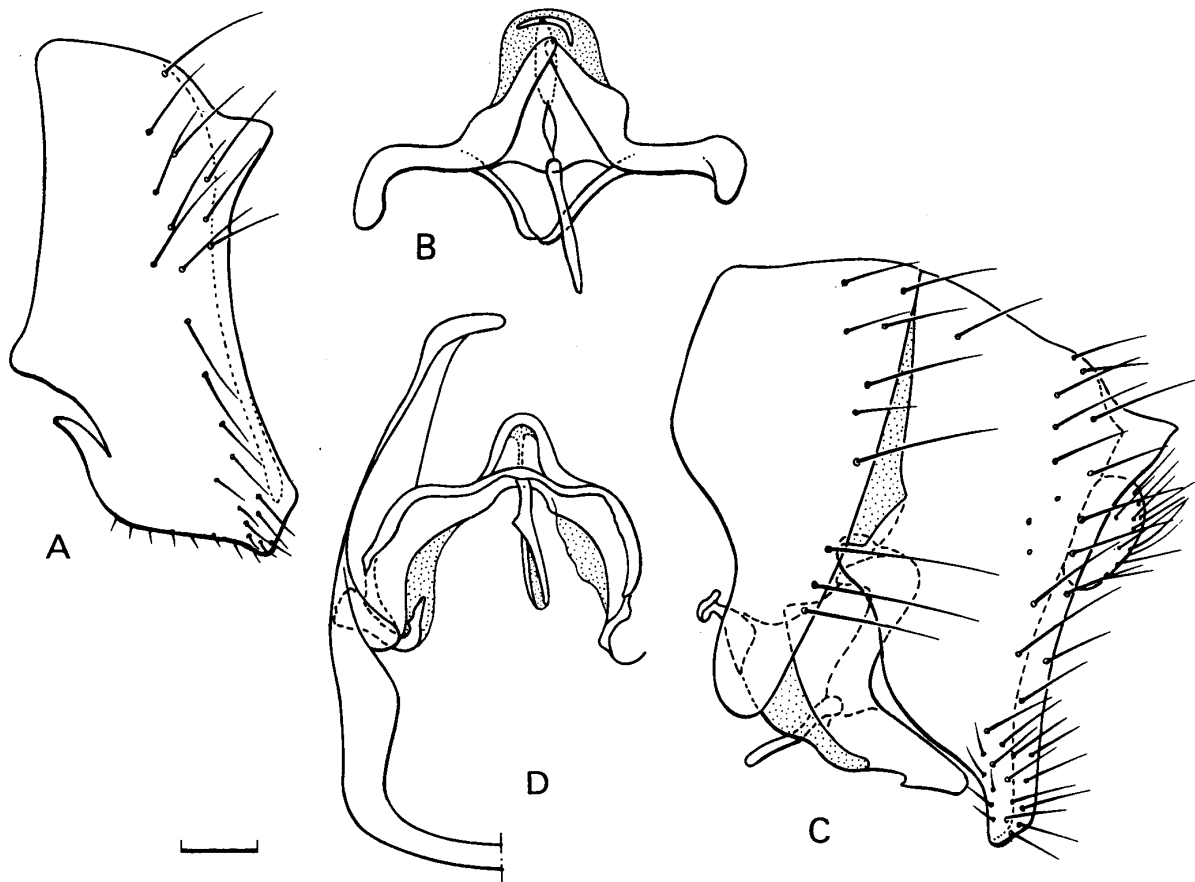


Fig. 9. Male genitalia of *Trigonometopus (T.) brunneicosta* Mall. (A, B) and *T. (T.) submaculipennis* Mall. (C, D).

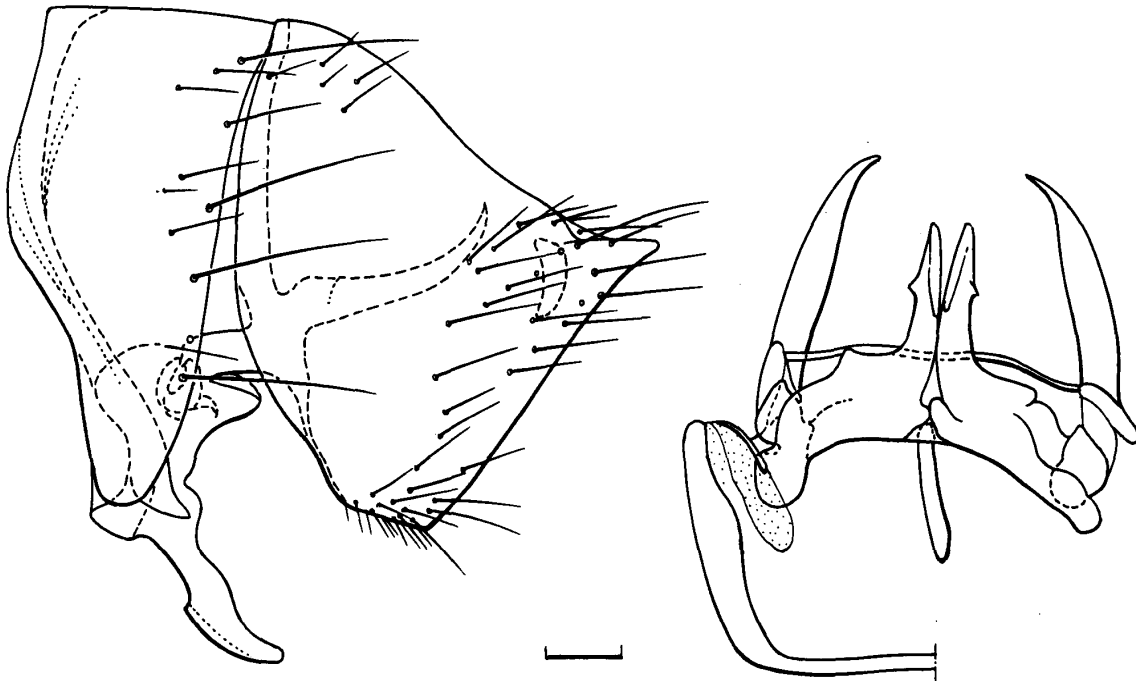


Fig. 10. Male genitalia of *Trigonometopus* (*T.*) *gressitti* n. sp. (paratype).

laterad of antennal base; face, epistome, parafacialia and gena pale; mesoscutum sparsely grayish dusted, with four pale brown vittae: median pair inside of *dc*-rows extended posteriorly to apical margin of scutellum, lateral pair divided into two vittae behind transverse suture; pleura with an indistinct vitta obliquely from propleuron to katepisternum; abdominal tergites each with a pair of large brown triangles posteriorly except for small ones on T6 and protandrium; surstylus browned apically. Wing hyaline, faintly brownish around both cross veins; halter yellowish, but with knob browned basally. Legs testaceous yellow, tarsi more or less darkened.

Frons about 1.5 (1.4-1.6) times as long as wide, diverging ventrally, setulose mesally and latero-ventrally; *oc* only a little longer than frontal setula; eye 1.3 time as wide as high; gena $1/2$ - $2/3$ of eye height; *pm* 10-13, extending anteriorly midway the parafacialia; epistome broadened below gena; antenna with scape subequal to pedicel in length, first flagellomere thrice as long as pedicel, rounded apically; arista pubescent.

