

Taxonomic notes on Oriental Tachinidae (Insecta, Diptera) I : Blondeliini¹⁾

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Abstract: Blondeliine tachinids from the Oriental region are reviewed. The following new species are described and new synonymies and new combinations are proposed: *Degeeriopsis apocola* sp. n., *Prodegeeria thomasi* sp. n., *Prodegeeria malayana* sp. n., *Blondelia breviceps* Shima syn. n. of *B. siamensis* (Baranov) (comb. nov.), *Compsilura sumatrensis* Townsend syn. nov. of *C. concinnata* (Meigen), *Eophyllophila filipes* Townsend syn. nov. of *E. elegans* Townsend, *Prodegeeria tricincta* (Villeneuve) syn. nov. of *P. javana* (Brauer et Bergenstamm), *Admontia gracilipes* (Mesnil) comb. n., *Admontia malayana* (Townsend) comb. n. and *Lixophaga villeneuvei* (Baranov) comb. n.

1. Introduction

Taxonomic studies of the Oriental Tachinidae were begun by European workers in the early 1800's and many species were described in scattered genera from the region until the early 1900's. In the absence of appropriate revision of these early works Townsend caused further confusion for the systematics of the Oriental Tachinidae by describing and erecting tremendous numbers of new species and genera (see Arnaud, 1958). Under the circumstances it had long been difficult to identify Oriental tachinids with certainty even to genera, although there had been needs for the identification of such important insects as tachinids in agriculture or forestry.

This chaotic state of tachinid systematics in the Oriental region has been mostly solved by Mesnil and Crosskey in the middle to late 1900's; Mesnil revised many genera and species of Oriental tachinids in his revisional work of the Palaearctic Tachinidae, "Die Fliegen" published in separate volumes between 1944 and 1975; Crosskey reviewed most type specimens of Oriental tachinid species and published his findings in his "conspectus" (Crosskey, 1976). It is now possible for us to identify most Oriental tachinid genera and in some cases species.

In recent years a good deal of Oriental tachinid material has accumulated in my collection and I have had the opportunity to see many types of Oriental tachinid species. In the course of my recent study I have found some mistakes in Mesnil's works and found

new synonymies not treated in Crosskey's conspectus. Further, many Oriental tachinid species described by early authors have never been redescribed in terms of contemporary tachinid systematics. In this series of papers I try to review Oriental tachinid species, with the aim of covering the need for an improved classification of the Tachinidae from the Oriental region.

I treat here mainly small genera, providing keys to Oriental species so far as possible, describing new species, redescribing known species and proposing new synonymies and new combinations. Revisions of large genera such as *Exorista*, *Carcelia* and *Tachina* are planned to be published in separate papers. In the first paper of this series I revise Oriental blondeliine genera which contain problematic species and for which I have been able to see the type specimens.

2. Materials and Methods

A key to genera of the Oriental Blondeliini was given by Crosskey (1976) and it is useful to identify most of the Oriental blondeliine genera. Oriental blondeliine genera treated here may be identified using the key, and in some cases with the aid of the key made by Mesnil (1960).

Material has been studied from the following collections:

Biosystematics Laboratory, Graduate School of Social and Cultural Studies, Kyushu University, Fukuoka (BLKU)

Department of Entomology, Natural History Museum,

1) Contribution from Biosystematics Laboratory, Graduate School of Social and Cultural Studies, Kyushu University (No. 13).

2) Biosystematics Laboratory, Graduate School of Social and Cultural Studies, Kyushu University, Ropponmatsu, Fukuoka 810, Japan.

London (BMNH)
 Entomological Institute, Hokkaido University,
 Sapporo (EIHU)
 Institut voor Systematiek en Populatiebiologie,
 Zoölogisch Museum, Amsterdam (ZMA)
 National Science Museum, Natural History, Tokyo
 (NMNH)
 Naturhistorische Museum, Wien (NMW)
 Projektgruppe Entomologie (Deutsches Entomologis-
 ches Institut), Eberswalde (DEI)
 U.S. National Museum of Natural History, Smith-
 sonian Institution, Washington D.C. (USNM)
 Zoological Museum, University of Helsinki, Helsinki
 (ZMH)
 Zoologisk Museum, University of Stockholm, Stock-
 holm (ZMUS).

In descriptions terminology mainly follows
 McAlpine (1981) and measurements were made in a
 similar manner to Shima (1996).

3. Taxonomic Notes

3.1. Genus *Admontia* Brauer et Bergenstamm
Trichopareia Brauer et Bergenstamm in Crosskey,
 1976.

This genus is mainly Holarctic in distribution and
 known from only two species in the Oriental region. A
 key to these two Oriental species and their redescip-

tions are given as follows.

Key to species of *Admontia*

1. Parafacial haired on upper 1/2; hind tibia with 3
 preapical *d* setae; Female: 1st flagellomere of
 antenna about 4.5 times as long as pedicel; gena
 about 0.43 of eye height; vertex about 0.34 of head
 width; wing tinged with pale brown on anterior
 portion.....*A. malayana* (Townsend)
- Parafacial haired on almost entire length; hind tibia
 with 2 preapical *d* setae; Female: 1st flagellomere
 more than 6 times as long as pedicel; gena about
 0.54 of eye height; vertex 0.35-0.37 of head width;
 wing evenly tinged with pale brown.....
*A. gracilipes* (Mesnil)

Admontia gracilipes (Mesnil) comb. nov.

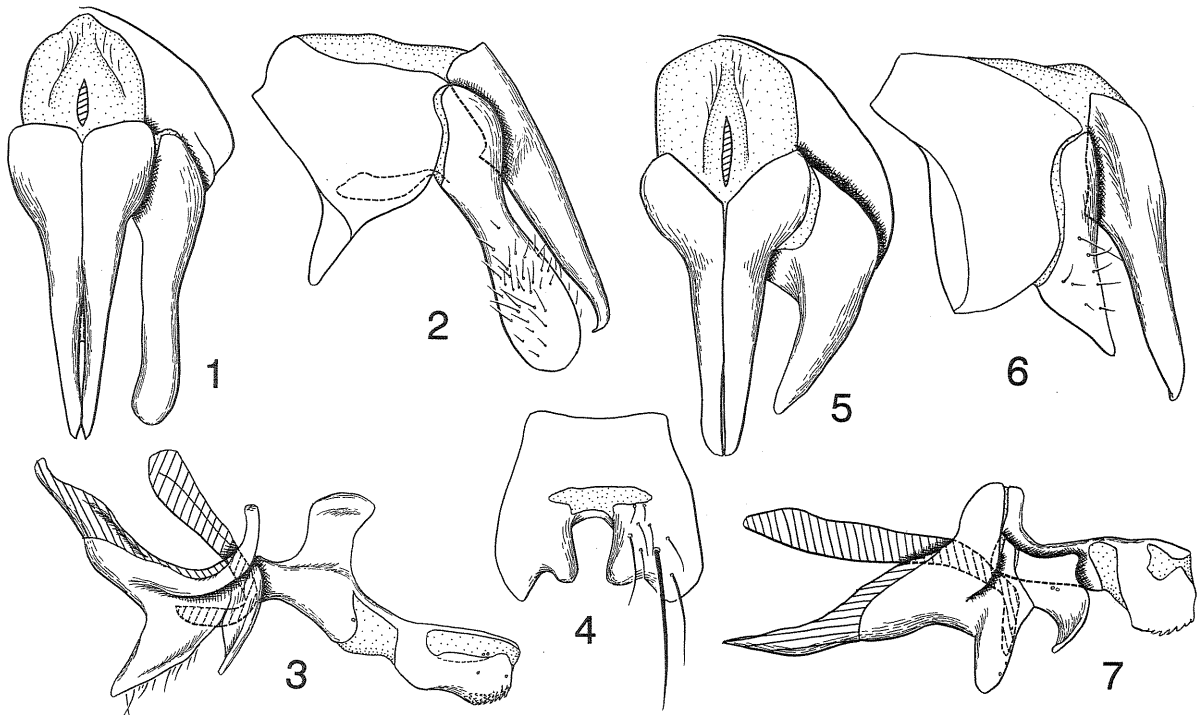
(Figs. 1-4)

Trichopareia gracilipes Mesnil, 1953: 101.

Type material examined: Holotype female (not
 male), Burma, Kambaiti, 2,000 m, 4.vi.1934. R. Malaise
 (ZMH).

Other specimens examined: 1 male and 2 females,
 16, 21.v.1934, R. Malaise (ZMUS).

Female. Head grayish white pollinose, fronto-
 orbital plate more grayish and somewhat polished on
 upper portion; antenna and arista black; palpus black.
 Vertex 0.35-0.37 of head width; frontal vitta nearly



Figs. 1-7. Male genitalia of *Admontia gracilipes* (Mesnil)(1-4) and *Medinodexia fulviventris* Townsend (5-7). Figs. 1, 5. Epandrium, cerci and surstylus in dorsal view; Figs. 2, 6. same in lateral view; Fig. 4. male 5th sternum in ventral view; Figs. 3, 7. hypandrium, gonopod, paramere and aedeagus in lateral view.

parallel-sided, about 1.5 times as wide as fronto-orbital plate at middle; parafacial slightly narrowed below, about 1.3 times as wide as 1st flagellomere at middle height; gena about 0.54 of eye height; face well concave, lower margin nearly in a plane; occiput weakly bulged. Inner vertical seta very strong, more than $2/3$ of eye height; outer vertical seta fine but distinct, $1/3 - 1/4$ as long as inner seta; 2 reclinate and 2 proclinate orbital setae, anterior seta of each stronger than posterior one; ocellar seta slightly longer than anterior proclinate orbital seta; 4 frontal setae, lowest seta nearly level with apex of pedicel; parafacial with 1-3 rows of fine short hairs on almost entire length; facial ridge with setae on lower $3/5$; vibrissa level with lower margin of face; upper occiput with 2-3 rows of black hairs. Antenna falling only slightly short of lower margin of face; 1st flagellomere 6.5-7 times as long as pedicel, 5.4-5.5 times as long as wide. Arista thickened on basal $1/2$, 2nd aristomere slightly longer than wide. Palpus weakly clavate, slightly less than $1/2$ length of 1st flagellomere.

Thorax black; dorsum rather densely grayish white pollinose on postpronotal lobe, notopleural region, median longitudinal portion of presutural area and intra-alar area of postsutural scutum, thinly pollinose on scutellum; pleura rather densely grayish white pollinose. 2 postpronotal setae; 2-3+3 *acr*, if 3 presutural setae present, then anterior seta very fine; 2+3 *dc*; 3 *ia*; 1-2+1 katepisternal setae, if 2 anterior setae present, then lowest seta very fine; anatergite bare; scutellum with 3-4 pairs of marginal setae, lateral seta at most as long as scutellum, apical setae very fine and nearly parallel or absent, discal seta absent.

Wing hyaline, evenly tinged with pale brown; tegula and basicosta black; lower calypter pale brown. Costal spine as long as r-m crossvein; 2nd costal sector haired below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1:4:1.5; vein M from dm-cu crossvein to its bend about 2 times as long as distance between the bend and wing margin.

Legs black, pulvilli brown. Fore tibia with 1-2 *p* setae; mid tibia with 1-2 *ad*, 2-3 *pd* and 1 *v* setae; hind tibia with 2 preapical *d* setae. Fore tarsus with apical $1/2$ of 1st tarsomere to 5th dilated and compressed dorsoventrally; 5th tarsomere rather rounded, shorter than 4th. Claws and pulvilli very short.

Abdomen shining black, rather thinly grayish white pollinose on anterior $1/3$ of 3rd tergum, $2/5$ of 4th and $2/3$ of 5th, the pollinosity faded posteriorly on each tergum. Syntergum 1+2 excavated to $1/2$ way to posterior margin. Hairs fine short rather sparse and recumbent on dorsum; 2nd tergum with 2 fine median marginal setae; 3rd tergum with 2 fine and short median discal and 2 strong median marginal setae, and with 1 strong lateral marginal seta on each side; 4th tergum with 2 strong median discal and a row of strong

marginal setae; 5th tergum with rows of strong discal and marginal setae; discal setae sometimes very fine or absent on 3rd and 4th terga.

