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ENTOMOLOGICAL RESULTS FROM  
THE SWEDISH EXPEDITION 1934 TO  
BURMA AND BRITISH INDIA

DIPTERA: TIPULIDAE-PEDICIINI

COLLECTED BY RENÉ MALAISE

BY

CHARLES P. ALEXANDER

WITH 19 FIGURES IN THE TEXT

COMMUNICATED OCTOBER 13TH 1948 BY  
O. LUNDBLAD AND NILS ODHNER

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**Entomological Results from the Swedish Expedition 1934 to Burma and British India.**

**Diptera: Tipulidae—Pediciini.**

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**CHARLES P. ALEXANDER.**

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Communicated October 13th 1948 by O. LUNDBLAD and NILS ODHNER.

In continuation of the study of the crane-flies taken by Dr. RENÉ MALAISE and Mrs. MALAISE in Burma in 1934 the species of the tribe *Pediciini* are here considered. This is a relatively small tribe in the *Tipulidae*, the great majority of the known species being Holarctic in distribution, with a very few further forms in New Zealand, Australia, and Chile. A small proportion of the Holarctic genera invade the Oriental Region, always at relatively high altitudes in the mountains. A rather surprising number of species were taken by Dr. and Mrs. MALAISE, all those discussed at this time being from Kambaiti, altitude approximately 7 000 feet. The types and uniques of the various species are to be preserved in the Naturhistoriska Riksmuseet, Stockholm.

**Genus *Ula* MACQUART.**

*Ula (Ula) fulva* sp. n.

General coloration of thorax fulvous, the dorsal pleurites and posterior sclerites of the mesonotum somewhat darker; antennal scape and pedicel yellow, flagellum black, antennae rather long; femora yellowish brown, the tips narrowly dark brown;

wings fulvous brown, sparsely patterned with darker brown; stigma yellow, darkened at either end; basal section of  $R_5$  very reduced to entirely lacking, in the latter case  $r-m$  connecting directly with the end of  $R_s$ ; inner end of cell 1st  $M_2$  arcuated.

*Female.* Length about 8—9 mm; wing 8—9.5 mm.

Described from alcoholic material. Rostrum obscure yellow; palpi dark brown. Antennae with scape and pedicel yellow, flagellum black; antennae relatively long for the female sex, if bent backward extending about to the root of the halteres; flagellar segments elongate-oval to subcylindrical; longest verticils of the intermediate segments a trifle shorter than the segments. Head dark brown above, paling to obscure yellow on sides.

General coloration of thorax fulvous to fulvous yellow, darker on mesonotum; dorsal pleurites and postnotum a little infuscated, forming a vague dorsal stripe extending from the cervical region and propleura across the dorsal mesopleura to the postnotum; scutal lobes weakly darkened. Halteres with stem yellow, knob infuscated. Legs with the coxae and trochanters yellow; femora obscure yellow basally, passing into yellowish brown, the tips narrowly dark brown; tibiae and tarsi brown, the outer tarsal segments darker; tibial spurs distinct, blackened, with flattened setae on proximal half. Wings (Fig. 1) with a strong fulvous brown tinge, the prearcular and costal fields clearer yellow; a restricted but conspicuous pale brown pattern, arranged as follows: Origin of  $R_s$ ; cord, extending from the proximal end of the yellow stigma to the posterior border of the wing along vein  $Cu_1$ ;  $R_{1+2}$  and  $R_2$ , forming the outer end of the stigmal area; outer end of cell 1st  $M_2$ ; very restricted darkenings over posterior arculus,  $Sc_2$ , and the tips of veins  $R_3$  and  $R_4$ ; certain of the longitudinal veins and the posterior wing border narrowly suffused with darker; veins pale brown, somewhat darker in the patterned areas. Macrotrichia abundant in cells of the outer two-thirds of wing, in the basal cells becoming sparse to finally lacking. Venation:  $Sc_1$  ending about opposite fork of  $R_{2+3+4}$ ,  $Sc_2$  at near three-fifths the distance between arculus and origin of  $R_s$ ;  $R_{1+2}$  shorter than  $R_2$ ; basal section of  $R_5$  reduced to entirely lacking, in the latter case  $r-m$  connecting directly with  $R_s$  at the fork;  $m-cu$  close to the fork of  $M$ ; proximal end of cell 1st  $M_2$  lying basad of cells  $R_4$  or  $R_5$ .

Abdominal tergites dark brown to brownish black, the proximal segments slightly more brightened; basal sternites yellow, the sixth and succeeding segments more uniformly darkened. Ovipositor with the cerci broad at base, upcurved to the acute tips.

*Holotype*, alcoholic ♀, Kambaiti, altitude 6 800 feet, April 10, 1934 (MALAISE). *Paratopotypes*, 2 alcoholic ♀♀.