Mesoscutum with 0+3 *dc*, four rows of *acr* (more densely on anteriormost part of scutum; lateral row ended before second *dc*), *prsc* about $1/2$ length of first *dc*. Wing: C-index 5, r-m almost at middle of discal cell, 4V-index 1.5-1.7, 5V-index 1.75.

Protandrium horseshoe-shaped, setose posteriorly; epandrium triangular in lateral view, with a pair of conical processes laterad of cerci; hypandrium somewhat crescent-shaped, elongated ventrally and connected with anterior marginal sclerite of protandrium; pregonite long, pointed on tip; aedeagus consisted of a pair of sclerites, each with a lateral tooth; aedeagal apodeme shorter than aedeagus.

Body length 4.2 (holotype)-4.3 mm, wing length 4.1 (holotype)-4.7 mm.

Female. Similar to male, but thoracic vittae darker and broader than those in male, lateral vitta on scutum extended to base of *h* and *ntpl*, and pleural one begins from ventral part of postpronotal lobe and ends in mid coxa cross anterior spiracle and anterior ventral corner of anepisternum; abdominal tergites each with a pair of brownish black stripes laterally except for small triangular ones on T6, T7 and ovipositor testaceous; body length 4.1-4.8 mm, wing length 5.0-5.2 mm.

Holotype male (BISHOP No. 16467), Mt. Alishan (2,130 m), 21 Aug. 1947, J. L. Gressitt (right antenna missing and some bristles broken). Paratypes: 1 ♀, Mt. Alishan (2,270 m), 8-9 Apr. 1965, C. M. Yoshimoto, Malaise trap; 1 ♂, same data as in holotype; 3 ♀, same locality as holotype, 20 Aug. 1947, L. & M. Gressitt; 1 ♂, Tsingtan, nr. Taipei, 12 Mar. 1958, K. S. Lin; 1 ♀, Kwangzeling (250 m), Tainan Hsien, 6-7 Apr. 1965, C. M. Yoshimoto.

Distribution. Formosa.

Remarks. This new species is easily distinguished from the known *T. deceptor* (Malloch, 1927; ♀, Hokuto) by its coloration of abdomen, wing markings and size.

10. *Trigonometopus* (*Trigonometopus*) *submaculipennis* Malloch (Fig. 9)

Trigonometopus submaculipennis Malloch, 1927: 164 (♀, Taihoku).

This species was described only by a female. Male differs from the female in the following points: frons with vittae pale brown, wing without hyaline lines which divide the cloud into three parts on R_{4+5} (clouds on R_{4+5} and M not extended to wing margin in one male examined), T1-4 almost entirely dark brown excepting lateralmost margin testaceous, or testaceous except for dark brown sublateral parts, T5-6 testaceous and each with a pair of brown spots sublaterally (paler and smaller on T6). Male genitalia similar to those of *brunneicosta*, but surstylus longer and incurved, hypandrium with posterior sclerite broad U-shaped, pregonites short and united with each other distally, aedeagus slender, sclerotized on lateral side and with a tooth before ventral apex, aedeagal apodeme longer than aedeagus.

Female T2-5 are testaceous, with posterior margins dark brown, but pale brown on T6 and 7, although Malloch did not describe.

Specimens examined. 1 ♂, Hsintien (100 m), Taipei Hsien, 29 Sept. 1957 (T. M.); 1 ♂, Wulai, Kueishan (300-500 m), 11 Nov. 1957 (T. M.); 1 ♀, Taipei (suburbs), 21 Oct. 1957 (T. M.).

Distribution. Formosa, Nepal.

11. *Xangelina formosana* n. sp. (Fig. 11)

Diagnosis. This is the second Oriental species for the genus, and is easily distinguishable from the entirely testaceous yellow *X. basiguttata* Walker, 1856, known from Malaya, by its trifasciate face, gray-dusted mesoscutum with brownish vittae and spots, blackish abdominal tergites with median and anterior lateral gray-dusted marks, and testaceous legs with a pale brown stripe on each femur and rings on all tibiae.

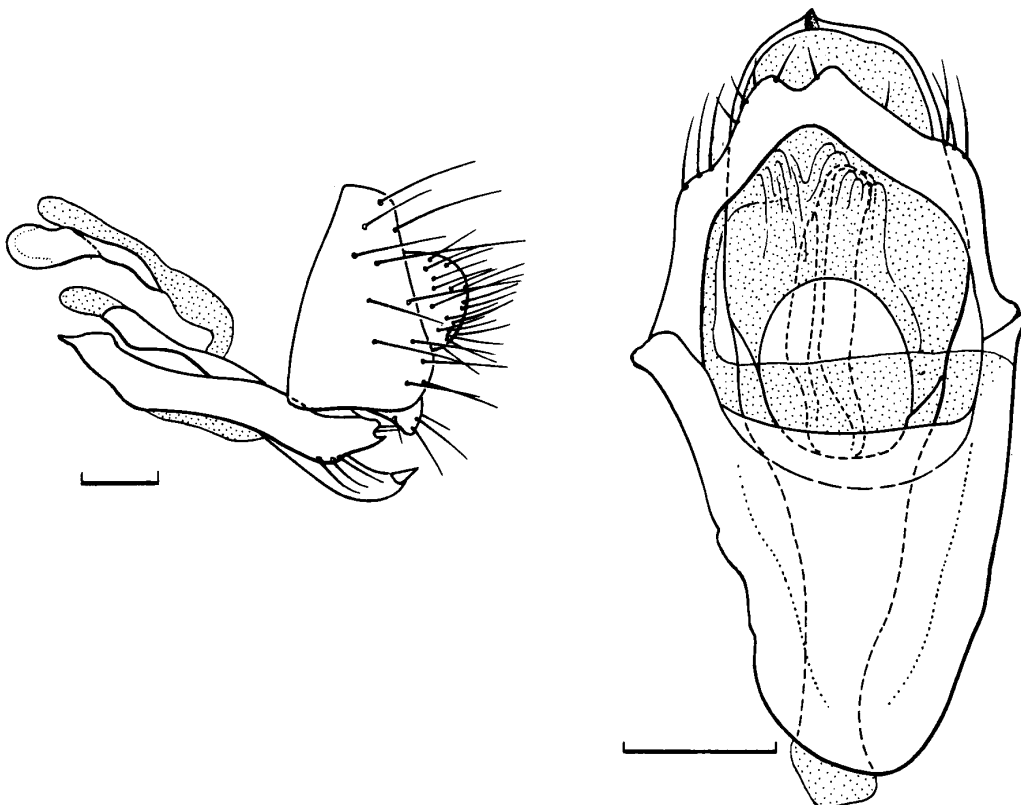


Fig. 11. Male genitalia of *Xangelina formosana* n. sp. (holotype).