Male. Closely resembling female, but differing as follows. Vertex about 0.4 of head width; frontal vitta widened anteriorly, about 2 times as wide as fronto-orbital plate; parafacial about $3/5$ as wide as 1st flagellomere; gena about 0.51 of eye height; facial ridge with setae on lower $2/3$; antenna long and wide, reaching well to lower margin of face, about 10 times as long as pedicel and about 4.7 times as long as wide; fore tibia with 2 *p* setae; mid tibia with 1 *ad*, 2 *pd* and 1 *v* setae; fore tarsus not dilated; 2nd abdominal tergum with 2 short and fine median marginal setae; 3rd tergum without median discal seta; 4th tergum with short and fine median discal setae. Genitalia: 5th sternum with inner posterior corner of posterior lobe roundly produced; 6th tergum short, rather weakly sclerotized, divided mid-dorsally into 2 hemitergites, without hair; syntergosternum 7+8 short; dorsal arms of hypandrium fused medially with each other; gonopod with dense hairs posteriorly; cerci in dorsal view narrowed posteriorly, weakly separated from each other on apical $1/6 - 3/5$, in lateral view curved ventrally at apex; surstylus in lateral view widened from basal $1/3$ to rounded apex, with rather dense fine hairs; epiphallus broad; distiphallus with spinules on apical portion.

Body length, 4.4-5.2 mm.

Remarks. Crosskey (1976) mentioned that the holotype of this species is a male, but it is a female.

Admontia malayana (Townsend) **comb. nov.**

Euhyperecteina malayana Townsend, 1926: 34.

Type material examined: Holotype female, Gunung Singgalang (Sumatra's Westkust), 1,800 m, vii. 1925, E. Jacobson (ZMA).

Female. Head grayish white pollinose, fronto-orbital plate more grayish and somewhat polished on upper portion especially around bases of setae; antenna and arista black; palpus black. Vertex about 0.34 of head width; frontal vitta nearly parallel-sided, about 2 times as wide as fronto-orbital plate at middle; parafacial narrowed below, slightly narrower than 1st flagellomere at middle height; gena about 0.43 of eye height; face rather well concave, lower margin nearly in a plane; occiput weakly bulged. Inner vertical seta very strong, outer vertical seta absent; 2 reclinate and 2 proclinate orbital setae, anterior seta of each stronger than posterior one; ocellar seta subequal in length to posterior proclinate orbital seta; 5-6 frontal setae, lowest seta nearly level with apex of pedicel; parafacial with 1-3 rows of fine short hairs on upper $1/2$; vibrissa level with lower margin of face; upper occiput with 1-2 rows of black hairs. Antenna falling only slightly short of lower margin of face; 1st flagellomere

about 4.5 times as long as pedicel. Arista thickened on basal 2/5, 2nd aristemere slightly longer than wide.

Thorax black; dorsum rather densely grayish white pollinose on postpronotal lobe, notopleural region and on median longitudinal portion; pleura rather densely grayish white pollinose. 2 postpronotal setae; 3+3 *acr*, anterior presutural seta fine; 2+3 *dc*; 3 *ia*; 1+1 katepisternal setae; anatergite bare; scutellum with 3 pairs of marginal setae, apical seta absent, discal seta fine, shorter than scutellum.

Wing hyaline, tinged with pale brown, especially well tinged between costa and vein M; tegula and basicosta black; lower calypter pale yellowish brown. Costal spine as long as r-m crossvein; 2nd costal sector haired below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1.5:6.5:2; vein M from dm-cu crossvein to its bend about 2.5 times as long as distance between the bend and wing margin.

Legs black, pulvilli brown. Fore tibia with 1 *p* seta; mid tibia with 2 *ad*, 2 *pd* and 1 *v* setae; hind tibia with 3 preapical *d* setae. Fore tarsus with 2nd to 5th tarsomeres dilated, 5th tarsomere short. Claws and pulvilli very short.

Abdomen shining black, rather thinly grayish white pollinose on anterior 1/3 of 3rd tergum, 2/5 of 4th and 2/3 of 5th, the pollinosity faded posteriorly on each tergum. Hairs fine short rather sparse and recumbent on dorsum; syntergum 1+2 with 2 fine median marginal setae; 3rd tergum with 2 fine and short median discal and 2 strong median marginal setae, and with 1 strong lateral marginal seta on each side; 4th tergum with 2 strong median discal and a row of strong marginal setae; 5th tergum with rows of strong discal and rather fine marginal setae.

Male. Unknown.

Body length, ca. 6 mm.

Remarks. This species resembles more closely some Palearctic species rather than the preceding species. It is known only from the type female, so affinity of this species cannot be deduced with certainty until a male specimen becomes available.

3.2. Genus *Blondelia* Robineau-Desvoidy

The genus *Blondelia* is distributed mainly in the Holarctic region and no species has been known previously from the Oriental region.

Blondelia siamensis (Baranov) comb. nov.

Euthelairosona siamense Baranov, 1938: 411.

Blondelia breviceps Shima, 1984: 544. **Syn. nov.**

Type material examined: Holotype male of *Euthelairosona siamense*, Siam [= Thailand], 8.xii.1877 (BMNH); holotype male of *Blondelia breviceps*, Japan, Kyushu, Kumamoto, Naidaijin, 8.v.1967, H. Shima

(BLKU).

Remarks. This species was placed in the genus *Prodegeeria* by Mesnil (1962) and later treated as an unplaced species of *Blondeliini* by Crosskey (1976). An examination of the type specimen revealed that this is the same as a blondeline species described from Japan. I have seen several specimens of this species from Yunnan, China, and Sun et al. (1992) recorded it from Hunan, China, under the name of *B. breviceps*.

3.3. Genus *Compsilura* Bouché

Compsilura concinnata (Meigen)

Tachina concinnata Meigen, 1824: 412.

Phorocera hyalipennis Macquart, 1851: 170. (After Crosskey, 1976).

Phorocera degeerioides Wulp, 1893: 179.

Compsilura sumatrensis Townsend, 1926: 33. **Syn. nov.**

Type material examined: Holotype male of *Phorocera degeerioides* Java, Buitenzorg [= Bogor] (BMNH); holotype male of *Compsilura sumatrensis*, Sumatra, Air Njuruk Bempu, 1,400 m, viii.1916, E. Jacobson (ZMA).

Remarks. The type specimen of *Compsilura sumatrensis* seems to be darker than specimens of *C. concinnata* from more northern areas, but I can find no other differences between them.

3.4. Genus *Degeeriopsis* Mesnil

Key to species of *Degeeriopsis*

1. Palpus yellow; vertex about 0.18 of head width in male, about 0.26 in female; abdomen entirely yellow, without pollinosity.....*D. xanthogastra* Mesnil
- Palpus dark brown to black; abdomen black on posterior portion of 4th tergum and entire 5th, rather thinly grayish white pollinose on entire 5th tergum; vertex wider, about 0.26 of head width in male.....*D. apocola* sp. n.

Degeeriopsis xanthogastra Mesnil

(Figs. 8-10)

Degeeriopsis xanthogastra Mesnil, 1953: 104.

Type material examined: Holotype male, N. E. Burma, Kambaiti, 2,000 m, 23.iv.1934, R. Malaise (ZMH).

Other specimens examined: 1 female, N.E. Burma, Kambaiti, 7,000 ft., 15.iv.1934, R. Malaise; 1 male, same locality and collector as holotype, 26.iv.1934 (all in ZMUS).

Mesnil (1953) described this species in detail. Here are added measurements and some features to the original description.

Male. Vertex 0.17-0.18 of head width; frontal vitta

widened anteriorly, about 2 times as wide as fronto-orbital plate at middle; parafacial narrow, narrowed below, about $\frac{3}{5}$ as wide as 1st flagellomere at middle height; gena about 0.12 of eye height; antenna falling short of lower margin of face by about $\frac{5}{6}$ length of pedicel; 1st flagellomere narrow, about 4 times as long as pedicel; palpus yellow, about $\frac{3}{4}$ as long as 1st flagellomere. 1+0(?) *acr*; 2+2 *dc*; 3 *ia*; 2-3 supra-alar setae, if 2 then posteriormost seta absent; 4 pairs of marginal scutellar setae, apical seta very fine hair-like; 2-1+1 katepisternal setae, lower seta fine, katepisternum with a row of fine and rather long hairs along anterior margin of mid coxa; anatergite haired. Relative lengths of costal sectors 2nd, 3rd and 4th approximately as 3:7:3; vein M from dm-cu crossvein to its bend about 2.5 times as long as distance between the bend and wing margin; last section of vein CuA₁ about $\frac{3}{4}$ as long as dm-cu crossvein; 2nd costal sector haired below. Mid tibia with 1 *ad* and 4 *pd* setae, without *v* seta; claws and pulvilli very long. Abdomen elongate, orange yellow, without discal setae. Male genitalia: Cerci tripartite apically, outer lobe weakly curved dorsally in lateral view; surstylus in lateral view weakly curved dorsally on apical $\frac{1}{4}$, without hair; epiphallus broad and short.

Female. Differing from male as follows. Head grayish pollinose; vertex about 0.26 of head width;

frontal vitta parallel-sided, about 2 times as wide as fronto-orbital plate at middle; 6-7 frontal setae, lowest seta nearly level with middle of pedicel; 1 proclinate orbital seta present; ocellar seta indistinct; facial ridge with fine short setae on lower $\frac{2}{3}$; antenna almost reaching to lower margin of face; 1st flagellomere about 6 times as long as pedicel; claws and pulvilli short, about $\frac{1}{2}$ as long as 5th tarsomere; 5th abdominal tergum strongly narrowed posteriorly, nearly conical, without marginal seta.

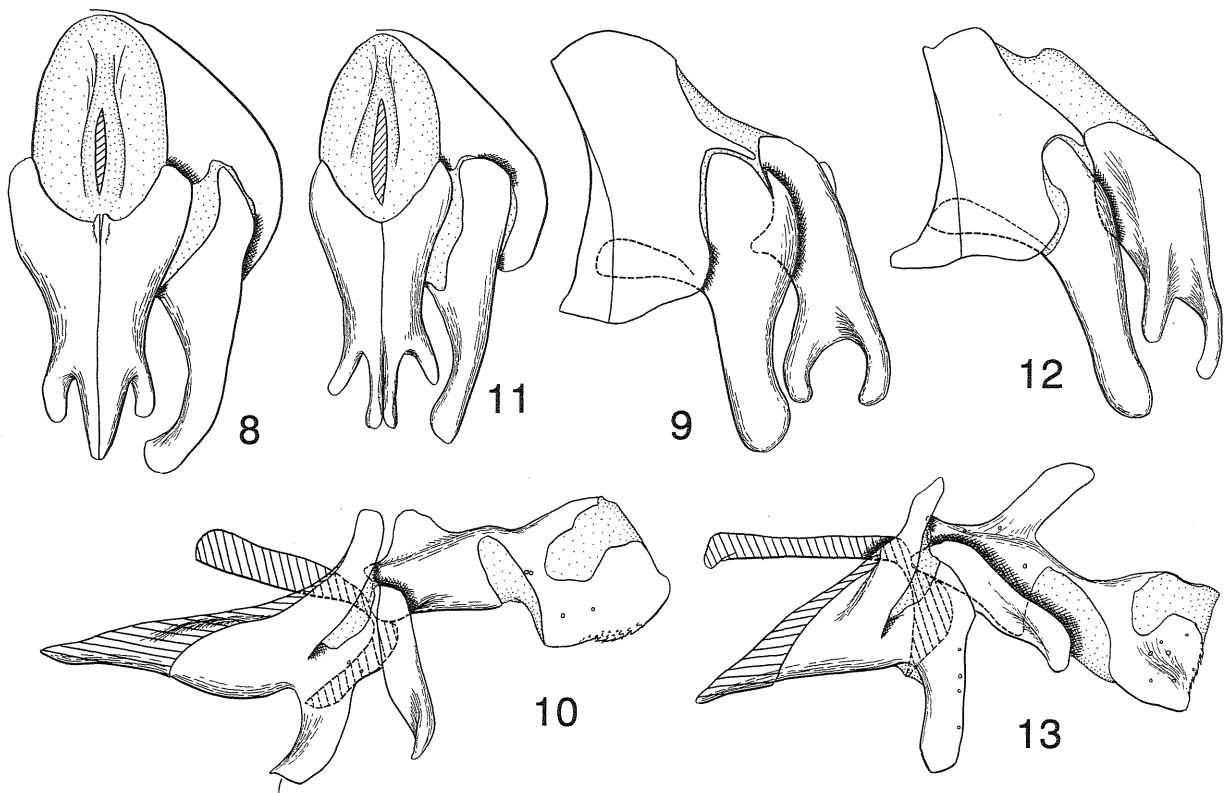
Body length, 4.1-6 mm.