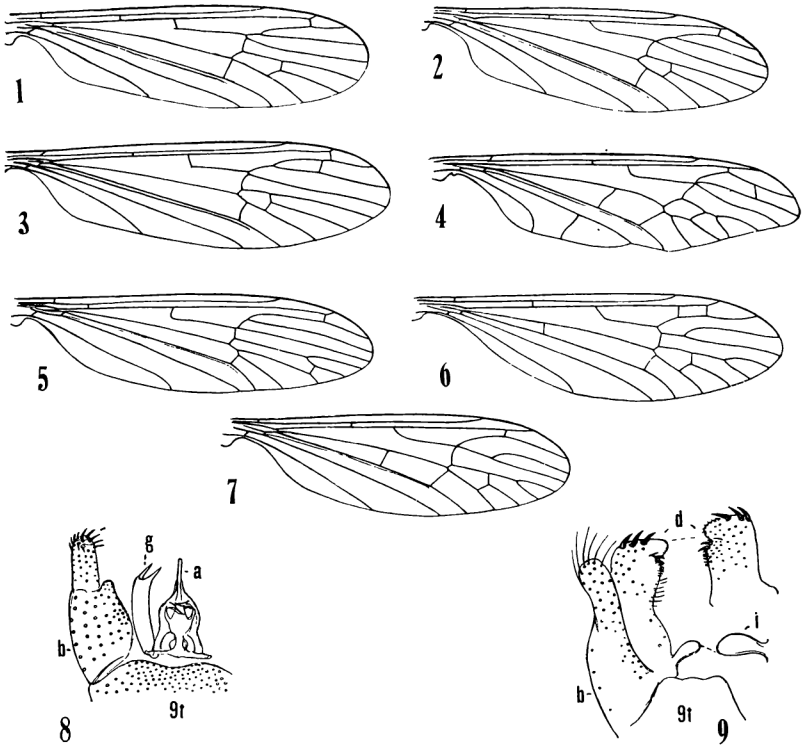


Fig. 1. *Ula (Ula) fulva* sp. n.; venation. — Fig. 2. *Ula (Ula) bidens* sp. n.; venation. — Fig. 3. *Ula (Metaula) splendissima* subgen. et sp. n.; venation. — Fig. 4. *Malaisemyia ornatissima* gen. et sp. n.; venation. — Fig. 5. *Pedicia (Tricyphona) perrecessa* sp. n.; venation. — Fig. 6. *Pedicia (Eucyphona) epione* subgen. et sp. n.; venation. — Fig. 7. *Pedicia (Nasiternella) ignara* sp. n.; venation. — Fig. 8. *Ula (Ula) bidens* sp. n.; male hypopygium. — Fig. 9. *Malaisemyia ornatissima* gen. et sp. n.; male hypopygium. (Symbols: a, aedeagus; b, basistyle; d, dististyle; g, gonapophysis; i, interbase; t, tergite.)

*Ula (Ula) fulva* is quite distinct from the other species now known from southern and southeastern Asia. It is closest to *U. (U.) comes* ALEXANDER, of southwestern China, being readily told by the general fulvous coloration and the strongly fulvous tinted wings, with the dark pattern much less distinct and contrasted than in *comes*.

#### *Ula (Ula) bidens* sp. n.

Size relatively small (wing, male, 6 mm or less); antennae of male elongate, about one-half the length of body; body almost uniformly dark brown, the bases of the more proximal abdomi-

nal sternites pale; legs brown; wings tinged with brown; stigma and a cloud over the anterior cord darker;  $r-m$  close to the fork of  $Rs$ ; cell 1st  $M_2$  relatively small, shorter than vein  $M_4$  beyond it; male hypopygium with the gonapophysis bispinous at tip.

*Male.* Length about 5.5 mm; wing 5.8—6 mm; antenna about 2.7—2.8 mm.

Described from alcoholic material. Rostrum and palpi brown, the former with unusually long setae. Antennae 17-segmented, dark brown throughout, elongate, approximately one-half the length of body; flagellar segments cylindrical, with an abundant erect pale pubescence and sparse verticils that are shorter than the segments; terminal segment longer than the penultimate. Head dark brown.

Thorax almost uniformly dark brown, apparently darker medially above; humeral region of praescutum obscure yellow. Halteres with stem dirty white, knob infuscated. Legs with the coxae brownish yellow, relatively long; trochanters obscure yellow; remainder of legs brown, the femoral bases narrowly obscure yellow, the outer tarsal segments darker. Wings (Fig. 2) tinged with brown; a restricted but conspicuous darker cloud over the anterior cord; stigma brown; veins brown, slightly darker in the more patterned areas. Macrotrichia of cells abundant, lacking only in the extreme basal cells. Venation:  $Sc_1$  ending at or beyond midlength of  $R_{2+3+4}$ ,  $Sc_2$  a distance before the origin of  $Rs$  about equal to one-half the length of the latter;  $r-m$  at or close to fork of  $Rs$ ; cell 1st  $M_2$  relatively small, about two-thirds as long as vein  $M_4$  beyond it;  $m-cu$  approximately one-half its length beyond the fork of  $M$ .

Abdominal tergites dark brown; basal sternites paler brown, the basal rings whitened; outer segments, including hypopygium, black. Male hypopygium (Fig. 8) with the dististyle,  $d$ , relatively long, with long slender blackened spinous setae. Gonapophyses,  $g$ , conspicuously bifid at tips, the spines subequal in size, slender and acute.

*Holotype*, alcoholic ♂, Kambaiti, altitude 2 000 meters, May 16, 1934 (MALAISE). *Paratopotypes*, 2 alcoholic ♂♂, altitude 7 000 feet, April 30, 1934 (MALAISE).

*Ula (Ula) bidens* is readily told from all other regional species by the structure of the male hypopygium, especially the bidentate gonapophyses. I am interpreting these structures as being gonapophyses but it is at least possible that they represent interbases but in the present case appear to be united with the phallosomic mass. What may represent true gonapophyses are figured as inwardly directed spines at near midlength of the phallosomic mass.

**Subgenus *Metaula* subgen. n.**

Characters as in *Ula* MACQUART but with a supernumerary crossvein in cell  $R_3$ , lying about one-half its length before the level of  $R_2$  and before midlength of the cell. (Fig. 3.)

Type of subgenus. — *Ula (Metaula) splendissima* sp. n.; Oriental: Indo-Himalayan.

***Ula (Metaula) splendissima* sp. n.**

General coloration dark brown; antennae relatively long, basal segments pale, outer segments brownish black; bases of knobs of halteres darkened; wings whitish subhyaline, heavily patterned with dark brown; a supernumerary crossvein in cell  $R_3$ .

*Female*. Length about 7 mm; wing 8.5 mm; antenna about 2.6 mm.

Described from alcoholic material. Rostrum dark brown; palpi relatively long, brownish black, the terminal segment paler, nearly twice the length of the penultimate. Antennae (female) relatively long, presumably still more elongate in male, 17-segmented; basal five segments yellow, the outer ones passing into brownish black; segments generally subcylindrical, a little dilated at near midlength; longest verticils unilaterally distributed, with a pair on each segment, placed close together before midlength of outer face; verticils of outer segments somewhat shorter and weaker. Head brownish black; anterior vertex relatively wide; eyes pubescent.