Male. Head testaceous; frons sparsely grayish dusted; frontalia brown, with a brownish yellow median fascia extending ventrad of ocellar triangle; parafrontalia brown except for orbit; ocellar triangle and basal swellings of *or* dark brown; *vti* growing on brown area, *vte* and *pvt* on testaceous area; face with three brown fasciae vertically (median one about $2/3$ as high as face, narrowing ventrally and not reaching to ventral margin of face, and lateral ones just mesad along ventro-lateral swellings) and brown markings on ventro-lateral swellings; parafacialia with three brown spots: laterad of antennal base (somewhat triangular in outline), ventrad of ventralmost corner of eye and between them narrowly along its anterior margin; postgena pale brown antero-ventrally; antenna testaceous, arista brown excepting base; epistome with median small area, clypeus and palpus brown. Thorax dark testaceous to brown in ground color and densely gray dusted; mesoscutum with a pair of brown (sparsely pollinose) narrow stripes just inside of *dc*-lines and anteriorly before level of second postsutural *dc*, brown patches irregular in outline between presutural *dc* and *prs*, and between postsutural *dc*-row and line on *sa-ipa*, brown spots at bases of bristles and setae; pleura except for notopleuron, katatergite and mediotergite dark brown, but median transverse line of anepisternum, dorso-caudal margin of katepisternum and anterior part of meron more or less pale; scutellum brown excepting lateral margin testaceous and bases of apical *sc* shiny brownish black, basal *sc* on dark brown spot, and yellow between apical spots. Wing faintly tinged with brownish yellow, with three small brown markings between apices of *Sc* and *R*₁, around r-m and on anterior extremity of m-cu; slightly brownish between forking point of *Rs* and *R*₁; veins pale testaceous but *h*, base of *Rs*, base of radial fork and *R*₁ above that brown; halter testaceous yellow. Legs testaceous but fore coxa brown, femora each with a pale brown striation extending throughout its whole length on outer side and darkened at base and preapical ventral side, tibiae each with pale brown subbasal ring and brown subapical (above base of *pd*) ring, all fifth tarsomeres darkened. Abdomen shiny brownish black, but T1-4 with anterior half (much broadened laterally) and T2-6 with median line (yellow to testaceous in ground color and extending throughout whole length of tergite) testaceous, densely gray dusted and mat, but T5 laterally and T6 slightly on lateral side dusted; epandrium brownish black, gray dusted.

Frons broad, about 1.5 times as wide as long, about twice as wide as eye, slightly divergent ventrally; parafrontalia linearly projecting above eye margin in profile, swollen at bases of *or*, with two reclinate *or* (lower *or* subequal to or slightly shorter than the upper) and several setulae between two *or* and ventrad of lower *or*; *oc* almost parallel, longer than upper *or*; face slightly higher than frons, flat or very weakly protruded anteriorly on ventral half, and with ventro-lateral swelling about $2/5$ as high as face; parafacialia distinctly beyond eye margin in profile, bearing a row of 5-7 setulae along margin; epistome broadened laterally and $3/5$ as high as gena; eye bare; gena about $1/4$ of eye height; antennae separated by a small protuberance at base; first flagellomere oval, narrowing apically, about 1.5 times as long as wide; arista short-haired, with dorsal longest hair about $2/5$ as long as the width of first flagellomere.

Mesoscutum with 1+3 *dc*, two rows of *acr*, of which 1+2(3) pairs distinct in addition to *prsc*, and without *ia*; *ppl* short; *stpl* 2 or 3, anterior one or two shorter than the posteriormost. Wing: Costal spinulae extending basal $1/4$ between apices of *R*₄₊₅ and *M*, r-m beyond middle of discal cell (5 : 4), 4V-index 2.0-2.3, ultimate section of *CuA*₁ almost $1/4$ length of the penultimate. Legs: Fore femur without ctenidium, with 5 long *pv*; all tibiae with *pd*, fore and hind tibial *pd* very long but mid tibial one shortest; mid tibia with a spur.

Abdominal tergites each with submedian one and lateral two pairs of marginal bristles especially long. S4-6 small, subquadrate, each slightly wider than long. Protandrium horseshoe-shaped; epandrium broadened ventrally, more than twice as wide as dorsal length; surstylus separated from epandrium, triangular in lateral view; hypandrium long V-shaped; pregonites connected on apices, each bearing several setae; aedeagus sclerotized on lateral side and with an apical tooth, membranous ventrally; aedeagal apodeme shorter than aedeagus; ejaculatory apodeme well-sclerotized.

Body length 4.4-4.5 (holotype) mm, wing length 4.7-5.2 (holotype) mm.

Female. Similar to male; ovipositor blackish brown; wing length 4.7-5.5 mm.

Holotype male (BISHOP No. 16468), Mt. Alishan (2,400 m), 12-16 June 1965, T. C. Maa & K. S. Lin; abdomen and genitalia in polyethylene tubule with glycerol and pinned with the specimen. Paratypes: 2 ♀, same locality as holotype, but 2,270 m, 8-9 Apr. 1965, C. M. Yoshimoto, Malaise trap; 1 ♀, Fenkihiu (1,370 m), Chiayi Hsien, 10-12 Apr. 1965, C. M. Yoshimoto & B. D. Perkins; 3 ♂ 4 ♀, same data as in holotype; 2 ♂ 6 ♀, same

locality as holotype, but 2,130 m, 17-23 Aug. 1947, J. L. Gressitt & 3-9 July 1972, T. C. Maa.

Distribution. Formosa.

Subfamily Homoneurinae

Five genera, *Cestrotus* (including 2 species), *Dioides* (1), *Homoneura* (35), *Parapachycerina* (2) and *Wawu* (1) are known to occur in Formosa. The dominance of *Homoneura* is well known. Additionally, in this paper, 7 species, *H. (H.) concava*, *longicornis*, *yehliuensis* and *condiostylis* which are new to science, and *aulatheca* Sasakawa and Ikeuchi, *laticosta* (Thomson) and *striatifrons* (de Meijere) are recorded.

12. *Cestrotus flavoscutellatus* de Meijere

See Sasakawa (2001), p. 54.

The specimen examined has the brown femora excepting apices yellow as named a subspecies *nigrofemoratus* of this species by Hendel (1920), but all other external characters agree with the original description of *flavoscutellatus*.

Specimen examined. 1 ♂, Fenchihu, Chiayi Hsien, 10 Apr. 1965 (M. S.).

Distribution. Java, Viet Nam, Formosa, Nepal.

13. *Homoneura (Homoneura) aulatheca* Sasakawa and Ikeuchi

Homoneura (H.) aulatheca Sasakawa and Ikeuchi, 1985: 497 (♂ ♀, Japan).

This densely gray-dusted dark species has the characteristic wing markings. Following points of the characters are added to the original description: a pair of lateral stripes, which are interrupted by transverse suture, between *dc*- and *sa*-rows distinct in Formosan male specimens; T2 with brownish median stripe in addition to other tergites when viewed from rear; hypandrium without long basal apodeme; pregonite long, extending almost apical level of aedeagus; aedeagus minutely pointed on dorsal tip. One male collected in Kueishan, Wulai, is provided with entirely testaceous body except for pale brown mesoscutal and dark brown abdominal stripes. It is quite similar to the specimen of Japanese summer form, with also pale wing markings.

Specimens examined. 1 ♂, Fenchihu, Chiayi Hsien, 17 June 1965 (T. M. & K. L.); 1 ♂, Mt. Alishan (2130 m), 23 Aug. 1947 (J. G. & M. G.); 1 ♂, Kueishan (300-500 m), Wulai, 11 Nov. 1957 (T. M.); 1 ♂, Sung-kang (2044 m), nr. Musha, 6 Dec. 1963 (T. M.).

Distribution. Japan, Formosa. New to Formosa.

14. *Homoneura (Homoneura) beckeri* (Kertész)

See Sasakawa (1992), p. 164.