Degeeriopsis apocola sp. nov.

(Figs. 9-12)

Holotype male, Philippines, Mindanao, Mt. Apo, Agko-Lake Binado, 1,350-2,300 m, 5.vii.1978, A. Nakanishi & O. Yata (BLKU).

Male. Head grayish white pollinose, fronto-orbital plate brownish; antenna brown-black; arista brown; palpus brown. Vertex about 0.26 of head width; frontal vitta nearly parallel-sided, about 2.5 times as wide as fronto-orbital plate at middle; parafacial narrowed below, about $\frac{1}{2}$ as wide as 1st flagellomere at middle height; gena about 0.16 of eye height; upper postorbit very narrow, close to posterior eye margin; occiput flattened. Inner vertical seta slightly more than $\frac{1}{2}$ of



Figs. 8-13. Male genitalia of *Degeeriopsis xanthogastra* Mesnil (8-10) and *D. apocola* sp. n. (11-13). Figs. 8, 11. Epandrium, cerci and surstylus in dorsal view; Figs. 9, 12. same in lateral view; Figs. 10, 13. hypandrium, gonopod, paramere and aedeagus in lateral view.

eye height; outer vertical seta absent; ocellar seta fine hair-like; 2 reclinate orbital setae, anterior seta stronger than posterior seta and about 3/4 as long as inner vertical seta; 5-6 frontal setae, lowest seta nearly level with apex of pedicel; fronto-orbital plate with fine sparse hairs which make a row on lower portion, 1-2 fine short hairs present just below lowest frontal seta; facial ridge with rather fine setae on lower 2/3; vibrissa nearly level with lower margin of face; upper occiput with several fine black hairs. Antenna long and rather wide, falling short of lower margin of face by about 1/2 length of pedicel; 1st flagellomere about 6 times as long as pedicel. Palpus slender, slightly shorter than 1/2 length of pedicel.

Thorax black in ground color; dorsum rather densely grayish white pollinose on postpronotal lobe, notopleural area, narrow posterior portion of presutural area of scutum along transverse suture and small roundish spot between rows of intra-alar and supra-alar setae just anterior to postalar callus, thinly grayish pollinose on posterior portion of postsutural scutum along posterior margin; pleura rather thinly grayish white pollinose. Postpronotal lobe with 3 setae, interior seta fine; 1+1 *acr*; 3+2 *dc*, anterior seta of presutural scutum fine; 0+3 *ia*; 3 *sa*; 1+1 katepisternal setae, katepisternum almost bare below; apical scutellar seta fine, hair-like; distance between bases of subapical scutellar setae about 1/2 that between basal and subapical setae of corresponding side.

Wing hyaline, tinged with pale brown, especially on anterior 1/2; tegula and basicosta black. Second costal sector haired below; costal seta undeveloped; basal node of vein R_{4+5} with 1 very fine short hair dorsally, bare ventrally. Relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1.5:3.5:2; vein M from dm-cu crossvein to its bend about 2.5 times distance between the bend and wing margin; last section of vein CuA_1 about 2/3 as long as dm-cu crossvein.

Legs black; pulvilli dull yellowish. Fore tibia with 2 *p* setae; mid tibia with 1 *ad* and 3 *pd* setae, uppermost *pd* seta short and fine, without *v* seta; hind tibia with 2 *ad*, 2 *pd* and 3 *v* setae. Claws and pulvilli very long.

Abdomen broadly reddish yellow on syntergum 1+2 to anterior portion of 4th tergum, black on mid-dorsal longitudinal area of syntergum 1+2 and 3rd tergum, posterior 2/3 of 4th and entire 5th; dorsum rather thinly grayish white pollinose on entire 5th tergum. Syntergum 1+2 weakly excavated only at base. Hairs on dorsum fine rather long and sparse, rather recumbent on 3rd and 4th terga; 2nd tergum with 2 rather strong median marginal setae, and with 1 lateral marginal seta on each side; 3rd tergum with 2 strong median marginal setae, and with 1 lateral marginal seta on each side; 4th and 5th terga each with a row of marginal setae; discal setae absent.

Male genitalia: Closely resembling the preceding

species; outer lobe of cerci nearly straight in lateral view and directed outward in dorsal view; surstylus nearly straight; epiphallus long.

Female. Unknown.

Body length, ca. 3.9 mm.

Remarks. This species closely resembles the preceding species, but is darker in coloration.

3.5. Genus *Eophyllophila* Townsend

There are 3 species of this genus described from the Oriental region. Mesnil (1962) provided a key to species of *Eophyllophila*, but his key is misleading. Crosskey (1976) suggested that all three are the same species. I recognize two species, as revised below.

Key to species of *Eophyllophila*

1. 2nd costal sector haired below; wing hyaline, only slightly and evenly tinged with pale yellow; female with 2 strong median discal setae each on 3rd and 4th terga *E. includens* (Walker)
- 2nd costal sector bare below; wing distinctly tinged with brown especially in male; in female median discal setae on 3rd abdominal tergum weak or absent, absent on 4th tergum and median marginal setae shifted forward *E. elegans* Townsend

Eophyllophila elegans Townsend

Eophyllophila elegans Townsend, 1926: 19.

Eophyllophila filipes Townsend, 1927b: 283. **Syn. nov.**

Type material examined: Lectotype male of *E. elegans* (designated by Crosskey, 1969: 95), Indonesia, Sumatra, Sungai Kumbang, ix.1915, E. Jacobson (ZMA); paralectotype male of *E. elegans*, same data as lectotype, E. Jacobson (ZMA); paralectotype male of *E. elegans*, same data as lectotype (USNM); syntype male of *E. filipes*, Taiwan, Sokutsu, H. Sauter, vi.1912 (DEI).

Other specimens examined: 69 males 11 females from Nepal, Thailand, Taiwan, Malaysia (Malaya, Sabah) and Indonesia (Sumatra)(BLKU).

Crosskey (1976) mentioned that he had examined syntypes of *E. filipes* in the USNM collection, but I did not see them there.

Male. Head densely whitish pollinose, parafacial and gena below eye brownish; occiput black; frontal vitta velvety black; antenna brown-black; arista brown, paler on thickened part; palpus black. Frons strongly narrowed to vertex, vertex 0.12-0.14 of head width; frontal vitta 2-3 times as wide as fronto-orbital plate at middle; parafacial strongly narrowed below, about 1/2 as wide as 1st flagellomere at middle height; gena 0.18-0.19 of eye height; face weakly concave, lower margin nearly in a plain; occiput flattened. Inner

vertical seta fine, about 1/3 of eye height; outer vertical seta still fine, about 2/3 as long as inner seta; ocellar seta about as long as inner vertical seta; 12-13 frontal setae, lowest seta nearly level with middle of pedicel; fronto-orbital plate with several fine hairs on inner portion; vibrissa level with lower margin of face, or slightly below; gena with several hairs on occipital dilation; postocular setae close to posterior eye margin on upper 1/3; occiput with many black hairs. Antenna falling short of lower margin of face by about 1/3 length of pedicel; pedicel with a long seta slightly shorter than inner vertical seta; 1st flagellomere 4.5-4.7 times as long as pedicel. Arista long plumose, including plumosity about 2 times as wide as 1st flagellomere. Palpus flattened, parallel-sided, slightly shorter than 1st flagellomere.

Thorax black, rather densely grayish white pollinose; dorsum with 3 broad longitudinal black vittae, median vitta broadest; supra-alar region, postalar callus, posterior margin of scutum and scutellum black. 2 postpronotal setae; 2+2 *acr*; 2+3 *dc*; 0+3 *ia*; 3 supra-alar setae, anterior seta very fine; proepisternal seta about 1/2 as long as proepimeral seta; 1+1 katepisternal setae; anatergite bare or haired; scutellum with 3 pairs of marginal setae, apical seta absent, basal seta rather short.

Wing tinged with brown, paler posteriorly; tegula and basicosta black; lower calypter brown. Costal spine 1-2 times as long as r-m crossvein; 2nd costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 2.5:5:2; vein M from dm-cu crossvein to its bend about 2.5 times as long as distance between the bend and wing margin.

Legs black; pulvilli pale yellowish. Fore tibia with 2 *p* setae; mid tibia with 1 *ad* and 3 *pd* setae, without *v* seta; hind tibia with a row of *ad*, 3 *pd* and 2 *v* setae, and with 2 preapical *d* setae, without apical *pv* seta. Claws and pulvilli long.

Abdomen black, rather densely grayish white, somewhat bluish, pollinose on anterior 1/3-1/4 of 3rd and 4th terga and 1/2-2/5 of 5th, the pollinosity faded posteriorly and thin on 5th tergum. Hairs fine rather long dense and erect; 2nd tergum with 2 median marginal setae and with 1 lateral marginal seta on each side; 3rd and 4th terga each with 2 median discal and a row of marginal setae, and with 1 lateral discal seta on each side; 5th tergum with regular rows of discal and marginal setae.

Female. Differing from male as follows. Inner 2/3 of fronto-orbital plate black; vertex about 1/4 of head width; parafacial very narrowed below, almost linear on lower 1/2; all head setae stronger than in male, inner vertical seta about 1/2 of eye height; outer vertical seta about 2/3 as long as inner seta, 2 strong proclinate and reclinate orbital setae; 1st flagellomere about 4 times as long as pedicel; 1st to 3rd tarsomeres

of fore leg weakly compressed and dilated laterally, 4th and 5th compressed dorso-ventrally; claws and pulvilli short; abdomen with sparse hairs, median discal setae fine on 3rd tergum and absent on 4th; median marginal setae on 4th abdominal tergum shifted forward; 5th tergum without distinct discal and marginal setae.

Body length, 4.5-8.9 mm.

Eophyllophila includens (Walker)

Dexia includens Walker, 1859: 130.

Type material examined: Holotype male, Indonesia, Celebes [= Sulawesi], Makassar [= Ujung Pandang], A. R. Wallace (BMNH).

Other specimens examined: 24 males 16 females from Pakistan, Nepal, Thailand, Taiwan and Indonesia (Sulawesi) (BLKU).

Male. Head densely whitish pollinose, fronto-orbital plate inside row of frontal setae, upper postorbit and upper occiput black, gena below eye brownish; antenna black; arista brown; palpus dark brown; vertex about 0.14 of head width; frontal vitta about 2 times as wide as fronto-orbital plate at middle; parafacial slightly narrower than 1st flagellomere at middle height; gena about 0.16-0.18 of eye height; postorbit strongly narrowed above; inner vertical seta rather fine, slightly shorter than upper frontal setae, subequal in length to ocellar seta; lowest frontal seta inserted slightly below base of pedicel; vibrissa nearly level with lower margin of face; upper postorbital setae close to posterior eye margin; antenna falling short of lower margin of face by about length of pedicel; 1st flagellomere about 4 times as long as pedicel; arista long plumose, total width including plumosity about 3 times as wide as width of 1st flagellomere. 2 postpronotal setae; 2+2-3 (fine, hair-like) *acr*; 2+3 *dc*; 3 fine *ia*; proepisternal seta fine, about 1/2 as long as proepimeral seta; 1+1 katepisternal setae; scutellum with 3 pairs of long marginal setae, no apical seta, no discal seta. Wing hyaline, only faintly tinged with pale brown; tegula and basicosta black; lower calypter pale brown; second costal sector haired below; costal seta slightly longer than r-m crossvein; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 2:5.5:2.5; vein M from dm-cu crossvein to its bend about 2 times distance between the bend and wing margin. Hind tibia with 3 preapical *d* setae, posterior seta fine but distinct.