Thorax almost uniformly dark brown, the humeral region of praescutum appearing slightly paler. Halteres pale, the bases of knobs infuscated, the apices restrictedly pale. Legs with the coxae brownish yellow, relatively long; a linear series of long setae on cephalic face of coxae, most conspicuous on fore pair, totalling six or seven bristles; trochanters brown; remainder of legs broken. Wings (Fig. 3) whitish subhyaline, the prearcular and costal fields a trifle more yellowish; membrane heavily patterned with dark brown, as follows: Over  $h$  and anterior arculus;  $Sc_2$ , extending from  $C$  to  $M$ ; origin of  $Rs$ , slightly narrower than last but co-extensive; a nearly continuous band along cord, from tip of  $Sc_1$  to the posterior margin, narrowly interrupted on  $R_{2+3+4}$  and again on the distal section of  $Cu_1$ ; a conspicuous area from the tip of  $R_{1+2}$ , across  $R_2$  and the supernumerary crossvein in cell  $R_3$  to more than one-half the distance across cell  $R_4$ ; outer end of cell 1st  $M_2$ ; marginal spots at ends of all longitudinal veins excepting  $R_5$ , from  $M_{1+2}$  to 2nd  $A$  becoming progressively larger; additional brown spots at beyond midlength of distal section of  $M_{1+2}$  at outer end of cell 1st  $A$  about

mid-distance between the veins and the narrow axillary border in cell *2nd A*; two conspicuous marks at and before midlength of vein *Cu*, the outer one larger, extending from vein *M* almost to *1st A*; stigma pale with either end darkened, as described; veins brown, not or scarcely darker in the patterned areas. Macrotrichia of cells abundant in outer cells but more sparse and scattered on the disk and especially near the wing base. Venation: *Sc*<sub>1</sub> ending beyond the fork of *R*<sub>2+3+4</sub>; *R*<sub>1+2</sub> a little more than one-half *R*<sub>2</sub>; basal section of *R*<sub>5</sub> very short, *r—m* correspondingly long and strongly arcuated; cell *1st M*<sub>2</sub> small, much shorter than any of the veins issuing from it; *m—cu* about two-thirds its length beyond the fork of *M*.

Abdomen dark brown, the caudal borders of the intermediate segments narrowly pale. Ovipositor with the cerci strongly flattened, the distal third narrowed and strongly upcurved to the acute tips.

*Holotype*, alcoholic ♀, Kambaiti, altitude 7 000 feet, April 30, 1934 (MALAISE).

*Ula (Metaula) splendissima* is readily told from all other members of the genus by the subgeneric character of a supernumerary crossvein in cell *R*<sub>3</sub> and by the unusually heavily patterned wings.

#### Malaisemyia gen. n.

Rostrum very short; labial palpi large and flap-like. Eyes hairy, with fine ommatidia. Wings (Fig. 4) subfalcate in outline, the posterior margin strongly inshirred at ends of certain of the veins, especially *1st A*. Venation: *R*<sub>2+3</sub>, *R*<sub>4</sub> and *R*<sub>5</sub> all arising directly from the end of *Rs* or with a very short element *R*<sub>2+3+4</sub>; vein *2nd A* unusually short, strongly curved into the Anal border, ending about its own length before the level of the origin of *Rs*; supernumerary crossveins in cells *R*<sub>3</sub>, *M* and *1st A*, the last unique in that it connects posteriorly with the border of the wing rather than with any vein, as is the case in all other Tipulidae; distance on margin between end of vein *2nd A* and this crossvein nearly as long as the latter; veins *M*<sub>2</sub> and *M*<sub>3</sub> approximated to nearly contiguous at wing border. Male hypopygium (Fig. 9) with the dististyle, *d*, incompletely separated from the basistyle, *b*; ninth tergite, *9t*, without lateral armature.

Genotype. — *Malaisemyia ornatissima* sp. n.; Oriental: Indo-Himalayan.

I take great pleasure in naming this new genus for Dr. René Malaise, distinguished student of the Tenthredinoidea. This conspicuous fly seems to be well distinguished by the venation, especially the number and position of the supernumerary cross-

veins and the course of vein *2nd A*. The approximation at margin of veins  $M_2$  and  $M_3$ , as above mentioned, is better shown on one particular wing where cell *2nd M*<sub>2</sub> is virtually closed. The nearest related genus seems to be *Heterangaenus* Alexander, with several species and subspecies in Japan and Korea, having the supernumerary crossveins in cells  $R_3$ ,  $R_4$ ,  $M_1$  and  $M$ , and with vein *2nd A* of normal length and course. The type of male hypopygium is quite distinct in the two groups.

*Malaisemyia ornatissima* sp. n.

Size large (wing, male, over 16 mm); general coloration brown; wings heavily patterned with pale brown, the bands narrowly bordered by darker brown; supernumerary crossveins in cells  $R_3$ ,  $M$  and *1st A*, the last connecting posteriorly with the margin of wing rather than with a vein; vein *2nd A* short and curved, the cell broad; male hypopygium without tergal armature; interbase a small flattened blade.

*Male*. Length about 20—21 mm; wing 16—16.5 mm.

Described from alcoholic specimens. Rostrum pale brown; palpi brown. Antennae with scape and pedicel obscure yellow; flagellum broken; pedicel relatively long. Head yellow; vertical tubercle distinct; eyes densely hairy.