Specimens examined. Taipei Hsien- 1 ♂, Pihu, 18 Feb. 1972 (T. M.); 1 ♂, Shuangchi, 19 Feb. 1972 (T. M.); 6 ♂ 16 ♀, Tsingtan (150-300 m), 12 Mar., 1 Apr., 16 & 25-26 Apr. 1958 (K. L.); 1 ♂ 1 ♀, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.); 1 ♂ 3 ♀, Yehliu Beach, 29-31 Mar. 1965 (C. Y.); 8 ♂ 4 ♀, Chaochi, 15-16 Apr. 1965 (M. S. & C. Y.); 11 ♂ 21 ♀, Wulai (150-500 m), 17 Apr. 1965 (C. Y.), 23 Sept. 1957 (K. L.) & 11 Nov. 1957 (T. M.); 1 ♀, Tsaoshan (150-300 m), 9 July 1958 (K. L.); 1 ♂, Hsintieu (100 m), 29 Sept. 1957 (T. M.); 5 ♂ 3 ♀, Keelung (100 m), 4-8 Oct. 1957 (T. M.); 1 ♂ 3 ♀, Tienmu (150 m), 8 Nov. 1957 (T. M.). Tainan Hsien- 4 ♂ 7 ♀, Kuantzung (250 m), 6-7 Apr. 1965 (M. S. & C.Y.). Taitung Hsien- 1 ♂, Tzepeng, Jan.-Feb. 1964 (T. M.). Kaohsiung Hsien- 1 ♂ 2 ♀, Liukuei, Mar.-Apr. 1964 (T. M.). Chiayi Hsien- 1 ♂ 3 ♀, Fenchihu (1370 m), 10-12 Apr. 1965 (C. Y. & B. P.); 1 ♀, Chiayi, 11 May 1958 (K. L.).

Distribution. Singapore, Java, Sumatra, Krakatau, Lombok, Soembawa, Formosa, India, Nepal.

15. *Homoneura (Homoneura) bistriata* (Kertész)

Lauxania (Minettia) bistriata Kertész, 1915: 524 (♂ ♀, Takao, Tainan etc.).

This species is characteristic in the bivittate mesoscutum, and wing markings which are somewhat similar to those of *H. striatifrons* (de Meijere). In *bistriata*, brown spot on apex of R_{4+5} larger than that on apex of M and first flagellomere of antenna distinctly infuscated apically, while in *striatifrons* dark apical spot on R_{4+5} much

smaller than that on M and first flagellomere entirely testaceous yellow.

Specimens examined. 1 ♀, Peitou, nr. Taipei, 20 Sept. 1957 (T. M.); 1 ♀, Tienmu (150 m), Taipei Hsien, 8 Sept. 1957 (T. M.); 1 ♀, Kuaninshan (200 m), 10 Nov. 1957 (T. M.); 1 ♂ 1 ♀, Kueishan (300-500 m), Wulai, 11 Nov. 1957 (T. M.).

Distribution. Formosa, Ceylon.

16. *Homoneura (Homoneura) brevicornis* (Kertész)

See Sasakawa and Ikeuchi (1982), p. 487.

Specimens examined. 2 ♂ 4 ♀, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.).

Distribution. Flores, Java, Philippines, Formosa, Japan (Ryukyus), New Guinea; Solomon Is.

17. *Homoneura (Homoneura) concava* n. sp. (Fig. 12)

Diagnosis. This new species is distinctive in having the blackish body, many brown-spotted wing and cavity of the surstylus.

Male. Head testaceous yellow in ground color, frontalia with a pair of brown stripes inside of parafrontalia which is grayish pollinose and brownish between bases of *or*; vertex, occiput and postgena except for anterior and ventral margins brown; parafacialia with pale brown triangle laterad of antennal base; parafacialia with anterior margin and peristome brown; face dorsally brown or only antennal grooves brownish; gena brown along ventral margin; antenna yellowish brown, first flagellomere more or less darkened dorsally, arista brown excepting base; palpus testaceous. Thorax black, densely gray dusted; postpronotal lobe testaceous dorsally and posteriorly; mesoscutum with four brownish stripes indistinctly when viewed from front, of which median pair between two lateral rows of *acr* just inside of *dc*-rows and lateral pair at middle between *dc*- and *sa*-rows; scutellum with posterior margin testaceous. Abdomen black, with gray-dusted spots on both lateral sides of shiny median line, T5-6 dark testaceous broadly on lateral sides; epandrium black. Wing hyaline, with many brown spots which are connected with each another as follows: basal spot from cell Sc to r-m large, extending posteriorly before CuA₁, small one before that at forking point of R₂₊₃ and R₄₊₅; subapical one on R₂₊₃ connected with basal one on R₄₊₅, apical one on R₂₊₃ connected with subapical one on R₄₊₅, these two also connected with large one around m-cu; apical one on R₄₊₅ with subapical one on M; apical margin between apices of R₄₊₅ and M pale brown; halter yellow to testaceous. Legs testaceous, mid femur slightly brown-tinged and hind femur

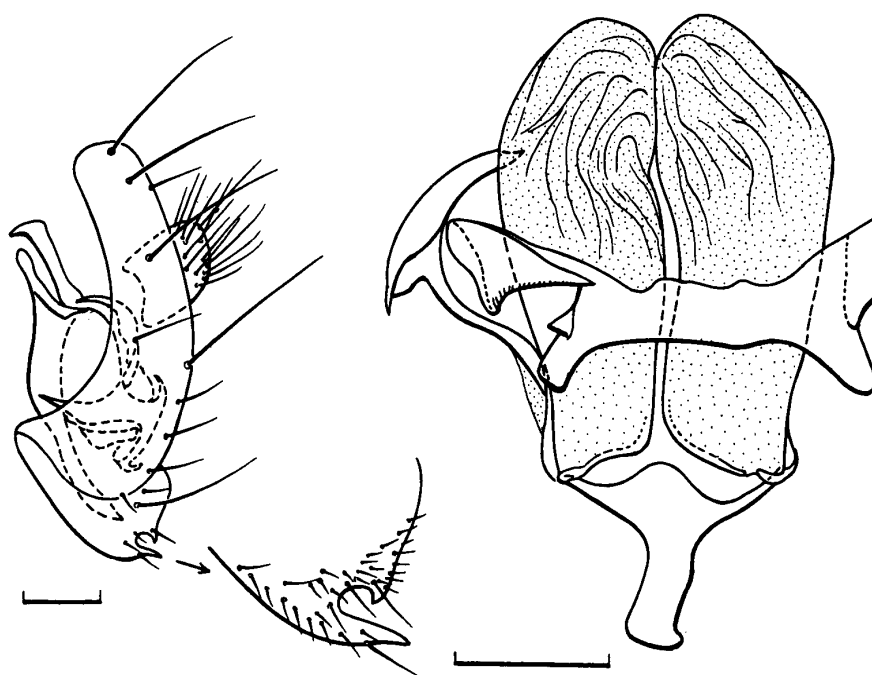


Fig. 12. Male genitalia of *Homoneura (H.) concava* n. sp. (paratype).

blackish brown, fourth to fifth tarsomeres of all tarsi slightly tinged with brown.