Female. Differing from male as follows. Inner 2/3 of fronto-orbital plate black; vertex slightly more than 1/4 of head width; parafacial strongly narrowed on lower 1/2; inner and outer vertical setae strong; 2 proclinate and reclinate orbital setae present; 1st flagellomere about 4 times as long as pedicel; fore tarsi weakly dilated; claws and pulvilli short; 3rd and 4th

abdominal terga each with 2 strong median discal setae; median marginal seta on 4th tergum only slightly shifted forward; 5th tergum with 2 short but distinct median discal setae, marginal setae indistinct among erect hairs.

Body length, 4.8-8.3 mm.

3.6. Genus *Lixophaga* Townsend

The genus *Lixophaga* has been known from the New World, Eastern Palearctic region and New Guinea but this is the first record from the Oriental region.

Lixophaga villeneuvei (Baranov) comb. nov.

Hemidegeeria villeneuvei Baranov, 1934: 44.

Type material examined: Lectotype male (designated by Sabrosky & Crosskey, 1969: 45), Burma, Bhamo, Shwegu Res., 25.iii.1930, D. J. Atkins (BMNH); 3 female paralectotypes, same locality as lectotype, 29.iii, 27.iv, 24.v.1930 (BMNH); paralectotype female, same as the preceding, 3.iv.1930 (USNM).

Male. Head densely white pollinose, fronto-orbital plate and upper 2/3 of parafacial yellow; antenna black; arista brown; palpus yellow. Vertex about 0.25 of head width; frontal vitta slightly wider than fronto-orbital plate at middle; parafacial subequal in width to 1st flagellomere at middle height; gena about 0.26 of eye height. Inner vertical seta more than 1/2 of eye height; outer vertical seta absent; ocellar seta strong; 2 reclinate orbital setae, anterior seta stronger than posterior one and subequal in length to inner vertical seta; fronto-orbital plate with 1-2 rows of fine hairs which do not descend below lowest frontal seta; lowest frontal seta nearly level with base of pedicel. First flagellomere about 3.6 times as long as pedicel. Arista short pubescent, thickened on basal 1/4.

Thorax densely pale yellowish gray-white pollinose; dorsum with 4 longitudinal black vittae, outer vitta slightly wider than inner one. Postpronotal lobe with 3 setae, middle seta set forward; 3+3 *acr*; 3+3 *dc*; 2+1 katepisternal setae; scutellum with 4 pairs of marginal setae, lateral seta short, apical setae still short hair-like, erect and crossed each other.

Wing hyaline; tegula and basicosta black; lower calypter pale yellowish white. Second costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1:2:1; vein R_{4+5} with 3 fine setulae dorsally, only 1 ventrally; vein M from dm-cu crossvein to its bend about 1.5 times distance between the bend and wing margin.

Legs black; pulvilli pale brown. Fore tibia with 1 *p* seta; mid tibia with 1 *ad*, 2 *pd* and 1 *v* setae. Claws and pulvilli slightly elongate, subequal in length to 5th tarsomere.

Abdomen black, anterolateral portions of 3rd and 4th terga reddish yellow; dorsum densely yellowish white pollinose on anterior 1/2 of each 3rd to 5th terga; mid dorsal longitudinal black vitta distinct on 3rd and 4th terga. Hairs dense rather long and suberect on dorsum; syntergum 1+2 excavated to posterior margin, with 2 median marginal setae, 1 strong lateral marginal seta present on each side; 3rd tergum with 2 median discal and 2 median marginal setae, and with 1 lateral discal and 1 lateral marginal setae on each side; 4th tergum with 2 median discal and a row of marginal setae, and with 1 lateral discal seta on each side; 5th tergum with regular rows of discal and marginal setae.

Female. Differing from male as follows. Vertex about 0.29 of head width; frontal vitta slightly narrower than fronto-orbital plate; outer vertical and 2 proclinate orbital setae developed; gena about 0.3 of eye height; antenna with 1st flagellomere about 4 times as long as pedicel; claws and pulvilli short.

Body length, 6.1-7.2 mm.

Remarks. Mesnil (1962) placed this species in the genus *Prodegeeria* and Crosskey (1976) treated this as an unplaced blondelline. I think this is a *Lixophaga* species close to a Japanese species, *L. cinctella* Mesnil, 1957. Males of *Lixophaga* species usually have a pair of strong setae on the 5th abdominal sternum. I did not confirm this character in the above specimens, but I believe they apparently belong to this genus.

3.7. Genus *Medina* Robineau-Desvoidoidy

The genus *Medina* is mainly distributed in the Holarctic and Afrotropical regions and only 3 species have been known from the Oriental region. Mesnil's key (1973) is misleading for Oriental species.

Key to species of *Medina*

1. Fore tibia with 3 *p* setae; 1+3 *acr*; mid tibia with 4 *pd* setae; abdomen rather densely and well defined grayish white pollinose on anterior 1/5 of each 3rd and 4th terga and 1/4 of 5th; abdominal hairs strong and bristle-like; wing only weakly tinged with pale brown...*M. malayana*(Townsend)
 - Fore tibia with 1 *p* seta; 2+3 *acr*; mid tibia with 2 *pd* setae; abdominal pollinose band rather ill-defined and faded posteriorly; abdominal hairs usually finer; wing tinged with brown or not much so.....2
2. Antenna long, 1st flagellomere about 5 times as long as 2nd; wing well tinged with brown especially on anterior portion; gena narrow, about 0.18 of eye height*M. fumipennis* Townsend
 - Antenna with 1st flagellomere at most 4.5 times as long as 2nd; wing weakly tinged with pale brown; gena 0.23-0.25 of eye height.....

.....*M. fuscisquama* Mesnil

***Medina fuscisquama* Mesnil**

(Figs. 14-16)

Medina fuscisquama Mesnil, 1953: 105.

Type material examined: Holotype male, N. E. Burma, Kambaiti, 2,000 m, 25.iv.1934, R. Malaise (ZMH).

Other specimens examined: 3 males 2 females, same locality and collector as holotype, 15.v. (1 male), 26.v. (1 female), 8.vi. (1 male), 11.vi.1934 (1 male and 1 female) (ZMUS); 10 specimens, same locality and collector (BMNH).

Male. Head brownish pollinose, lower postorbit grayish white pollinose; vertex about 0.16 of head width; frontal vitta about 3 times as wide as fronto-orbital plate at middle; parafacial about 1/2 as wide as 1st flagellomere at middle height; gena 0.23-0.25 of eye height; facial ridge with fine setae on lower 3/4; 1st flagellomere 3.9-4.5 times as long as pedicel; palpus about 4/5 as long as 1st flagellomere. Relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1: 2.8:1.5; vein M from dm-cu crossvein to its bend slightly more than twice length of distance between the bend and wing margin. Third and 4th abdominal terga brownish pollinose on dorsum, rather grayish white on

sides. Genitalia: Cerci in dorsal view rather widely separated from each other, each cercus narrowed near middle, apex of each cercus directed outward, in lateral view curved ventrally at apex; surstylus short, in lateral view nearly triangular; epiphallus rather long, weakly curved posteriorly.

Body length, 5.5-7.9 mm.

Remarks. This species closely resembles the Palearctic species *M. collaris*, but differs from it by the narrow vertex, brownish fronto-orbital plate and brown lower calypter.

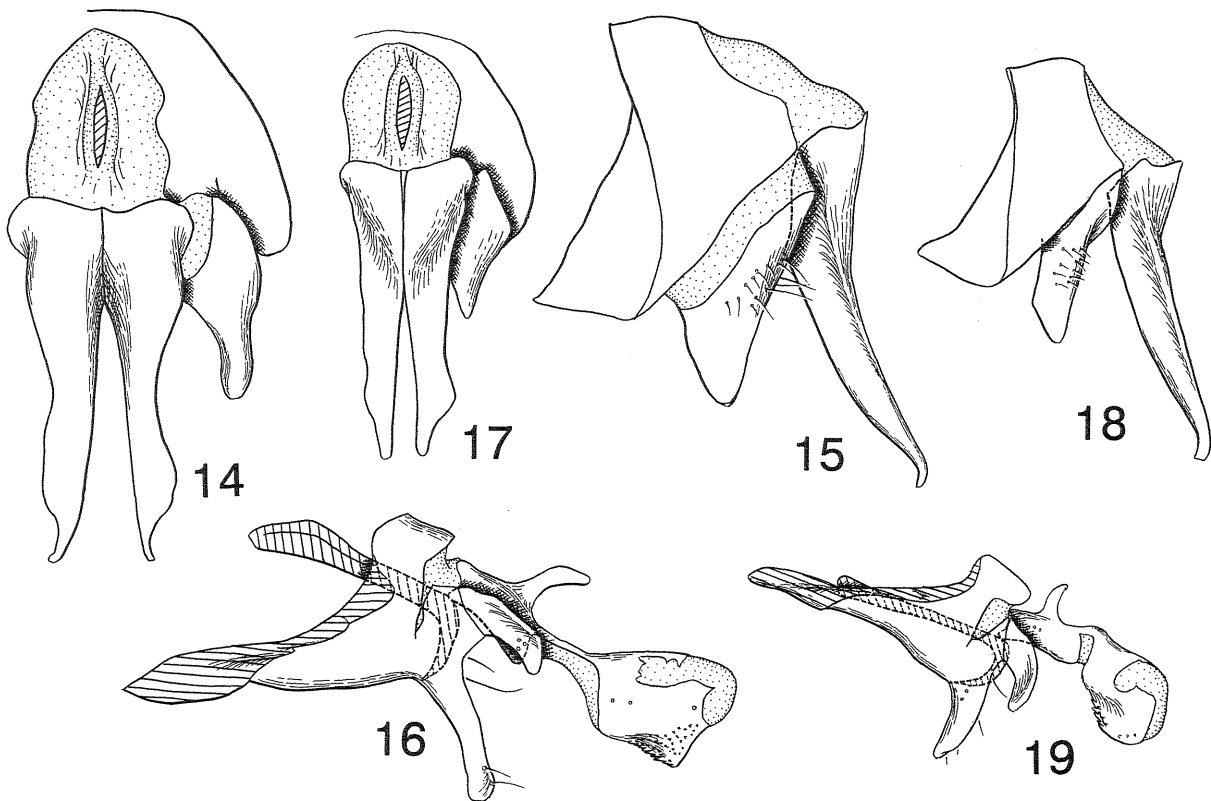
***Medina fumipennis* Townsend**

(Figs. 17-19)

Medina fumipennis Townsend, 1926: 20.

Type material examined: Holotype male, Indonesia, Sumatra, Air Njurus Bempu, 1,400 m, viii. 1916, E. Jacobson (ZMA).

Male. Fronto-orbital plate grayish brown, parafacial yellowish brown (somewhat golden), face pale yellowish white and lower 1/2 of postorbit whitish pollinose; antenna and arista brown-black; palpus brown. Vertex 0.14-0.15 of head width; frontal vitta weakly widened anteriorly, about 2 times as wide as fronto-orbital plate at middle; parafacial narrowed below, about 2/5 as wide as 1st flagellomere at middle



Figs. 14-19. Male genitalia of *Medina fuscisquama* Mesnil (14-16) and *M. fumipennis* Townsend (17-19). Figs. 14, 17. Epandrium, cerci and surstylus in dorsal view; Figs. 15, 18. same in lateral view; Figs. 16, 19. hypandrium, gonopod, paramere and aedeagus in lateral view.

height; face well concave, lower margin nearly in a plane; gena about 0.18 of eye height; occiput flattened on upper 1/2 and bulged on lower portion. Inner vertical seta fine, less than 1/3 of eye height; outer vertical seta hair-like; ocellar seta fine hair-like; only 1 proclinate orbital seta, slightly shorter than inner vertical seta; lowest frontal seta nearly level with base of 1st flagellomere; vibrissa level with lower margin of face; facial ridge with fine setae on lower 1/2; upper occiput with 1-2 rows of black hairs. Antenna falling only slightly short of lower margin of face; 1st flagellomere about 5 times as long as pedicel. Arista thickened on basal 1/4, 2nd aristomere shorter than wide. Palpus nearly parallel-sided, slightly flattened, about 3/4 as long as 1st flagellomere.