Thorax almost uniformly dark brown, the praescutum presumably striped and possibly pruinose in fresh specimens; posterior sclerites of notum apparently paler; vestiture of notum very small and sparse. Halteres relatively long, yellow. Legs with the coxae elongate, concolorous with the pleura; trochanters brownish yellow; a fragment of leg detached in vial seems to belong here, femora and tibiae obscure yellow, the tips narrowly and weakly darkened; tarsi broken. Wings (Fig. 4) whitish subhyaline, heavily and very handsomely patterned with brown, somewhat as in various species of *Tanyderus* or *Epiphragma*; veins chiefly with broad pale brown seams that are narrowly margined with darker, forming a complete oblique crossband at cord and a more basal, nearly complete band extending from above the origin of *Rs*, across the basal supernumeraries to the wing margin, broken by the costal cell and very narrowly along the posterior border of cell *R*; extensive prearcular and postarcular darkenings, interconnected along vein *Cu* with the crossbands; further extensions of this pattern reach the margin along vein  $R_3$ , being more extensive in the outer radial cells before narrowing at border; a similar pattern surrounds cell *1st M*<sub>2</sub>, reaching the margin along vein  $M_2$ , at border expanded to include the tip of vein  $M_3$ ; small isolated darkenings at ends of veins  $M_1$  and  $M_4$  and as more extensive borders back from the



margin at ends of veins *1st A* and *2nd A*, the former connected along border with the crossband at cord; the area at *2nd A* includes nearly the distal third of vein; cell *C* uniformly brownish yellow excepting a cloud at *h*; cell *Sc* light yellow, interrupted above arculus, at *Sc*<sub>2</sub>, at mid-distance between the two latter and as a connecting link between the two crossbands; veins yellow, not or scarcely darkened in the patterned areas. Venation as described under the generic diagnosis.

Abdomen elongate; tergites brown, more or less variegated with paler, the caudal and lateral borders narrowly more darkened; outer segments, including hypopygium, more uniformly darkened; basal sternites yellow, weakly darkened medially; abdominal segments provided with relatively short but abundant yellow setae. Male hypopygium (Fig. 9) of simple structure. Ninth tergite, *9t*, large but its central extended portion relatively small; caudal margin nearly truncate, with three poorly developed lobules; no lateral tergal arms; vestiture of tergite very small and delicate, inconspicuous. Basistyle, *b*, relatively large, on dorsal surface near apex with a stout fingerlike lobe that bears relatively few scattered setae. Interbase, *i*, an unusually small simple flattened blade, more or less cultrate in outline. What may be either a dististyle, *d*, or a ventro-apical lobe of the basistyle appears as a broad flattened lobe that bears about three strong black spines along the outer lateral margin and with a further ventral sublateral lobule or shoulder that bears two or three smaller blackened points and additional short dense spinous setae. Aedeagus very small.

*Holotype*, alcoholic ♂, Kambaiti, altitude 7 000 feet, June 4, 1934 (MALAISE). *Paratopotypes*, ♂♂, June 4—15, 1934.

This exceptional fly requires no comparison with other members of the tribe Pediciini.

### Genus *Pedicia* LATREILLE.

#### *Pedicia* (*Tricyphona*) *perrecessa* sp. n.

General coloration brownish yellow; halteres yellow; wings light yellow, conspicuously patterned with solid brown areas, including a complete crossband at cord; *Sc*<sub>2</sub> unusually retracted, lying only a short distance beyond the level of the arculus; *R*<sub>2+3+4</sub> present, longer than *r—m*; cell *1st M*<sub>2</sub> long.

*Female*. Length about 16 mm; wing 13 mm.

Described from alcoholic material. Rostrum and palpi black. Antennae with the scape and pedicel light brown; flagellum broken. Head brownish black; eyes with setae between the ommatidia.

Pronotum dark brown, somewhat paler behind. Mesonotum only moderately gibbous; general coloration obscure yellow, patterned with slightly darker, evident as three brownish gray praescutal stripes and weakly darkened scutal lobes. Pleura patterned with brown, especially on the very oblique lower sternopleurite. Halteres yellow. Legs with the coxae obscure yellow, the fore and middle pairs somewhat more distinctly infuscated on basal portion; trochanters brownish yellow; remainder of legs broken. Wings (Fig. 5) with the ground light yellow, the prearcular and costal fields more saturated yellow; a heavy and conspicuous solid brown pattern, distributed as follows: A postarcular area in both cells *R* and *M*, extending cephalad over *Sc*<sub>2</sub> to the margin in cell *C*, at this point rather expanded; the portion in cell *M* crosses cell *Cu*<sub>1</sub> and occupies nearly the central third of cell *Cu*; a major area at origin of *Rs*, extending from *C* to vein *M*, thence distad to unite with the marking at cord; a narrow but complete band at cord, forming a shallow V due to the obliquity of the anterior cord; two extensive dark areas in outer portion, one at *R*<sub>1+2</sub> and *R*<sub>2</sub>, ending posteriorly at vein *R*<sub>4</sub>, the other beginning at vein *R*<sub>5</sub> and extending slightly obliquely to the wing margin, crossing the fork of *M*<sub>1+2</sub>, *m* and distal section of vein *M*<sub>3</sub>; except for cell *R*<sub>4</sub> these two latter areas form a complete crossband; a major triangular marginal area at end of vein 2nd *A*; axillary border conspicuously darkened, including more than one-half the length of the cell; veins yellow, darker in the patterned portions. Venation: *Sc*<sub>1</sub> ending some distance beyond the fork of *R*<sub>2+3+4</sub>, *Sc*<sub>2</sub> unusually retracted toward the wing base, lying shortly distad of arculus, as above described; *Rs* square at origin; *R*<sub>1+2</sub> shorter than *R*<sub>2</sub>, the latter transverse; *R*<sub>2+3+4</sub> gently arcuated, longer than *r—m*, the latter shortly before the fork of *Rs*; cell 1st *M*<sub>2</sub> long, the second section of vein *M*<sub>1+2</sub> about one-half longer than vein *M*<sub>1</sub>; cell *M*<sub>4</sub> narrow, especially at base.

Abdomen elongate, reddish brown, the outer segments more conspicuously darkened; lateral tergal borders narrowly brownish gray. Ovipositor with cerci long and nearly straight, horn-yellow.

*Holotype*, alcoholic ♀, Kambaiti, altitude 7 000 feet, May 15, 1934 (MALAISE).

Despite its very fragmentary condition I have no hesitation in defining this fly as new since it is one of the most distinct members of the subgenus so far discovered. The unusual recession of *Sc*<sub>2</sub> toward the wing base is noteworthy. Among the described regional species, the fly is closest, perhaps, to *Pedicia* (*Tricyphona*) *flavipennis* (BRUNETTI), from the eastern Himalayas at Darjiling. Brunetti does not mention the position of

$Sc_2$  in this species nor is it shown in his figure but presumably lies in the darkened area before the origin of  $R_s$  or at near mid-distance between arculus and the origin of  $R_s$ .