Frons slightly wider than long, about 1.5 times as wide as eye, converging ventrally; parafrontalia slightly projecting above eye margin in profile; frontalia with sparsely minute setulae on lateral sides; lower *or* slightly shorter than the upper and subequal to *oc*; eye 1.3 times as high as wide; face flat; gena 1/6-1/8 height of eye; *pm* 5 or 6, short; antenna with first flagellomere slightly longer than broad (6 : 5), arista short-haired, with longest hair nearly 1/5 the width of first flagellomere.

Mesoscutum with 0+3 *dc*, six rows of *acr*, *prsc* shorter than first *dc*; anterior *stpl* shorter than the posterior. Wing: C-index 2.0-2.3, R_{2+3} weakly sinuate, r-m before middle of discal cell, 4V-index 1.17-1.27, 5V-index 0.1-0.12. Legs: Fore femur with two long and one short *pv*, mid femur with 3-4 *a*, all tibiae with distinct *pd*.

Protandrium horseshoe-shaped, slightly longer than epandrium; epandrium very narrow in lateral view, bearing five pairs of long bristles posteriorly; surstylus projected shortly with a cavity; hypandrium transverse, with very short apodeme at lateral end; pregonite pale brown, darkened and pointed apically, postgonite slightly longer than pregonite; aedeagus membranous, weakly sclerotized along basal margin, with apodeme very short.

Body length 3.8 (holotype)-3.9 mm, wing length 4.1 (holotype)-4.3 mm.

Female. Similar to male, but T3-6 (rarely T2) each with testaceous spots on anterior lateral and lateralmost parts; ovipositor blackish brown; body length 3.7 (3.4-4.0) mm, wing length 4.2 (4.0-4.5) mm.

Holotype male (BISHOP No. 16469), Kwantzing (250 m), Tainan Hsien, 6-7 Apr. 1965, C. M. Yoshimoto. Paratypes: 1 ♂ 1 ♀, same data as in holotype; 1 ♂ 1 ♀, Mt. Alishan (2,270 m), 8-9 Apr. 1965, C. M. Yoshimoto & B. D. Perkins; 1 ♂ 1 ♀, Mt. Alishan (2,400 m), 12-16 June 1965, T. C. Maa & K. S. Lin; 1 ♂, Mt. Alishan (2,400 m), 3-9 July 1972, T. C. Maa; 3 ♀, Mt. Alishan (2,130 m), 19 Aug. 1947, J. L. Gressitt.

Distribution. Formosa.

Remarks. Wing markings are variable among the specimens, that is, sometimes an isolated round spot is situated on R_{2+3} between basal large spot and subapical spot on R_{2+3} , and rarely cell R_1 almost entirely brown and with two or three hyaline spots.

Etymology. The specific name refers to the 'hollowed' surstylus in lateral view.

18. *Homoneura (Homoneura) fasciventris* Malloch

See Sasakawa (1992), p. 173.

Specimens examined. 1 ♀, Mt. Alishan (2,130 m), 20 Aug. 1947 (J. G.); 4 ♀, Santiaoling, 19 Nov. 1957 (T. M.); 1 ♀, Chito Exp. Forest (1,150 m), 12-15 Oct. 1957 (T. M.).

Distribution. Formosa, Malaya, Viet Nam, Borneo.

19. *Homoneura (Homoneura) flavomarginata* (Kertész)

Lauxania (Minettia) flavomarginata Kertész, 1915: 529 (♀, Toyenmongai).

This large testaceous species is distinctive in the wing tinged rather distinctly with brownish yellow and spotted-markings on veins: a brown spot at middle of R_{4+5} almost directly above spot around m-cu and almost above it a brown spot on R_{2+3} which does not extend to apex of the vein; apical spots between apices of Sc and R_1 small; apical spot on R_{4+5} and M, respectively; arista plumose but sparsely hairy; mesoscutum with eight rows of *acr*; T2-5 with posterior margins linearly darkened; mid tibia with one long and two short spurs.

Specimen examined. 1 ♀, Santiaoling, 19 Nov. 1957 (T. M.).

Distribution. Formosa.

20. *Homoneura (Homoneura) forcipata* (Kertész)

See Sasakawa (1992), p. 174.

Specimen examined. 1 ♀, Chiayi, Chiayi Hsien, 12-13 Apr. 1965 (C. Y.), Malaise trap.

Distribution. Formosa, Malaya.

21. *Homoneura (Homoneura) laticosta* (Thomson)

Geomyza laticosta Thomson, 1869: 598 (Singapore).

Homoneura laticosta: Hennig, 1948: 422 (Lombok, Flores); Sasakawa, 1991: 568 (Indonesia).

See Sasakawa (1992), p. 181.

Specimens examined. 1 ♂ 1 ♀, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.); 1 ♂, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.).

Distribution. Malaya, Singapore, Thai, Borneo, Lombok, Flores, Formosa, Philippines; Solomon Is. New to Formosa.

22. *Homoneura (Homoneura) latifrons* Malloch

This large testaceous species is characterized by three brown marks on R_{4+5} beyond r-m in addition to apical one. See Sasakawa and Ikeuchi (1982), p. 486.

Specimen examined. 1 ♂, Santiaoling, 19 Nov. 1957 (T. M.).

Distribution. Formosa, Japan (Kyushu, Ryukyus).

23. *Homoneura (Homoneura) longicornis* n. sp. (Fig. 13)

Diagnosis. This species is characterized by the dark body, densely gray-dusted mesoscutum with four brown vittae and a median fascia on abdominal tergites posteriorly, projected surstylus and dark postgonite, differing from *H. subvittata* Malloch by its dark color, small size, and wing venation and markings.

Male. Head dark testaceous, frons sparsely and face and occiput densely whitish pollinose; frontalia with a pair of dark brown stripes; parafacialia with anterior margin linearly dark brown; antenna and palpus testaceous. Thorax brown, postpronotal lobe pale; mesoscutum densely gray dusted except for four brown vittae: median ones between two lateral *acr*-rows and lateral ones between rows of *dc* and *sa* interrupted by suture and indistinct before suture; scutellum testaceous. Abdomen black, more or less brown-tinged on lateral side, densely whitish gray dusted except for a median black fascia on T2-5; epandrium brownish black. Wing