Thorax black, rather densely grayish white pollinose, brownish on postpronotal lobe; presutural area with 2 broad outer and 3 narrow inner longitudinal black vittae, these vittae fused with each other on anterior 3/4; postsutural scutum and scutellum entirely black. 3 postpronotal setae standing in a triangle; 2-3+3 *acr*; 2+3 *dc*; 0+3 *ia*; proepisternal seta less than 1/2 length of proepimeral seta; 1+1 katapisternal setae; anatergite with a few very fine short hairs; basal scutellar seta slightly longer than scutellum; lateral scutellar seta slightly shorter than subapical setae; discal scutellar seta fine, suberect, shorter than scutellum.

Wing rather well tinged with brown; tegula and basicosta black; lower calypter brownish. Costal spine indistinct; 2nd costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 2.5:2; vein M from dm-cu crossvein to its bend about 2.5 times as long as distance between the bend and wing margin.

Legs black; pulvilli pale brownish. Fore tibia with 1 *p* seta; mid tibia with 1 *ad*, 2 *pd* and 1 *v* setae; hind tibia with 2 *ad*, 2 *pd* and 3 *v* setae, and with 2 preapical *d* setae, without *pv* apical seta. Claws and pulvilli long.

Abdomen brownish, sides of 3rd tergum and anterolateral portion of 4th yellowish brown; dorsum thinly grayish white pollinose on anterior 1/5 of 3rd and 4th terga and 1/4 of 5th, the pollinose bands broadly interrupted at middle and faded posteriorly. Mid dorsal excavation of syntergum 1+2 extending to level of median marginal setae. Hairs long fine rather dense and erect on dorsum; 2nd tergum with 2 median marginal setae, 1 lateral discal and 2 lateral marginal setae present on each side; 3rd tergum with 1 fine anterior and 2 strong posterior median discal and 2 median marginal setae, and with 2 lateral marginal setae on each side; 4th tergum with 1 fine anterior and 2 strong posterior median discal and a row of marginal setae, 1 lateral discal seta present on each side; 5th tergum with regular rows of strong discal and marginal setae.

Male genitalia: Cerci in dorsal view rather widely separated from each other at basal 1/4 to apex, in lateral view apical portion weakly curved ventrally, each cercus nearly parallel-sided and narrowed at apical 1/5 in dorsal view; surstylus short, nearly parallel-sided and truncated at apex.

Female. Unknown.

Body length, ca. 7.5 mm.

Medina malayana (Townsend)

Mollia malayana Townsend, 1926: 20.

Type material examined: Holotype male, Indonesia, Sumatra, Gunung Singgalang (Sumatra's West-kust), 1,800 m, vii.1925, E. Jacobson (ZMA).

Male. Head grayish white pollinose, fronto-orbital plate darkened; antenna and arista brown-black; palpus brown. Vertex 0.16 of head width; frontal vitta well widened anteriorly, about 2 times as wide as fronto-orbital plate at middle; parafacial narrowed below, about 3/8 as wide as 1st flagellomere at middle height; face well concave, lower margin nearly in a plane; gena about 1/6 of eye height; occiput rather well bulged especially on lower portion. Inner vertical seta fine, about 1/3 of eye height; outer vertical seta hair-like; ocellar seta fine hair-like; 2 proclinate orbital setae, subequal in length to each other and to inner vertical seta; lowest frontal seta nearly level with base of 1st flagellomere; vibrissa level with lower margin of face; facial ridge with fine setae on lower 2/3; upper occiput with 1-2 rows of black hairs. Antenna falling only slightly short of lower margin of face; 1st flagellomere about 3.9 times as long as pedicel. Arista thickened on basal 1/4, 2nd aristomere as long as wide. Palpus nearly parallel-sided, slightly flattened, about 2/3 as long as 1st flagellomere.

Thorax black, very thinly grayish pollinose on presutural area, with 4 broad longitudinal black vittae, the pollinosity denser and whitish on postpronotal lobe, notopleural area and anterior mid dorsal area between inner vittae; postsutural scutum and scutellum entirely black. 3 postpronotal setae standing in a triangle; 1+3 *acr*; 2+3 *dc*; 1+3 *ia*; proepisternal seta less than 1/2 length of proepimeral seta; 1+1 katapisternal setae; anatergite with a few very fine short hairs; basal scutellar seta distinctly longer than scutellum(4:2.5) and subequal to lateral seta, subapical seta more than 2 times as long as scutellum; discal scutellar seta fine, suberect, slightly longer than scutellum.

Wing weakly tinged with pale brown; tegula and basicosta black; lower calypter pale brownish. Costal spine indistinct; 2nd costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 3.5:8:3.5; vein M from dm-cu crossvein to its bend about 2 times as long as distance between the bend and wing margin.

Legs black; pulvilli pale brownish. Fore tibia with 3 *p* setae; mid tibia with 2 *ad* setae, upper seta very fine, and 4 *pd* and 2 *v* setae, upper *v* seta fine; hind tibia with a row of *ad*, 4 *pd* and 5 *v* setae, and with 2 preapical *d* setae, without *pv* apical seta. Claws and pulvilli long.

Abdomen black, anterolateral portion of 3th tergum narrowly yellowish brown; dorsum rather densely grayish white, somewhat bluish, pollinose on anterior 1/5 of 3rd and 4th terga and 1/4 of 5th, the pollinose bands broadly interrupted at middle and rather well defined posteriorly. Mid dorsal excavation of syntergum 1+2 extending to level of median marginal setae. Hairs long strong sparse and erect on dorsum, stronger and bristle-like on lateral portion; 2nd tergum with 2 median marginal setae, 2 lateral discal and 2 lateral marginal setae present on each side; 3rd tergum with 2 rather fine anterior and 2 strong posterior median discal and 2 median marginal setae, and with 1 lateral discal and 2-3 lateral marginal setae on each side; 4th tergum with 2 pairs (anterior and posterior) of strong median discal and a row of marginal setae, and with 1 lateral discal seta on each side; 5th tergum with rows of strong discal and marginal setae. Male cerci close to each other, in dorsal view weakly narrowed to apex, in lateral view nearly straight.

Female. Unknown.

Body length, ca. 5.5 mm.

Remarks. This species is distinctive in having 1+3 *acr* setae on the thorax and 2 proclinate orbital setae in the male. These characters, together with 3 *p* setae on the fore tibia, seem to suggest that this species is a member of *lucutosa*-group (Herting, 1966) of this genus.

3.8. Genus *Medinodexia* Townsend

Key to species of *Medinodexia*

1. Abdomen entirely black in ground color, at most pale brownish pollinose on anterior portion of 3rd and 4th terga; fore tibia with only 1 *p* seta; male 5th or male 4th and 5th abdominal terga with dense minute recumbent hairs dorsally2
- Abdomen broadly reddish yellow, at most darkened on narrow mid dorsal longitudinal portion of 3rd and 4th terga, posterior portion of 4th tergum and entire 5th; fore tibia with 1 or 2 *p* setae; male abdominal dorsum with normal hairing, without dense minute recumbent hairs3
2. 2+1 katapisternal setae; wing only weakly tinged with brown; mid dorsal excavation of abdominal syntergum 1+2 extending to posterior 2/3; male 5th abdominal tergum with dense minute recumbent hairs dorsally*M. exigua* Shima
- 1+1 katapisternal setae; wing distinctly tinged with brown; abdominal syntergum 1+2 excavated

only at base dorsally; male 4th and 5th abdominal terga each with dense minute recumbent hairs dorsally*M. orientalis* Shima

3. Fore tibia with 2 *p* setae; vertex narrow, about 1/5 of head width in male; abdomen reddish yellow with mid-dorsal longitudinal black vitta and black posterior portion of 4th tergum and entire 5th*M. fulviventris* Townsend
- Fore tibia with 1 *p* seta; vertex wider, only slightly less than 1/4 of head width; abdomen almost entirely reddish yellow*M. morgani* (Hardy)

Medinodexia fulviventris Townsend

(Figs. 5-7)

Medinodexia fulviventris Townsend, 1927a: 57

Type material examined: Lectotype male (designated by Crosskey, 1969: 98), Indonesia, Sumatra, Tanjunggadang (Sumatra's Westkust), 1,200 m, ii.1926, E. Jacobson (ZMA).

Other specimen examined: 1 male, Burma, Tenasserim, Sukli, 75 km E of Moulmein, 600 m, 27-31.x. 1934, R. Malaise (ZMUS).

Male. Head whitish pollinose, fronto-orbital plate grayish, upper portion slightly yellowish brown; antenna brown-black; arista brown; palpus reddish yellow. Vertex about 0.2 of head width; frontal vitta weakly widened anteriorly, about 2 times as wide as fronto-orbital plate at middle; parafacial narrowed below, 3/4-3/5 as wide as 1st flagellomere at middle height; gena 0.22-0.23 of eye height; face well concave, lower margin weakly warped forward, not over vibrissal angle; occiput bulged. Inner vertical seta fine and short, at most 1/3 of eye height; outer vertical seta absent; ocellar seta fine; 11-12 frontal setae, upper 2 setae weakly reclinate, lowest seta nearly level with base of 1st flagellomere; vibrissa nearly level with lower margin of face; facial ridge with fine setae on lower 1/3; gena with several short black hairs on upper portion of occipital dilation, with fine pale yellowish hairs on lower portion; upper occiput with a row of several black hairs. Antenna falling short of lower margin of face by length of slightly shorter than pedicel; 1st flagellomere about 4.8 times as long as pedicel. Arista thickened on basal 2/5; 2nd aristemere slightly longer than wide. Palpus slightly shorter than 1st flagellomere.

Thorax black, dorsum rather densely grayish white, somewhat yellowish or bluish, pollinose on postpronotal lobe, notopleural area, posterior 1/3 of presutural area of scutum and posterior 2/5 of post-sutural scutum; scutellum black; pleura rather densely grayish yellow pollinose. Prosternum bare in lectotype, haired in another specimen examined; 2 postpronotal setae; 2+3 *acr*; 2+2-3 *dc* (if 2+3, then middle post-sutural seta very fine); 0+3 *ia*, anterior postsutural

seta fine; 3 supra-alar setae, anterior seta (pre-alar) subequal in length to or slightly stronger than 1st postsutural *ia* seta; proepisternal seta about 1/2 as long as proepimeral seta; 1+1 katepisternal setae; anepimeron with a fine seta; anatergite with several very fine short hairs; scutellum with 3 pairs of marginal setae, apical seta absent, basal seta slightly longer than lateral seta and about 2 times as long as scutellum; discal scutellar seta fine, slightly shorter than scutellum. Postcoxal bridge weakly sclerotized.

Wing hyaline, very slightly tinged with pale yellowish; tegula and basicosta brown-black; lower calypter translucent pale yellowish. Costal spine absent; 2nd costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 2.6:2.5; vein R_{4+5} with 1-2 fine setulae at base dorsally, no setula ventrally; vein M from dm-cu crossvein to its bend about 2.5 times as long as distance between the bend and wing margin; last section of vein CuA_1 about 1/2 as long as dm-cu crossvein.

Legs black, coxae reddish brown; pulvilli pale brownish. Fore tibia with 2 *p* setae; mid tibia with 1 *ad*, 2 *pd* and 1 *v* setae; hind tibia with 2 *ad*, 2 *pd* and 3 *v* setae, and with 2 preapical *d* and a weak but distinct apical *pv* setae. Claws and pulvilli long.