### Subgenus *Eucyphona* subgen. n.

Characters as in *Tricyphona* ZETTERSTEDT but with supernumerary crossveins in cells  $R_1$  and  $M$ , the latter lying unusually far basad, before midlength of vein  $M$ ; vein  $R_1$  and the supernumerary crossvein in cell  $R_1$  unusually approximated, one at either end of the stigma.

Type of subgenus. — *Pedicia* (*Eucyphona*) *epione* sp. n.; Oriental: Indo-Himalayan.

The present fly represents still another subgeneric group in the *Pedicia* complex that is based essentially on the presence and distribution of the supernumerary crossveins. The crossvein in cell  $M$  is as found in *Nasiternella* but the added one in cell  $R_1$  is entirely unique in *Pedicia* though characteristic of certain subgenera in the allied genus *Dicranota* ZETTERSTEDT. It may be questioned as to whether it is advisable to erect new subgeneric groups based on the presence of supernumerary crossveins but since many of our best known subgenera elsewhere in the family are founded on these characters it seems consistent to proceed as in the present case. Among such familiar groups based on comparable characters may be mentioned *Discobola* OSTEN SACKEN, *Idioptera* MACQUART, *Elaeophila* RONDANI, *Symplecta* MEIGEN, and many others.

### *Pedicia* (*Eucyphona*) *epione* sp. n.

General coloration obscure yellow, the praescutum with three conspicuous dark brown stripes; wings subhyaline, chiefly covered by pale gray and brownish gray clouds; stigma oval, narrowly bordered by pale brown; outer cells of wings pale, preceded by extensive brownish gray clouds; supernumerary crossvein in cell  $R_1$  at proximal end of stigma; supernumerary in cell  $M$  unusually far basad; cell  $R_4$  petiolate; cell 1st  $M_2$  closed.

*Female*. Length about 7.5 mm; wing 6.9 mm.

Described from alcoholic material. Rostrum and palpi black. Antennae 15-segmented; scape dark brown, pedicel brownish black, flagellum brown; basal flagellar segments subcylindrical, the outer ones more oval. Head black; eyes with dense setae between the ommatidia.

Pronotum brown, dark brown medially above. Mesonotal praescutum obscure yellow with three conspicuous dark brown stripes, the median one slightly darker; scutal lobes conspicuously

darkened; scutellum darkened medially, the parascutella paler; mediotergite medium brown. Pleura chiefly darkened, especially the ventral sternopleurite. Halteres weakly darkened. Legs with the coxae and trochanters obscure yellow; remainder of legs broken. Wings (Fig. 6) with the restricted ground color subhyaline, chiefly covered by pale gray and brownish gray clouds; stigma oval, yellow, narrowly ringed with pale brown; markings at and beyond cord slightly darker than the basal pattern; a distinct subapical cloud from cells  $R_3$  to  $M_3$ , inclusive, the apices of the cells pale; in basal cells of wing the clouds very extensive, not or scarcely broken in cells  $Cu$ , 1st  $A$  or 2nd  $A$ ; in cells  $R$  and  $M$  with large incursions of the ground, the darker color being confined to the vicinity of the veins; veins yellow, brown in the clouded portions. Venation:  $Sc_1$  ending opposite the supernumerary crossvein in cell  $R_1$ ;  $R_2$  longer than  $R_{1+2}$ ; petiole of cell  $R_4$  slightly longer than  $r-m$ ; cell  $M_1$  about equal to its petiole; cell 1st  $M_2$  strongly widened outwardly;  $m-cu$  shortly beyond the fork of  $M$ .

Abdomen uniformly dark brown. Ovipositor with the cerci long, darkened on more than the proximal half, the tips yellow.

*Holotype*, alcoholic ♀, Kambaiti, altitude 7 000 feet, June 11, 1934 (MALAISE).

The present fly is readily told from all generally similar members of the genus by the subgeneric characters above defined and by the characteristic wing pattern.

#### *Pedicia* (*Nasiternella*) *ignara* sp. n.

General coloration dark brown; antennae 15-segmented, brown throughout; knobs of halteres weakly darkened; wings yellowish subhyaline, conspicuously patterned with brown; a supernumerary crossvein in cell  $M$ .

*Female*. Length about 9 mm; wing 8.5 mm.

Described from alcoholic material. Rostrum and palpi dark brown. Antennae 15-segmented, dark brown throughout; pedicel relatively long; basal flagellar segment subcylindrical, nearly as long as the succeeding two taken together; following segments oval, gradually decreasing in size. Head dark brown.

Thorax in alcohol almost uniformly dark brown, presumably more or less pruinose in fresh specimens; praescutum with the usual stripes apparently confluent or virtually so. Halteres with the stem pale, knob weakly darkened. Legs with the coxae and trochanters dark; remainder of legs broken. Wings (Fig. 7) with a yellowish subhyaline ground, variegated by brown spots, as follows:  $Sc_2$ ; origin of  $R_s$ ; the extensive stigmal area; cord and outer end of cell 1st  $M_2$ ; forks of  $R_{4+5}$  and  $M_{1+2}$ ; supernumerary

crossvein in cell *M*; distinct seams along veins *Cu* and 2nd *A*; veins yellow, darker in the patterned areas. Venation: *r—m* at fork of *Rs*;  $R_{1+2}$  relatively long, exceeding twice the length of  $R_2$ ;  $R_{4+5}$  more than one-half *Rs*; *r—m* long, arcuated; cell 1st  $M_2$  closed, narrowed at basal end; petiole of cell  $M_1$  subequal in length to the cell; *m—cu* just beyond the fork of *M*; supernumerary crossvein in cell *M* about opposite the origin of *Rs*.

Abdomen brown; darker in the pleural region and on the second sternite. Ovipositor with cerci strongly upcurved, yellowish horn-color.