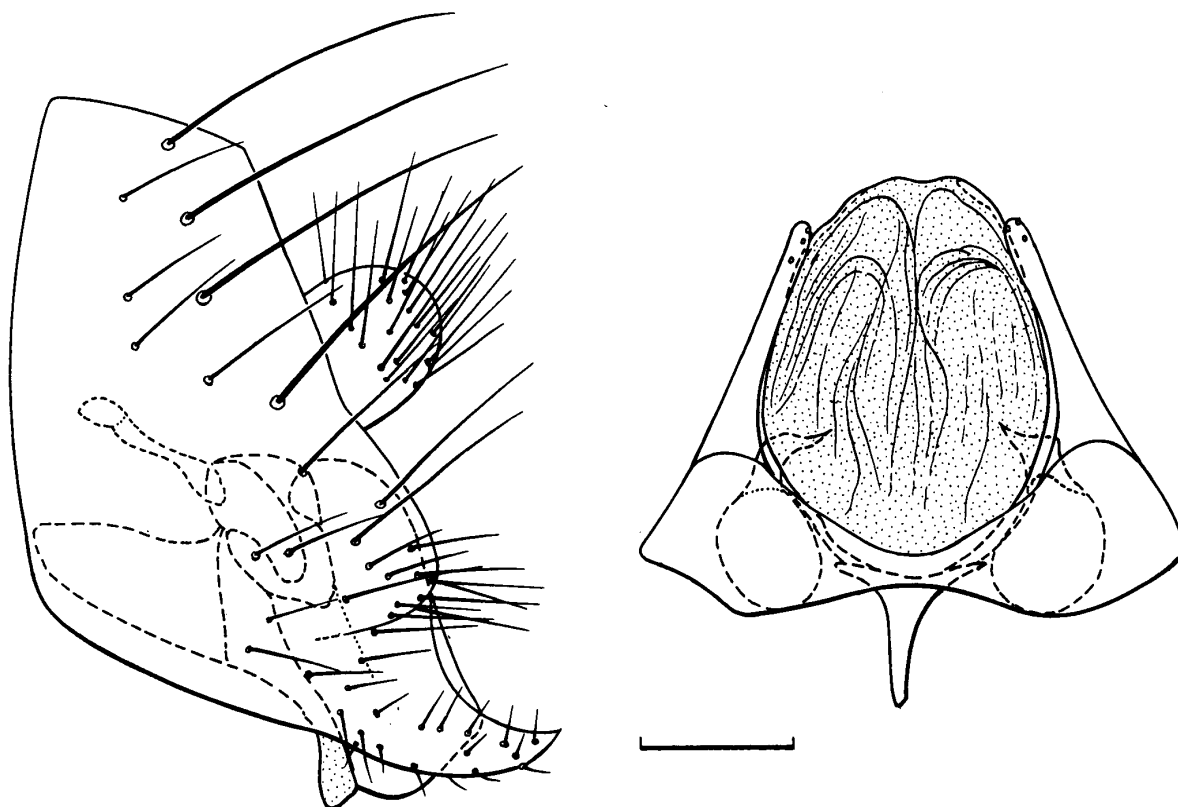


Fig. 13. Male genitalia of *Homoneura (H.) longicornis* n. sp. (paratype).

hyaline, very faintly brown-tinged, with eight brown spots: between apices of Sc and R₁, on apices of R₂₊₃ and M, and just before apex of CuA₁; two subquadrate ones on R₄₊₅ between r-m and apical spot, of which outer one connected with apical spot on R₂₊₃; spots around r-m and m-cu large, the former posteriorly and the latter anteriorly broadened; halter yellow. Legs testaceous, third or fourth to fifth tarsomeres slightly brown-tinged.

Frons wider than long, about 1.5 times as wide as eye, converging ventrally; parafrontalia linearly projecting above eye margin in profile; lower *or* slightly shorter than the upper; *oc* long; gena nearly 1/5 (-1/6) of eye height; face flat; antenna with first flagellomere and arista missing; *pm* 8-9, very short.

Mesoscutum with 0+3 *dc* (first *dc* close to suture, second *dc* equidistant from first and third), six rows of *acr*, *prsc* long but less than 1/2 length of third *dc*; anterior *stpl* shorter than the posterior. Wing: C-index 2.3-2.5, r-m before middle of discal cell, 4V-index 1.4-1.5, 5V-index 0.14. Legs: Fore femur with four *pv*, mid femur with 5(-6) *a*, hind femur with one apical *ad*, all tibiae with *pd*, mid tibia with two spurs.

Protandrium horseshoe-shaped, longer than epandrium on dorsal side, distinctly narrowed ventrally, with a row of marginal setae; epandrium distinctly broadened ventrally, with four pairs of long bristles posteriorly; surstylus curved and pointed dorsally; hypandrium transverse, broadened at lateral end; pregonite long, with several sensillae on apex; postgonite brown, with apex incurved and sharply pointed; aedeagus simple, membranous ventrally, with lateral sclerite; aedeagal apodeme very short.

Body length 3.5-3.7 (holotype) mm, wing length 4.2-4.4 (holotype) mm.

Female. Similar to male, but thoracic pleura blackish; scutellum brown except for margin testaceous; ovipositor brown; body length 4.0-4.1 mm, wing length 4.4-4.5 mm.

Holotype male (BISHOP No. 16470), Mt. Alishan (2,130 m), 19 Aug. 1947, J. L. Gressitt. Paratypes: 1 ♂ 2 ♀, same data as in holotype.

Distribution. Formosa.

Etymology. The specific name refers to the 'long' pregonite.

24. *Homoneura* (*Homoneura*) *notostigma* (Kertész)

Lauxania (*Minettia*) *notostigma* Kertész, 1913: 94 (♂ ♀, Chip Chip, Takao etc.).

This small testaceous species is easily recognized by having a blackish subquadrate marking on mesoscutum before scutellum and semicircular one on anterior part of scutellum.

Specimen examined. 1 ♀, Peitou, nr. Taipei, 28 Apr. 1958 (K. L.).

Distribution. Formosa.

25. *Homoneura* (*Homoneura*) *nudifrons* (Kertész)

See Sasakawa (1992), p. 189.

Specimens examined. 1 ♀, Hengchun Park (250 m), Kuraru, 2 Apr. 1965 (C. Y.); 1 ♂, Keelung (100 m), 4-8 May 1957 (T. M.).

Distribution. Formosa, Borneo.

26. *Homoneura* (*Homoneura*) *ornatifrons* (Kertész)

See Sasakawa (2001), p. 93.

Specimens examined. 1 ♀, Pihu, 49 km E. of Taipei, 18 Feb. 1972 (T. M.); 1 ♂, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.); 1 ♂ 3 ♀, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S. & C. Y.); 1 ♂ 5 ♀, Wulai, Taipei Hsien, 17 Apr. 1965 (C. Y.); 1 ♂, Kuantzing (250 m), Tainan Hsien, 6 Apr. 1965 (M. S.); 1 ♀, Tungpu, nr. Poli, 8 Dec. 1963 (T. M.).

Distribution. Formosa, Japan, Viet Nam.

27. *Homoneura* (*Homoneura*) *picta* (de Meijere)

See Sasakawa (1992), p. 192.

Specimens examined. 3 ♂, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.); 2 ♂ 1 ♀, Fenchihu, Chiayi Hsien, 10-12 Apr. 1965 (M. S. and C. Y. & B. P.); 4 ♂ 3 ♀, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.); 1 ♂, Wulai, Taipei Hsien, 17 Apr. 1965 (C. Y.); 1 ♀, Mt. Alishan (2270 m), 9. Apr. 1965 (M. S.); 2 ♂ 2 ♀, Mt. Alishan

(2400 m), 12-16 June 1965 (T. M. & K. L.); 1 ♀, Mt. Alishan (2130 m), 22 Aug. 1947 (J. G.); 1 ♂, Tungpu, nr. Poli, 8 Dec. 1963 (T. M.).

Distribution. Java, Sumatra, Borneo, Malaya, Thai, China, Flores, Formosa, India, Nepal.

28. *Homoneura (Homoneura) quinquevittata* (de Meijere)

See Sasakawa (1992), p. 195.

Specimens examined. 1 ♀, Tzepeng, Taitung Hsien, Jan.-Feb. 1964 (T. M.); 1 ♂ 1 ♀, Pihu, 49 km E. of Taipei, 18 Feb. 1972 (T. M.); 2 ♀, 17-23 km W. of Taipei, 15 Apr. 1965 (M. S.); 5 ♂ 4 ♀, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.); 1 ♂, Wulai, Taipei Hsien, 17 Apr. 1965 (C. Y.), Malaise trap; 1 ♂, Keelung, 4-8 Oct. 1957 (T. M.).