Abdomen elongate in form; syntergum 1+2 excavated only at base. Broadly reddish yellow from syntergum 1+2 to anterior 3/5 of 4th terga, black on mid dorsal longitudinal portion of syntergum 1+2 to 4th tergum and on entire 5th; the longitudinal band expanded posteriorly on each 3rd and 4th terga; dorsum thinly whitish pollinose on anterior 1/3 of each 3rd and 4th terga and on anterior 2/5 of 5th, the pollinose band rather narrowly interrupted at middle. Hairs fine long rather sparse and erect on dorsum; 2nd tergum with 2 median marginal setae, 2-3 lateral discal and 1 lateral marginal setae present on each side; 3rd tergum with 2 median discal and 2 median marginal setae, and with 1 lateral discal and lateral marginal setae on each side; 4th and 5th terga each with regular rows of discal and marginal setae, row of discal setae on 5th tergum rather close to row of marginal setae.

Male genitalia. 5th sternum long, posterior lobe occupying posterior 1/3 of entire length; cerci in dorsal view broad at base, gradually narrowed from basal 1/4 to apex, in lateral view nearly straight; surstylus long triangular in lateral view, with sparse short hairs; basal portion of basiphallus expanded dorsally, epiphallus absent.

Female. Unknown.

Body length: 6.6-8.5 mm.

Remarks. This species cannot be run to *Medinodexia* by Crosskey's (1976) key to blondeliine genera, because there are 2 *p* setae on the fore tibia and only males are known in this species. The prosternum is bare in the type specimen and haired another speci-

men examined. It is not certain if the bare prosternum is merely aberrant in the type specimen. Although this species resembles the following species in general appearance, their true affinity cannot be deduced at present, because the female of this species is unknown.

Medinodexia morgani (Hardy)

Zosteromyia morgani Hardy, 1934: 37.

Specimens examined: many identified specimens from Ceylon, N. Borneo, Papua New Guinea and Australia (BMNH); 2 males from Thailand and Indonesia (Java) (BLKU).

Remarks. This species was originally described from Queensland, Australia. I have not seen the type specimen of this species, but there are many identified specimens in BMNH collection from Sri Lanka, North Borneo, Papua New Guinea and Australia. I have also seen two males from Thailand and Indonesia which are identical with these specimens. This species closely resembles *fulviventris*, but is different from it in having the wider vertex, only 1 *p* seta on the fore tibia, and entirely reddish yellow abdomen.

Medinodexia orientalis Shima

Medinodexia orientalis Shima, 1979a: 137.

Type material examined: Holotype male, Thailand, Kanchana Buri, Sai Yok, 500 m, 9-13.xii.1975, H. Shima (NMNH); 27 males 9 females paratypes, Thailand, and Malaysia (BLKU), detailed data see Shima (1979a).

Remarks. This and the following species are fairly different from above two species in general appearance as mentioned by Shima (1979a). These species are also different from the latter in the structure of the male genitalia: 5th abdominal sternum short and posterior lobe occupying only posterior 1/2, dorsal portion of cerci broadly membranous and epiphallus long and slender. Despite these differences, they are tentatively placed in *Medinodexia* because of the structure of the female genitalia (Shima, 1979a). *Masicera guttata* Walker, 1858 from Aru Island, Indonesia, which is treated as an unplaced species of Blondeliini by Cantrell & Crosskey (1989), is apparently close to this species. I have seen several undescribed species close to these species from Southeast Asia and South Pacific area.

Medinodexia exigua Shima

Medinodexia exigua Shima, 1979a: 140.

Type material examined: Holotype male, Indonesia, Celebes [= Sulawesi], Noongan, 1,200 m, 2-10.xii.1973, H. Shima (NMNH); 2 males and 1 female paratypes, same data as holotype except collector, H. Shima & H. Kurahashi (BLKU).

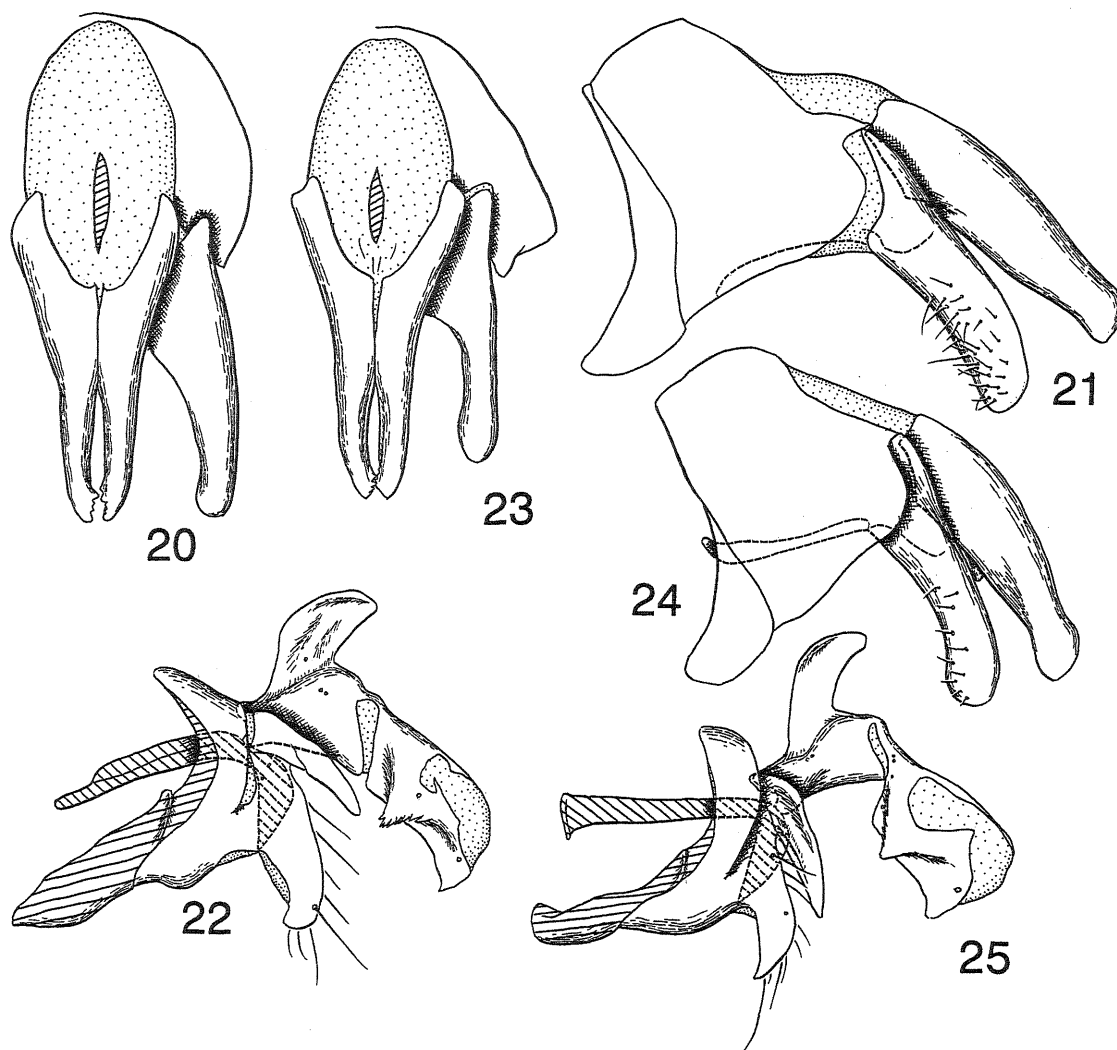
3.9. Genus *Prodegeeria* Brauer et Bergenstamm

Mesnil (1962) provided a key to African, Oriental and Japanese species of this genus and Shima (1979b) also keyed Japanese and Oriental species. Their keys are, however, misleading for Oriental species.

Key to species of *Prodegeeria*

- 1. 3+3 *dc*2
- 2+3 *dc*4
- 2. Abdominal syntergum 1+2 excavated almost to level of median marginal setae; mid tibia with 2-3 *ad* setae; male claws and pulvilli very long; inner vertical seta strong in male (Japanese species).....
.....*P. japonica* (Mesnil) & *P. gracilis* Shima
(see Shima, 1979b)
- Syntergum 1+2 excavated only at base dorsally; mid tibia with only 1 *ad* seta; male claws and pulvilli shorter than 5th tarsomere; inner vertical

- seta very fine hair-like in male3
- 3. 0+1 katepisternal seta; male fore leg extraordinary long, coxa longer than thorax and only slightly shorter than abdomen, femur slightly longer than abdomen, tibia as long as thorax and tarsus nearly as long as body length; mid and hind legs of normal length*P. thomasi* sp. n.
- 1+1 katepisternal setae; male legs not elongate, at most fore tarsus longer than abdomen.....
.....*P. malayana* sp. n.
- 4. Abdominal syntergum 1+2 excavated to anterior margin of base of marginal setae; fore tibia usually with 1 fine upper and 1 strong lower *p* setae; gena slightly more than 1/5 of eye height; mid tibia without *v* seta in male.....
.....*P. javana* Brauer et Bergenstamm
- Syntergum 1+2 excavated only at base or at most to 1/2 way to posterior margin; fore tibia with 1 or 2 strong *p* setae; gena about 1/4 of eye height; mid tibia sometimes with a *v* seta in male5



Figs. 20-25. Male genitalia of *Prodegeeria thomasi* sp. n. (20-22) and *P. malayana* sp. n. (23-25). Figs. 20, 23. Epandrium, cerci and surstylus in dorsal view; Figs. 21, 24. same in lateral view; Figs. 22, 25. hypandrium, gonopod, paramere and aedeagus in lateral view.

5. Fore tibia with 1 fine upper and 1 strong lower *p* setae; wing only weakly tinged with pale brown on anterior portion; hind tibia with 2 preapical *d* setae; abdominal syntergum 1+2 excavated only at base; male: vertex about 1/5 of head width; claws and pulvilli distinctly longer than 5th tarsomere.....*P. chaetopygialis* (Townsend)
- Fore tibia with only 1 *p* seta; wing distinctly tinged with brown on more than anterior 1/2; hind tibia with 3 preapical *d* setae; abdominal syntergum 1+2 excavated to 1/2 way to posterior margin; male: vertex about 1/4 of head width; claws and pulvilli shorter than 5th tarsomere.....*P. tentata* (Walker)

***Prodegeeria thomasi* sp. nov.**

(Figs. 20-22)

Holotype male, Malaysia, Cameron Highlands, Gunung Jasar, 15-27.xi.1994, T. Pape (ZMUS).

Paratypes: 3 males, same data as holotype (ZMUS).

Male. Head whitish pollinose, upper fronto-orbital plate pale yellowish; antenna brown-black, base of 1st flagellomere narrowly reddish; arista brown, thickened part paler; palpus yellow. Vertex 0.17-0.18 of head width; frontal vitta subequal in width to fronto-orbital plate at middle; parafacial weakly narrowed below, 1.4-1.6 times as wide as 1st flagellomere at middle height; gena 0.28-0.29 of eye height. Fronto-orbital plate with 1-2 rows of fine and rather short hairs which do not descend below lowest frontal seta; inner vertical seta hair-like, at most as long as postvertical seta; outer vertical seta absent; ocellar seta strong, more than 1/2 of eye height; 2-3 reclinate orbital setae, anterior seta strongest, 2/3 as long as ocellar seta; 7-10 frontal setae, lowest seta nearly level with base of 1st flagellomere; genal dilation with rather sparse fine black hairs; vibrissa inserted above level of lower margin of face by about 4/5 length of pedicel; upper occiput with several fine black hairs. Antenna falling short of lower margin of face by about 1.5 times length of pedicel; 1st flagellomere 3.5-3.7 times as long as pedicel, about 4 times as long as wide. Arista thickened on basal 1/4. Palpus weakly clavate, subequal in length to 1st flagellomere.