*Holotype*, alcoholic ♀, Kambaiti, altitude 6 800 feet, April 10, 1934 (MALAISE).

The reference of the present fly to the subgenus *Nasiternella* WAHLGREN is based solely on the presence of the supernumerary crossvein in cell *M*. In other regards the fly much resembles a *Tricyphona* and the discovery of the male sex may be necessary before a final assignment to subgenus can be made. The only other *Nasiternella* in the Asiatic fauna is *Pedicia* (*Nasiternella*) *variinervis hokkaidensis* ALEXANDER, of Korea and northern Japan, a very different fly.

### Genus *Dicranota* ZETTERSTEDT.

#### *Dicranota* (*Rhaphidolabis*) *princeps* sp. n.

Size large (wing, male, over 7 mm); general coloration dark brown; halteres infuscated; femora obscure yellow basally, passing into black; wings grayish subhyaline, stigma darker, prearcular field more yellowed; male hypopygium with the tergite very large, deeply emarginate medially, the obliquely truncated lobes with abundant elongate setae; lateral tergal arms long and slender; basistyle with a broad lobe on mesal face that bears abundant long setae.

*Male*. Length about 7.5—8 mm; wing 7.5—8.5 mm.

Described from alcoholic material. Rostrum black; palpi broken. Antennae with scape black; remainder broken. Head black, evidently pruinose in dry material; anterior vertex relatively wide, the vertical tubercle poorly developed.

Thorax apparently uniformly dark brown to brownish black, in dry specimens presumably more or less pruinose and possibly with praescutal stripes; mesonotum relatively gibbous. Halteres infuscated, relatively long and slender. Legs with the coxae concolorous with the thorax; trochanters brownish yellow; a single (hind) leg remains; femora obscure yellow basally, passing into black at near midlength; tibiae brown, the tips more blackened; tarsi black. Wings (Fig. 10) grayish subhyaline, the pre-

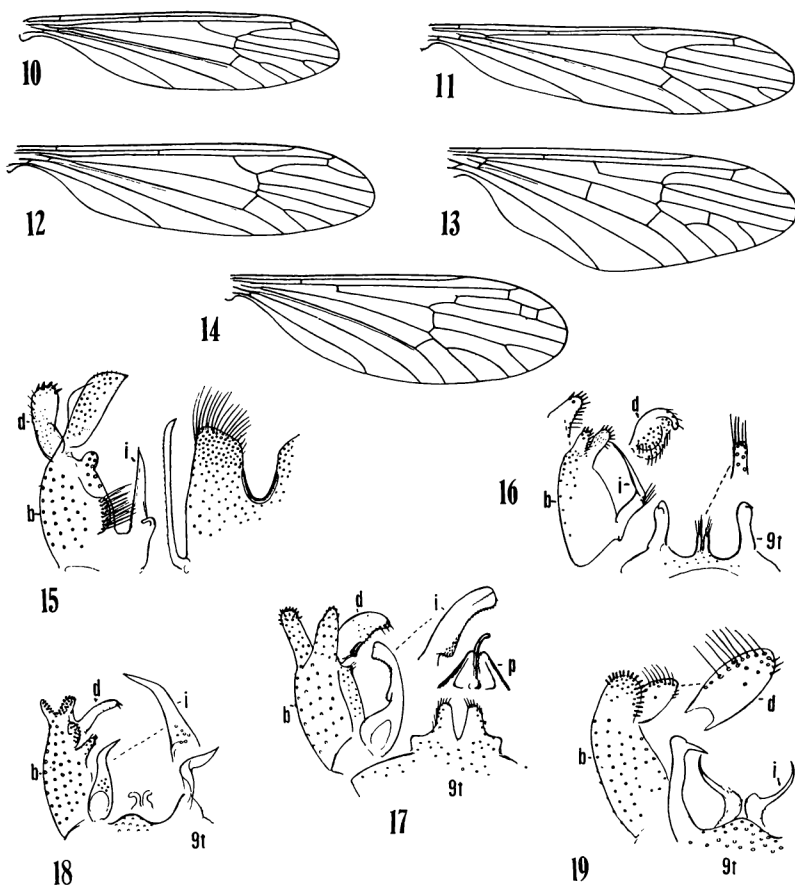


Fig. 10. *Dicranota (Rhaphidolabis) princeps* sp. n.; venation. — Fig. 11. *Dicranota (Rhaphidolabis) setulifera* sp. n.; venation. — Fig. 12. *Dicranota (Plectromyia) serrulifera* sp. n.; venation. — Fig. 13. *Dicranota (Amalopinodes) phantasma* subgen. et sp. n.; venation. — Fig. 14. *Dicranota (Euamalopina) perelegantula* subgen. et sp. n.; venation. — Fig. 15. *Dicranota (Rhaphidolabis) princeps* sp. n.; male hypopygium. — Fig. 16. *Dicranota (Rhaphidolabis) setulifera* sp. n.; male hypopygium. — Fig. 17. *Dicranota (Plectromyia) serrulifera* sp. n.; male hypopygium. — Fig. 18. *Dicranota (Euamalopina) perelegantula* subgen. et sp. n.; male hypopygium. — Fig. 19. *Dicranota (Amalopinodes) phantasma* subgen. et sp. n.; male hypopygium. (Symbols: *b*, basistyle; *d*, dististyle; *i*, interbase; *p*, phallosome; *t*, tergite.)

arcular field more yellowed; stigma oval, brown; veins dark brown. Venation: *Sc* long, *Sc*<sub>1</sub> ending just beyond one-third the length of *R*<sub>2+3</sub>, *Sc*<sub>2</sub> a distance before the origin of *Rs* that is a little greater than the length of the latter; *R*<sub>2+3+4</sub> present, sub-

equal to  $r-m$ ; vein  $R_2$  bent slightly basad, subequal to  $R_{1+2}$ ; cell  $M_2$  closed in one wing of the type, normally open by the atrophy of  $m$ ; cell 2nd  $A$  relatively wide.