Distribution. Java, Sumatra, Borneo, Malaya, Philippines, Formosa, Japan, India, Nepal.

29. *Homoneura (Homoneura) quiquenotata* (de Meijere)

See Sasakawa (1992), p. 194.

Specimens examined. 1 ♀, Tsingtan, nr. Taipei, 1 Apr. 1958 (K. L.); 2 ♀, Keelung, 4-8 Oct. 1957 (T. M.).

Distribution. Java, Malaya, Borneo, Formosa.

30. *Homoneura (Homoneura) striatifrons* (de Meijere)

Lauxania striatifrons de Meijere, 1924: 67 (Java).

See Sasakawa and Ikeuchi (1982), p. 480.

Specimens examined. 1 ♀, Wusheh (671 m), 30 Jan. 1962 (C. Y.); 1 ♀, Kuan Yin Shan, nr. Taipei, 26 Mar. 1961 (E. S.); 1 ♀, Yehliu Beach, Taipei Hsien, 29-31 Mar. 1965 (C. Y.); 1 ♀, Tsaoshan, nr. Taipei, 25 Apr. 1956 (K. L.); 1 ♀, Fenhiku, Chiayi Hsien, 17 June 1965 (T. M. & K. L.).

Distribution. Java, Formosa, Japan (Ryukyus). New to Formosa.

31. *Homoneura (Homoneura) subvittata* Malloch

See Sasakawa (1992), p. 203.

Specimens examined. 1 ♂, Wusheh (660 m), 31 Jan. 1962 (C. Y.); 1 ♂ 1 ♀, Wushe, 13 Mar. 1961 (E. S.); 1 ♂, Wulai, Kueishan, 11 Nov. 1957 (T. M.); 1 ♂, Tungpu, nr. Poli, 8 Dec. 1963 (T. M.).

Distribution. Formosa, Thai, Malaya, Borneo.

32. *Homoneura (Homoneura) unguiculata* (Kertész)

See Sasakawa and Ikeuchi (1982), p. 494.

Specimens examined. 16 ♂ 16 ♀, Shuangchi, 15 km NW. of Taipei, 19 Feb. 1972 (T. M.); 1 ♂, Chaochi, Taipei Hsien, 16 Apr. 1965 (M. S.); 3 ♂ 1 ♀, Tsaoshan (150-300 m), nr. Taipei, 25-26 Apr. 1958 (K. L.); 3 ♂, Peitou, nr. Taipei, 28 May & 21 Oct. 1957 (T. M. & K. L.); 3 ♂, Museh (150 m), 19 Oct. 1957 (K. L.); 1 ♀, Keelung, 4-8 Oct. 1957 (T. M.); 6 ♂ 5 ♀, Taipei, 21 Oct. 1957 (T. M.); 1 ♂ 2 ♀, Kuaninshan (200 m), Taipei Hsien, 10 Nov. 1957 (T. M.).

Distribution. Formosa, China, Viet Nam, Japan, Ceylon.

33. *Homoneura (Homoneura) yehliuensis* n. sp. (Fig. 14)

Diagnosis. This new species is characterized by the fuscous anterior margin of wing, pubescent arista, bifurcate surstylus and the presence of dorsal median processes on aedeagus. The color of wing and shape of surstylus show a relationship with *H. pleuripuncta* Malloch, known from Sumatra and Malaya, but *pleuripuncta* is provided with the long hair on arista and distinct vittae or spots on thorax and abdomen.

Male. Testaceous; head pale, frons orangish and sparsely whitish pollinose excepting frontalia slightly shining; arista brown; thorax dusted with whitish gray; mesoscutum indistinctly with four brownish vittae between *dc*-row and laterad of that when viewed from front; T1-4 dark brown but pale on lateral side, T5-6 brown; protandrium and epandrium testaceous. Wing faintly brownish tinged, but distinctly darkened anteriorly between costa and vein R_{4+5} , and around *m-cu*; halter pale testaceous. Legs yellowish.

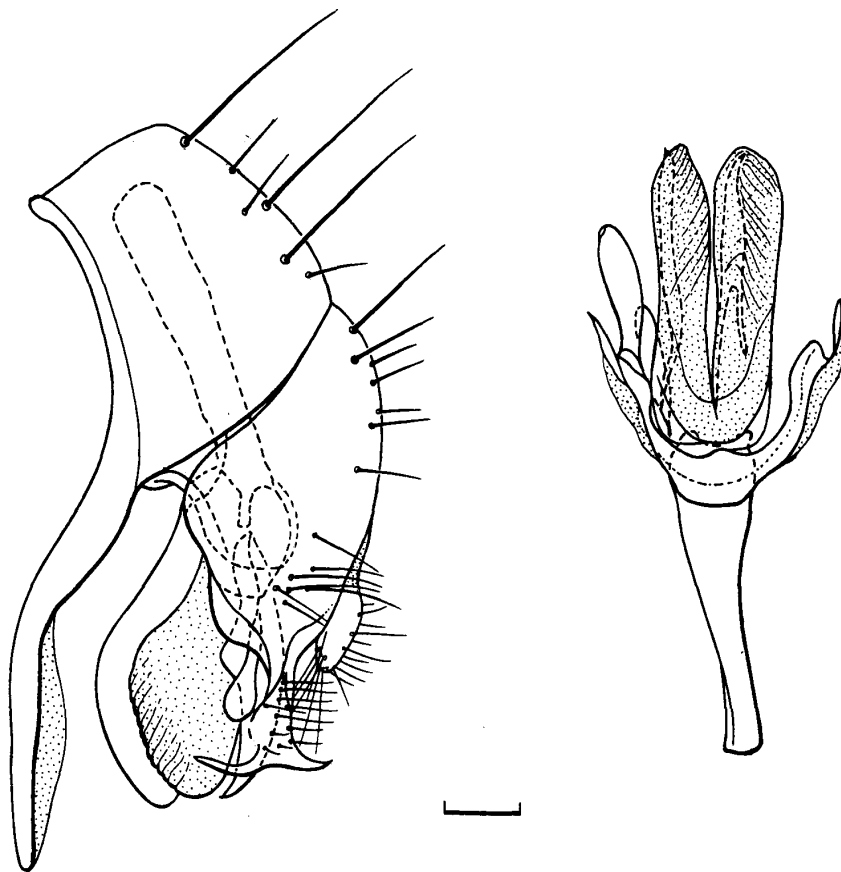


Fig. 14. Male genitalia of *Homoneura (H.) yehliuensis* n. sp. (holotype).

Frons wider than long, twice as wide as eye, almost parallel-sided; upper *or* as long as the lower; *oc* slightly longer than *or*; frontalia sparsely setulose on ventro-lateral sides; parafrofrontalia slightly projecting above eye margin in profile; eye 1.4 times as high as wide; face flat, epistome low and weakly excavated; gena about 1/5 height of eye; *pm* 7-8, short; antenna with first flagellomere 1.5 times as long as wide, arista shorter than eye height, pubescent.