Thorax rather densely pale yellowish gray-white pollinose on dorsum including posterior 2/3 of scutellum when seen from front, broadly blackish when seen from behind; pleura rather densely pale yellowish whitish pollinose. 3+3 *acr*; 3+3 *dc*; 0+1 katapisternal setae; proepisternum with fine short black hairs; anatergite bare; scutellum with 3 strong marginal setae, apical seta absent, discal seta fine short and suberect.

Wing weakly tinged with pale brown, denser on anterior portion; tegula and basicosta black; lower

calypter pale brownish. 2nd costal sector almost bare below, at most with several scattered hairs; basal node of vein R_{4+5} with 3-5 fine setulae dorsally, 2-4 ventrally. Relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1.5:4:1.5; vein M from dm-cu cross-vein to its bend about 2 times distance between the bend and wing margin.

Fore leg enormously elongate; fore coxa elongate, only slightly shorter than abdomen; fore femur about 1.5 times as long as fore coxa; fore tibia as long as fore coxa; fore tarsus very long, slightly longer than body length; mid and hind legs of normal length. Fore tibia with 1 strong *p* seta; mid tibia with 1 *ad*, 2 *pd* and 1 *v* setae; hind tibia with 2 preapical *d* setae. Claws and pulvilli shorter than 5th tarsomeres.

Abdomen black, anterior 1/2-2/5 of 3rd tergum, 1/3-2/5 of 4th and 2/3 of 5th rather thinly grayish white pollinose, the pollinosity with tessellate appearance, narrow mid dorsal longitudinal vitta only visible on 3rd tergum. Syntergum 1+2 excavated only at base. Second tergum with 2 median marginal setae, and with 2 lateral discal and 1 lateral marginal setae on each side; 3rd tergum with 2 median discal and 2 median marginal setae, and with 1 lateral marginal seta on each side; 4th tergum with 2 median discal and a row of marginal setae; 5th tergum with regular rows of strong discal and weak marginal setae; venter of 5th tergum with rather small hair-fascicles of dense and long hairs.

Male genitalia: Cerci in dorsal view narrowly separated from each other near middle to apical portion, apices converging, inner apical portion of each cercus dentate, in lateral view nearly straight; surstylus very weakly curved ventrally, with dense hairs; epiphallus broad and strong; median portion of distiphallus strongly expanded laterally.

Female. Unknown.

Body length, 7.1-8 mm.

Remarks. This species is very characteristic in having enormously elongate fore legs, with especially elongate coxae.

***Prodegeeria malayana* sp. nov.**

(Figs. 23-25)

Holotype male, Malaysia, Taman Negara, K. Tahan, 60 m, 22-26.iv.1979, H. Kurahashi (BLKU).

Paratype: 1 female, Malaysia, 30 mls N Tapah, 300-600 m, 28.x.1975, H. Shima (BLKU).

Male. Head whitish pollinose, upper fronto-orbital plate pale yellowish white; antenna brown-black, base of 1st flagellomere narrowly reddish yellow; arista reddish yellow on thickened part; palpus yellow. Vertex about 0.19 of head width; frontal vitta slightly wider than fronto-orbital plate at middle; frons in lateral view rather rounded; parafacial not narrowed

below, slightly wider than 1st flagellomere at middle height; gena 0.28-0.29 of eye height. Fronto-orbital plate with only a few fine short hairs; inner vertical seta very short, only slightly longer than postvertical seta; outer vertical seta absent; ocellar seta less than 1/3 of eye height, about 2 times as long as inner vertical seta; 2 reclinate orbital setae, anterior seta stronger, about as long as ocellar seta; 6-8 frontal setae, lowest seta nearly level with middle of 1st flagellomere; genal dilation with only a few sparse fine short black hairs; vibrissa inserted above level of lower margin of face by about 2/5 length of pedicel; upper occiput with a few fine black hairs. Antenna falling short of lower margin of face by about length of pedicel; 1st flagellomere about 3.7 times as long as pedicel, about 4.4 times as long as wide. Arista thickened on basal 1/4. Palpus weakly clavate.

Thorax rather densely pale yellowish gray-white pollinose on dorsum including scutellum, 4 rather broad longitudinal black vittae present on presutural area of scutum, squarely blackish on anterior 2/3 between rows of intra-alar setae on postsutural scutum; pleura rather thinly grayish whitish pollinose. 3+3 *acr*; 3+3 *dc*; 1+1 katepisternal setae; proepisternum with several fine short black hairs; anatergite bare; scutellum with 3 strong marginal setae, apical seta absent, discal seta fine short and suberect, at most as long as scutellum.

Wing weakly tinged with pale brown, denser on anterior portion and gradually faded posteriorly; tegula and basicosta black; lower calypter pale yellowish. Second costal sector bare below; basal node of vein R_{4+5} with 3 fine setulae dorsally, 1-2 ventrally. Relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1.5:4:1.5; vein M from dm-cu crossvein to its bend about 2.5 times distance between the bend and wing margin.

Fore leg with tarsus rather elongate, fore tarsus slightly longer than abdomen; fore tibia as long as fore femur and slightly shorter than mid and hind tibiae. Fore tibia with 1 strong *p* seta; mid tibia with 1 *ad*, 2 *pd* and 1 *v* setae; hind tibia with 3 preapical *d* setae, posterior seta fine but distinct. Claws and pulvilli shorter than 5th tarsomeres.

Abdomen black, anterior 1/2 of 3rd tergum, 2/5 of 4th and 1/2 of 5th rather thinly pale yellowish white pollinose, the pollinosity with tessellate appearance, mid-dorsal longitudinal vitta indistinct. Syntergum 1+2 excavated only at base. Second tergum with 2 median marginal setae, and 2 lateral discal and 1 lateral marginal setae present on each side; 3rd tergum with 2 median discal and 2 median marginal setae, and with 1 lateral marginal seta on each side; 4th tergum with 2 median discal and a row of marginal setae; 5th tergum with regular rows of strong discal and weak marginal setae; venter of 5th tergum with rather small hair-

fascicles of dense and long hairs.

Male genitalia: Resembling the preceding species; apical dentation of each cercus weak; cerci in lateral view slightly swollen at apex; surstylus with sparse hairs; epiphallus longer and more slender.

Female. Differing from male as follows: Vertex about 0.26 of head width; frontal vitta slightly narrower than fronto-orbital plate at middle; parafacial narrowed below, about 1.4 times as wide as 1st flagellomere at middle height; gena about 1/3 of eye height; inner vertical seta about 1/2 as long as eye height; outer vertical seta about 1/2 as long as inner seta; ocellar seta slightly shorter than inner vertical seta; 2 proclinate orbital setae present, anterior seta stronger than inner vertical seta; 1st flagellomere about 3 times as long as pedicel; fore tibia only slightly longer than fore tibia, about 1/2 as long as abdomen; interior seta of 3 preapical *d* setae on hind tibia still finer; abdomen more broadly pollinose.

Body length, 5.8-7.5 mm.

Prodegeeria chaetopygialis (Townsend)

Euthelairosona chaetopygiale Townsend, 1926: 33.

Hemidegeeria bicincta Villeneuve, 1929: 67.

Type material examined: Lectotype male of *E. chaetopygiale* (designated by Crosskey, 1969: 96), Indonesia, Sumatra, Fort de Kock, 920 m, 1925, E. Jacobson (ZMA); paralectotype male of *E. chaetopygiale*, same data as lectotype (ZMA); paralectotype male of *E. chaetopygiale*, Indonesia, Sumatra, Suban Ajam, vii. 1916, E. Jacobson (USNM); holotype male of *H. bicincta*, Taiwan, Fuhosho, H. Sauter vii.1909 (DEI).

Other specimens examined: 22 males identified as *E. chaetopygiale* by Townsend from Kankau (Koshun), Formosa, H. Sauter ix.1912 (DEI); 12 males and 2 females from Thailand, Malaysia (Malaya), Taiwan and Indonesia (Java) (BMNH, BLKU).

Male. Head whitish pollinose, fronto-orbital plate yellowish, upper portion behind anterior reclinate orbital seta shiny black. Vertex 0.2-0.21 of head width; frontal vitta subequal in width to fronto-orbital plate at middle; parafacial weakly narrowed below, subequal in width to 1st flagellomere at middle height; gena 0.25-0.26 of eye height; inner vertical seta strong, more than 1/2 length of eye height; 2-3 reclinate orbital setae; ocellar setae strong, slightly longer than reclinate orbital seta; 1st flagellomere 4-4.2 times as long as pedicel; arista thickened on basal 1/5. 2+3 *acr*; 2+3 *dc*; 1+1 katepisternal setae; anatergite bare. Relative lengths of costal sectors 2nd, 3rd and 4th approximately as 2.5:6:2; vein M from dm-cu crossvein to its bend 1.7-2 times as long as distance between the bend and wing margin. Fore tibia with 2 *p* setae; mid tibia with 1 *ad*, 2-4 *pd* and 1 *v* setae; mid femur subequal in length to hind femur; mid tibia and tarsus only slightly

longer than hind tibia and tarsus, respectively. Abdomen rather densely whitish, somewhat bluish, pollinose on anterior 2/7 of 3rd tergum and 3/8 of 4th, very thinly whitish pollinose on entire 5th tergum; weak and ill-defined longitudinal vitta visible on 3rd and 4th terga; syntergum 1+2 excavated only at base dorsally.

Body length: ca. 9 mm.

Prodegeeria javana Brauer et Bergenstamm

Prodegeeria javana Brauer et Bergenstamm, 1894: 617.

Hemidegeeria tricincta Villeneuve, 1929: 67. **Syn. nov.**

Type material examined: Holotype female of *P. javana* (wings missing, abdomen broken, hind legs missing), Indonesia, Java, 1891, H. Fruhstorfer (NMW); holotype male of *H. tricincta*, Taiwan, Kanchizei, H. Sauter, vii.1909 (DEI).

Other specimens examined: 1 male identified as *P. javana* by Townsend, Taiwan, Kankau (BMNH); 3 males, Malaysia, N. Borneo (BMNH); 1 male, Taiwan, Nantou Hsien, Chitou, 12-13.vii.1976, H. Takizawa (EIHU); 1 female, Kanchana Buri, nr. Sai Yok, 500 m, 9.ix.1975, H. Kurahashi; 1 female, Thailand, Bangkok, 27.viii.1963; 1 male, Malaysia, Cameron Highlands, 700-1,000m, 23-24.x.1975, H. Shima; 1 female, Indonesia, Sulawesi, 50 km S Menado, Noongan, 1,000 m, H. Shima (all in BLKU).

Male. Head whitish pollinose, upper parafacial and fronto-orbital plate pale yellowish, antenna brown-black, apex of pedicel and base of 1st flagellomere narrowly reddish; palpus reddish yellow. Vertex about 0.2 of head width; frontal vitta subequal in width to fronto-orbital plate at middle; parafacial well narrowed below, subequal in width to, or at most slightly wider than, 1st flagellomere at middle height; gena about 0.22 of eye height. Fronto-orbital plate with several fine short hairs on upper portion; inner vertical seta strong, slightly longer than 1/2 of eye height; 2-3 reclinate orbital setae, anterior seta strong; ocellar seta longer than anterior reclinate orbital seta; vibrissa inserted slightly above level of lower margin of face. Antenna falling short of lower margin of face by about 1/2 length of pedicel; 1st flagellomere 3.2-3.5 times as long as pedicel, about 4 times as long as wide. Arista thickened on basal 1/4. Palpus weakly clavate, slightly longer than 1st flagellomere.

Thorax rather densely pale yellowish white pollinose on dorsum, whitish pollinose on pleura; presutural area of scutum with 2 rather broad outer and 2 narrow inner longitudinal black vittae, outer vitta about 2 times as wide as inner one; postsutural scutum with 4 longitudinal black vittae subequal in width to each other, rather broadly blackish on anterior portion. 2+3 *acr*; 2+3 *dc*; 1+1 katepisternal setae; scutellum with 3 strong marginal setae, apical seta absent, discal seta fine and erect; anatergite bare.