Abdomen brownish black, the sternites somewhat paler; hypopygium black. Male hypopygium (Fig. 15) with the tergite, 9t, of unusual size (only the left half shown in figure), consisting of a subrectangular plate with the caudal margin very deeply notched, the bottom of the notch with a thickened margin; each lobe thus formed obliquely truncated at apex and provided with abundant elongate setae, those toward the outer angle longest; lateral tergal appearing as unusually long, nearly straight slender rods, a trifle expanded towards the outer ends, the rods a little longer than the length of the tergite; along outer margin for almost the whole length with microscopic spinous points. Basistyle,  $b$ , with a conspicuous lobe on mesal face, bearing a brush of long conspicuous setae, at mesal-apical portion with a small rounded lobe provided with a few strong setae; what seems to represent an apical lobe of the basistyle rather than a dististyle appears as a broad flattened cultrate blade, the outer margin with a high nearly glabrous flange; interbase,  $i$ , broadly attached to the basistyle, dilated and expanded into an obtuse knob at near midlength, this further produced into a slender fingerlike lobule, the blade thence narrowed to an acute point. Dististyle,  $d$ , a little shorter than the blade of the basistyle, more clavate, at apex with five or six strong black spines.

*Holotype*, alcoholic ♂, Kambaiti, altitude 5 850 feet, June 11, 1934 (MALAISE). *Paratopotype*, ♂, altitude 7 000 feet, April 30, 1934.

This large species of *Dicranota* is readily told from all other regional members of the genus by the size and by the structure of the male hypopygium, especially the very unusual ninth tergite.

#### *Dicranota* (*Rhaphidolabis*) *setulifera* sp. n.

General coloration dark brown; antennae short; legs uniformly darkened; wings with a strong brownish tinge, the stigma a little darker;  $Sc$  unusually short,  $Sc_1$  ending before midlength of  $R_s$ ;  $R_{2+3+4}$  present; male hypopygium with the median region of tergite produced into two slender lobes that are tipped with long setae; interbase at near proximal third bearing a group of about five long setae.

*Male*. Length about 5 mm; wing 5.5 mm.

Described from alcoholic material. Rostrum and palpi brownish black. Antennae short, dark brown, if bent backward extending to shortly beyond base of pronotum; flagellar segments oval. Head brown.

Thorax almost uniformly dark brown, the humeral portion of the praescutum restrictedly brightened; mesonotum unusually narrow, the praescutum gibbous. Halteres pale, knobs weakly infuscated. Legs with the coxae infuscated; trochanters obscure yellow; remainder of legs brownish black; tibial spurs small but evident; claws slender, simple. Wings (Fig. 11) with a strong brownish tinge, the oval stigma slightly darker brown; basal portions of costal field similarly a little darkened; veins pale brown. Venation: *Sc* unusually short, *Sc*<sub>1</sub> ending about opposite two-fifths to midlength of *Rs*, *Sc*<sub>2</sub> at near two-fifths the distance between arculus and the origin of *Rs*; *R*<sub>2+3+4</sub> long and conspicuous, exceeding *m-cu* in length; *R*<sub>1+2</sub> and *R*<sub>2</sub> subequal; cell *M*<sub>1</sub> present; *m-cu* nearly its own length beyond the fork of *M*.

Abdominal tergites and hypopygium dark brown, the sternites obscure yellow, with numerous small dark setigerous punctures. Male hypopygium (Fig. 16) with the tergite, *9t*, very narrow on its central portion, the caudal border being deeply emarginate, with two submedian slender lobes at the base of the notch; each of these lobes is tipped with about five long setae that are nearly equal in length to the lobes, with further scattered setae on surface of lobe and on main body of the tergite; lateral tergal arms produced far caudad, appearing as pale flattened blades, relatively wide, the tip narrowed and bent more or less at a right angle. Basistyle, *b*, with two apical lobes, with what appears to represent a single dististyle in their notch; upper lobe of basistyle broad-based, set with strong spinous setae at apex and down the mesal face, the more proximal ones passing into long hairs; lower lobe a little longer and more constricted at base, provided with somewhat similar strong spinous setae. Interbase, *i*, of unusual conformation, broad on its basal third, the distal portion narrowed into a long slender spine; at point of narrowing on mesal face with a close group of about five long pale setae, the longest about two-thirds the enlarged base. What is considered as being a dististyle, *d*, is broadly dilated, bearing a setiferous cushion on the basal part of the mesal face, the apex a curved more sclerotized blade, the margin with a few conspicuous pale setae. In the unique type it cannot be certain that a rounded setiferous lobe above described as being on the dististyle is actually not on the lower lobe of the basistyle. Gonapophyses and aedeagus forming a compact phallosomic mass, the latter darkened, obtusely rounded at tip, the apophyses small and inconspicuous.

*Holotype*, alcoholic ♂, Kambaiti, altitude 7 000 feet, April 30, 1934 (MALAISE).

The present fly is very different from all other regional species of the subgenus in the short *Sc* and the very distinctive



structure of the male hypopygium, especially the tergite and interbase. It may be observed that in *Dicranota (Plectromyia) incompleta* (BRUNETTI), of the eastern Himalayas, *Sc* is even shorter than in the present fly, ending at or before the origin of *Rs*.

*Dicranota (Plectromyia) serrulifera* sp. n.

General coloration dark brown; antennae short, 15-segmented; wings with a weak brownish tinge, the oval stigma darker brown;  $R_{2+3+4}$  distinct; cell  $M_1$  present or absent; male hypopygium with the tergite produced into two slender submedian lobes, each with a lateral shoulder; no lateral tergal arms; interbase a flattened yellow blade, the outer margin of the distal half produced into a flange whose edge is microscopically serrulate.

*Male*. Length about 6.5—7 mm; wing 6.5—7.8 mm.

Described from alcoholic material. Rostrum and palpi brownish black. Antennae 15-segmented, brownish black throughout, relatively short; first flagellar segment longer than the pedicel, the succeeding segments oval, gradually decreasing in size outwardly. Head black, pruinose; vertical tubercle developed.