Mesoscutum with 0+3 *dc*, first *dc* 2/3 length of the third, six rows of *acr*, *prsc* shorter than first *dc*. Wing: C-index 3.0, r-m at about middle of discal cell, 4V-index 1.7, 5V-index 0.16. Legs: Fore femur with 5-6 short *pv*, mid tibia with one long and one short spurs, all tibiae with *pd*.

Protandrium ringed but sternite extremely elongated ventrally, bearing three pairs of long dorsal setae; epandrium sparsely setose; surstylus bifurcated as claws on tip; hypandrium small U-shaped, without basal apodeme; pregonite and postgonite each slender; aedeagus dorsally with a pair of well-sclerotized processes which are pointed on apices and ventrally with a pair of membranous lobes; aedeagal apodeme subequal to aedeagus in length.

Body length 3.1 mm, wing length 3.1 mm.

Female unknown.

Holotype male (BISHOP No. 16471), Yehliu Beach, Taipei Hsien, 29-31 Mar. 1965 C. M. Yoshimoto; abdomen and genitalia in a polyethylene tubule with glycerol and pinned with the specimen

Distribution. Formosa.

34. *Homoneura (Minettioides) condylostylis* n. sp. (Fig. 15)

Diagnosis. This new species has the dark brown costal margin on wing and a brown spot before middle of vein R_{4+5} , and well-projected knob-like surstylus in male. It differs from *H. fumipennis* Malloch, 1972, known from Formosa, by its narrow brown margin along costa and clear r-m.

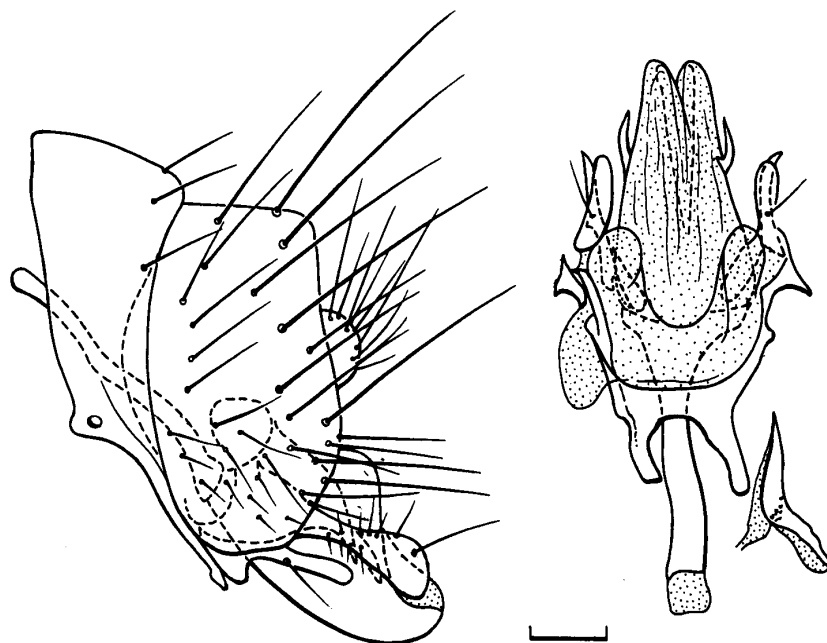


Fig. 15. Male genitalia of *Homoneura (Minettioides) condylostylis* n. sp. (paratype).

Male. Testaceous; head very sparsely whitish pollinose; face, parafacialia, gena and postgena pale; ocellar triangle and parafrontalia faintly brown-tinged; arista dark brown excepting base; thorax sparsely whitish dusted; mesoscutum subshining; abdomen slightly darker than thorax, T2-5 each with dark brown posterior margin. Wing very faintly tinged with brownish yellow, with brown costal margin broad, extending posteriorly to middle of cell R_5 and united with apical markings on R_{4+5} and M (apical marking about $1/4$ length of vein R_{4+5} and that $1/2$ length of ultimate section of M), a brown round spot on R_{4+5} situated before level of m-cu and connected anteriorly with brown costal margin, brown marking around m-cu broadened posteriorly; halter pale testaceous. Legs testaceous, third to fifth tarsomeres slightly brown-tinged.

Frons wider than long, 1.5-1.6 times as wide as eye, slightly diverging ventrally; *oc* longer than upper *or*; parafrontalia projecting above eye margin in profile; lower *or* subequal to the upper; eye 1.3 times as high as broad; face flat; gena about $1/5$ eye height; *pm* 8-10; antenna with first flagellomere oval, 1.7-2.0 times as long as wide; arista short-haired, with dorsal longest hair nearly $1/2$ as long as width of first flagellomere.

Mesoscutum with 0+3 *dc*, equidistant among them, eight rows of *acr*, *prsc* shorter than second *dc* but longer than first *dc*, postsutural *ia* $1/3$ length of third *dc*, *ipa* shorter than *opa*; anterior *stpl* shorter than the posterior. Wing: C-index 3.5-3.7, r-m before middle of discal cell, ultimate section of M only a little longer than the penultimate, 5V-index 0.11. Legs: Fore femur with ctinidium of spinulae and four long *pv*, mid femur with 4-5 *a*, all tibiae with *pd*, mid tibia with three spurs.

S4-6 each slightly wider than long, S6 emarginated on posterior $1/5$. Protandrium ringed, extremely narrowed ventrally and sternite horizontal in caudal view; epandrium with long marginal bristles; surstylus clubbed, with a seta at base; hypandrium H-shaped, pregonite clavate and with a seta at middle, postgonite pointed apically; aedeagus with broad lateral sclerite which is provided with a spine, membranous on dorsal and ventral sides.

Body length 6.3 mm, wing length 6.5 mm.

Female. Similar to male; ovipositor testaceous yellow; body length 5.6-6.3 mm, wing length 6.3-6.5 mm.

Holotype male (BISHOP No. 16472), Mt. Alishan (2,130 m), 19 Aug. 1947, J. L. Gressitt. Paratypes: 1 ♂ 1 ♀, same locality as holotype, 17 & 20 Aug. 1947, J. L. Gressitt; 1 ♀, Mt. Alishan (2,400 m), 12-16 June 1965, T. C. Maa & K. S. Lin.

Distribution. Formosa.

Etymology. The specific name refers to the knob-like surstylus.

35. *Homoneura* (*Neohomoneura*) *honest*a (Kertész)

This large, testaceous yellow species is distinctive in having the brown markings on apices of R_{2+3} , R_{4+5} and M, of which marking on R_{4+5} with basal extremity at same level of that on R_{2+3} , and a brown spot at middle of T4-6, respectively. Male genitalia: See Sasakawa (1992), p. 145.

Specimen examined. 1 ♀, Tsingtan, nr. Taipei, 12 Mar. 1958 (K. L.).

Distribution. Formosa, Thai, Malaya, Viet Nam, Cambodia.

36. *Homoneura* (*Neohomoneura*) *paroeca* (Kertész)

The wing marking of this species is similar to that of *honest*a, but apical marking on R_{4+5} is remote from the apex of vein, and also T4-6 are not provided with median spots. See the key to Oriental species of this subgenus given by myself in 2001, p. 57-58.

Specimens examined. 1 ♀, Wulai, nr. Taipei, 23 Apr. 1957 (T. M.); 3 ♂ 4 ♀, Kueishan (300-500 m), Wulai, 11 Nov. 1957 (T. M.).

Distribution. Formosa.

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