Wing weakly tinged with pale brown anteriorly from base to level of apex of vein R_{2+3} and dm-cu crossvein between costa and vein CuA_1 ; tegula and basicosta black; lower calypter pale yellowish white. Second costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 3:6:2.5; vein M from dm-cu crossvein to its bend 1.5-1.7 times distance between the bend and wing margin.

Fore tibia with 1 fine upper and 1 strong lower *p* setae; mid tibia with 1 *ad* and 3-4 *pd* setae, without *v* seta; hind tibia with 2 preapical *d* setae. Claws and pulvilli long.

Abdomen black, anterior 3/5 of 3rd tergum and 1/2 of each 4th and 5th rather densely white pollinose, the pollinose bands broadly interrupted by longitudinal vitta on 3rd tergum, narrowly so on 4th. Syntergum 1+2 excavated to level of anterior base of marginal setae. Second tergum with 2 median marginal setae, and 1 lateral marginal seta present on each side; 3rd tergum with 2 median discal and 2 median marginal setae, and with 1 lateral marginal seta on each side; 4th tergum with 2 median discal and a row of marginal setae; 5th tergum with regular rows of strong discal and marginal setae; venter of 5th tergum with large hair-fascicles of dense and long hairs.

Female. Differing from male as follows. Head densely whitish pollinose, darkened near vertex; vertex about 0.23 of head width; frontal vitta subequal in width to fronto-orbital plate at middle; parafacial narrowed below, about 3/4 as wide as 1st flagellomere at middle height; gena about 0.2 of eye height; outer vertical seta developed; ocellar seta slightly shorter than outer vertical seta; 1 strong proclinate and 2 reclinate orbital setae, as long as inner vertical setae; vibrissa level with lower margin of face; occiput with 1-2 black hairs on upper portion; antenna falling only slightly short of lower margin of face, 1st flagellomere about 4.4 times as long as pedicel and about 4 times as long as wide; arista thickened on basal 1/5; palpus clavate, slightly more than 3/4 length of 1st flagellomere. Mid tibia with 1 *ad*, 2(?) *pd* and 1 *v* setae; 5th tarsomere of fore leg slightly widened and elongate; fore claws and pulvilli shorter than 5th tarsomere; 4th abdominal tergum with 2 strong median discal setae.

Body length, 6.2-8 mm.

Remarks. *Prodegeeria tricincta* (Villeneuve) was treated as a valid species distinct from *P. javana* by Crosskey (1976). The holotype of *H. tricincta* is a male and that of *P. javana* is a female, but I was unable to find any difference between them except for sexual dimorphic characters and consider them as conspecific. A male specimen from Borneo preserved in BMNH, which was identified as *P. tricincta* by Townsend, is different from the type of *P. tricincta* in having long and wide 1st flagellomere of the antenna and wide gena. I consider this specimen as misidentified.

Prodegeeria tentata (Walker)*Masicera tentata* Walker, 1858: 98.

Type material examined: Holotype male (abdomen missing), Indonesia, Aru Is, A. R. Wallace (BMNH).

Other specimen examined: 1 male, same locality and collector as holotype (BMNH).

Male. Head whitish pollinose, slightly pale yellowish on parafacial; antenna brown-black, base of 1st flagellomere broadly yellowish; arista brownish; palpus yellow. Vertex about 0.24 of head width; frontal vitta subequal in width to fronto-orbital plate; parafacial slightly wider than 1st flagellomere at middle height (6:5); gena about 0.23 of eye height. Inner vertical seta strong; outer vertical seta fine but distinct; 2 reclinate orbital setae; ocellar seta strong; 7-8 frontal setae, lowest seta nearly level with base of 1st flagellomere; fronto-orbital plate with rather dense fine hairs which do not descend below lowest frontal seta; gena with dense short fine black hairs; occiput without black hairs. Antenna narrow; pedicel with a long seta which is about twice as long as its own length; 1st flagellomere about 4 times as long as pedicel and about 4.8 times as long as wide. Arista thickened on basal 1/8, rather long pubescent.

Thorax black; dorsum rather densely grayish white pollinose; presutural area of scutum with 2 broad outer and 2 narrow inner longitudinal black vittae, inner and outer vittae fused with each other on anterior portion and outer vitta stopped well before transverse suture; postsutural scutum with rectangular black portion between intra-alar area on anterior half; scutellum brown; pleura grayish white pollinose on posterior 2/3 of anepisternum, anterior 1/2 of anepimeron and posterior 2/3 of katepisternum, other portion brown-black. 2+3 *acr*; 2+3 *dc*; 3 *ia*; 1+1 katepisternal setae; scutellum with 3 pairs of strong marginal setae, apical seta absent, discal seta at most hair-like; anatergite bare.

Wing distinctly tinged with brown from base to bend of vein M and dm-cu crossvein between costa and vein CuA₁, the tinge faded marginally; tegula and basicosta black; lower calypter pale yellowish white. Second costal sector bare below; relative lengths of costal sectors 2nd, 3rd and 4th approximately as 1.5:3.5:1.5; vein R₄₊₅ with 5-6 setulae at base dorsally and ventrally; vein M from dm-cu crossvein to its bend about 1.4 times distance between the bend and wing margin.

Legs black; pulvilli pale yellowish. Fore tibia with 1 long *p* seta; mid tibia with 1 *ad*, 3 *pd* and 1 *v* setae; hind tibia with 3 preapical *d* setae, posterior seta fine but distinct. Claws and pulvilli rather short, fore claws and pulvilli shorter than 5th tarsomere.

Abdomen black, anterior 3/8 of 3rd tergum and 1/2

of 4th rather densely grayish white pollinose, a broad ill-defined mid-dorsal longitudinal vitta present on 3rd and 4th terga; 5th tergum shining black. Syntergum 1+2 excavated only 1/2 way to hind margin, with 2 median marginal setae, 1 lateral marginal seta present on each side; 3rd tergum with 2 median discal and 2 median marginal setae, and with 1 lateral marginal seta on each side; 4th tergum with 2 median discal and a row of marginal setae; 5th tergum with 2 strong median discal and short and fine marginal setae; venter of 5th tergum with hair-fascicle of long hairs.

Female. Unknown.

Body length, 7.5-10.3 mm.

Remarks. This species is distinct in having brownish wings and short claws and pulvilli in the male. Although this species is distributed outside the Oriental region, it is included here because many tachinids are widely distributed and it may be found in the Oriental region.

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5. Literature

- Arnaud, P. H. Jr. 1958. The entomological publications of Charles Henry Tyler Townsend [1863-1944]; with lists of his new generic and specific names. *Micrentomology* 23: 1-63.
- Baranov, N. 1934. Mitteilungen über gezuchtete orientalische Larvaevoriden (Insecta, Diptera). *Ent. NachrBl., Troppau* 8: 41-49.
- Baranov, N. 1938. Neue indo-australische Tachinidae. *Bull. ent. Res.* 29: 405-414.
- Brauer, F. and J. E. von Bergenstamm. 1894. Die Zweiflügler des Kaiserlichen Museum zu Wien. VII. Vorar-

- beiten zu einer Monographie der Muscaria schizometopa (exclusive Anthomyidae). Pars IV. *Denkschr. Akad. Wiss., Wien* 61: 537-624.
- Cantrell, B. K. and R. W. Crosskey. 1989. Family Tachinidae. In Evenhuis, N. L. (ed.) "Catalog of the Diptera of the Australasian and Oceanian Regions.": 733-784. Bishop Museum Press & E. J. Brill.
- Crosskey, R. W. 1969. The type material of Indonesian Tachinidae (Diptera) in the Zoological Museum, Amsterdam. *Beaufortia* 16: 87-107.
- Crosskey, R. W. 1976. A taxonomic conspectus of the Tachinidae (Diptera) of the Oriental Region. *Bull. Br. Mus. nat. Hist. (Ent.)*, Suppl. 26: 357 pp.
- Hardy, G. H. 1934. Notes on Australian Muscoidea (Calypttrata). *Proc. R. Soc. Qld.* 45: 30-37.
- Herting, B. 1966. Beiträge zur Kenntnis der europäischen Raupenfliegen (Dipt. Tachinidae). *Stutt. Beitr. Naturk.* (146): 1-12.
- Macquart, J. 1851. Diptères nouveaux ou peu connus. Suite de 4e Supplement publiée dans les Mémoire de 1849. *Mém. Soc. Sci. Agric. Lille* 1850: 134-294.
- McAlpine, J. F. 1981. Morphology and terminology - adults. In McAlpine, J. F. et al. (eds.) "Manual of Nearctic Diptera." 1: 9-63. Research Branch, Agriculture Canada, Monograph (27).
- Meigen, J. W. 1824. Systematische Beschreibung der bekannten europäischen zweiflügligen Insekten. 4: xii + 428 pp., Hamm.
- Mesnil, L. P. 1953. Nouveaux tachinaires d'Orient (1^{re} partie). *Bull. Ann. Soc. Ent. Belg.* 89: 85-114.
- Mesnil, L. P. 1957. Nouveaux Tachinaires d'Orient (Deuxième série). *Mém. Soc. r. ent. Belg.* 28: 1-80.
- Mesnil, L. P. 1960. Larvaevorinae (Tachininae). In Lindner, E. (ed.) "Die Fliegen der palaearktischen Region." 64G: 609-656. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart.
- Mesnil, L. P. 1961. Larvaevorinae (Tachininae). In Lindner, E. (ed.) "Die Fliegen der palaearktischen Region." 64G: 657-704. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart.
- Mesnil, L. P. 1962. Larvaevorinae (Tachininae). In Lindner, E. (ed.) "Die Fliegen der palaearktischen Region." 64G: 705-752. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart.
- Sabrosky, C. W. and R. W. Crosskey. 1969. The type material of Tachinidae (Diptera) described by N. Baranov. *Bull. Br. Mus. nat. Hist. (Ent.)* 24: 29-63.
- Shima, H. 1979a. New genera, species and subspecies of Oriental Tachinidae (Diptera). *Bull. Natn. Sci. Mus., Ser. A (Zool.)* 5: 135-152.
- Shima, H. 1979b. Study on the tribe Blondeliini from Japan (Diptera: Tachinidae) I. *Kontyu* 47: 126-138.
- Shima, H. 1984. Study on the tribe Blondeliini from Japan (Diptera, Tachinidae). V. The genera *Blondelia* Robineau-Desvoidy and *Compsilura* Bouché. *Kontyu* 52: 540-552.
- Shima, H. 1996. A systematic study of the tribe Winthemiini from Japan (Diptera, Tachinidae). *Beitr. Ent.* 46: 169-235.
- Sun, X., E. Liang, Y. Qiao, C. Chao and S. Zhou. 1992. Tachinidae. In Hunan Forestry Office (ed.) "Iconography of forest insects in Hunan, China." : 1163-1207. Hunan Academic Press, Changsha. (In Chinese with English description.)
- Townsend, C. H. T. 1926. Fauna sumatrensis. Diptera Muscoidea II. *Supplta Ent.* 14: 14-42.
- Townsend, C. H. T. 1927a. Fauna sumatrensis. Diptera Muscoidea III. *Supplta Ent.* 16: 56-76.
- Townsend, C. H. T. 1927b. New muscoid flies in the collection of the Deutsches Entomologisches Institut in Berlin. *Ent. Mitt.* 16: 277-287.
- Walker, F. 1858. Catalogue of the dipterous insects collected in the Aru Islands by Mr. A. R. Wallace, with descriptions of new species. *J. Proc. Linn. Soc. Lond.* 3 (1859): 77-110.
- Walker, F. 1859. Catalogue of the dipterous insects collected at Makassar in Celebes, by Mr. A. R. Wallace, with descriptions of new species. *J. Proc. Linn. Soc. Lond.* 4 (1860): 90-144.
- Villeneuve, J. 1929. Myodaires supérieurs nouveaux. *Bull. Ann. Soc. ent. Belg.* 69: 61-68.
- Wulp, F. M. van der. 1893. Einige Javaansche Tachininen. *Tijdschr. Ent.* 36: 159-188.

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