Thorax chiefly dark brown, the dorsum apparently patterned with darker brown, the praescutum without clearly differentiated stripes. Halteres with the stem pale, knob weakly darkened. Legs with the coxae dark brown, trochanters a little paler; remainder of legs brownish black, elongate. Wings (Fig. 12) with a weak brownish tinge, the oval stigma darker brown; veins dark brown. Venation: *Sc* relatively long,  $Sc_1$  ending about opposite two-fifths to nearly midlength of  $R_{2+4}$ ;  $Sc_2$  far before the origin of *Rs*, the distance greater than that portion of vein  $Sc_1$  beyond the origin of *Rs*;  $R_{2+2+4}$  distinct, longer than the basal section of  $R_5$ ; vein  $R_2$  oblique, usually a little longer than  $R_{1+2}$ ; cell  $M_1$  usually lacking (as in *Plectromyia*), in cases preserved (as in *Rhaphidolabis*) but small; *m—cu* beyond the fork of *M*.

Abdomen brown, the lateral margins and posterior borders of the segments narrowly dark brown; hypopygium and preceding segment uniformly brownish black. Male hypopygium (Fig. 17) with the tergite, *9t*, produced into two relatively slender submedian lobes that are separated by a deep and narrow notch, each lobe provided with a conspicuous lateral shoulder; no lateral tergal armature. Basistyle, *b*, with two apical lobes, the longer outer one more cylindrical, at apex with numerous spinous setae of moderate size; inner lobe narrowed at tip, provided with numerous elongate setae; mesal face of style before apex with a slightly indicated papilla that bears three or four long setae. Interbase, *i*, a conspicuous flattened yellow blade from an enlarged base, the outer half with a lateral expansion or flange

that is microscopically serrulate along the outer margin, the more proximal teeth less acute than the distal ones. Dististyle,  $d$ , a broadly flattened blade, about equal in length to the longest apical lobe of the basistyle, the tip obtuse; lower or ventral margin with several spinous setae. Phallosome,  $p$ , a small compact mass, the gonapophyses narrowed to obtuse tips, the short aedeagus projecting slightly beyond their tips.

*Holotype*, alcoholic ♂, Kambaiti, altitude 7 000 feet, April 30, 1934 (MALAISE). *Paratopotypes*, several ♂♂, with the type.

The most similar species is *Dicranota (Rhaphidolabis) praeclisa* ALEXANDER, of southwestern China, which has the tergite, interbase and dististyle of approximately the same type as in the present fly but differing in every detail of structure. The presence or absence of cell  $M_1$  in a series of specimens of what is surely a single species emphasizes the weakness of the subgenus *Plectromyia*. I am referring the present species to this latter subgenus since it appears that cell  $M_1$  is normally lacking and, if present, is small and weak. A comparable case is known in various other species of *Dicranota*, including the genotype, *guerrini* ZETTERSTEDT.

### Subgenus *Amalopinodes* subgen. n.

Characters as in the subgenus *Eudicranota* ALEXANDER; a supernumerary crossvein in cell  $M$  about opposite the level of origin of  $R_s$  (Fig. 13).

Type of subgenus. — *Dicranota (Amalopinodes) phantasma* sp. n.; Oriental: Indo-Himalayan.

The rather numerous subgeneric groups now proposed in the genus *Dicranota* are all based on relatively weak and partly unstable characters. On such a basis they must necessarily function chiefly as groups of convenience in distributing the heterogeneous mass of forms now known. The subgenera may be separated by the following key.

#### Key to the Subgenera of *Dicranota*.

- |   |   |
|---|---|
| 1. Wings with supernumerary crossveins in certain of the cells.                         | 2 |
| No supernumerary crossveins in any cells of wing.                                       | 9 |
| Cell $M$ with a supernumerary crossvein.  | 3 |
| No crossvein in cell $M$ .  | 4 |
| 3. No other crossveins in the wing cells. <i>Amalopinodes</i> subgen. n.                |   |
| Additional supernumeraries in cells $R_1$ , $R_3$ and $R_4$ . <i>Polyangaenus</i> DOANE |   |
| 4. A supernumerary crossvein in cell $R_4$ . <i>Amalopina</i> BRUNETTI                  |   |
| No supernumerary crossvein in cell $R_4$ .  | 5 |
| A supernumerary crossvein in cell $R_1$ ; no other crossveins present.                  | 6 |
| No supernumerary crossvein in cell $R_3$ ; at least one such vein in cell $R_2$ .       | 8 |
| 6. Cell 1st $M_2$ closed. <i>Eudicranota</i> ALEXANDER                                  |   |
| Cell 1st $M_2$ open.  | 7 |

7. Cell $M_1$ lacking.	<i>Paradicranota</i> ALEXANDER	
- Cell $M_1$ present.	<i>Dicranota</i> ZETTERSTEDT	
8. One supernumerary crossvein in cell $R_3$ .	<i>Dicranotella</i> ALEXANDER	
- Two supernumerary crossveins in cell $R_3$ .	<i>Euamalopina</i> subgen. n.	
9. Cell 1st $M_2$ closed.	<i>Rhaphidolabina</i> ALEXANDER	
- Cell $M_2$ open by the atrophy of $m$ .		10
10. Cell $M_1$ lacking.	<i>Plectromyia</i> OSTEN SACKEN	
- Cell $M_1$ present.	<i>Rhaphidolabis</i> OSTEN SACKEN	

Subgenus	Subgenotype	Range
<i>Amalopina</i> BRUNETTI	<i>elegantula</i> (BRUNETTI)	Indo-Himalayan
<i>Amalopinodes</i> subgen. n.	<i>phantasma</i> sp. n.	Indo-Himalayan
<i>Dicranota</i> ZETTERSTEDT	<i>guerini</i> ZETTERSTEDT	Holarctic
<i>Dicranotella</i> ALEXANDER	<i>siberica</i> ALEXANDER	Eastern Palaearctic
<i>Euamalopina</i> subgen. n.	<i>perelegantula</i> sp. n.	Indo-Himalayan
<i>Eudicranota</i> ALEXANDER	<i>notabilis</i> ALEXANDER	Eastern Nearctic; Eastern Palaearctic
<i>Paradicranota</i> ALEXANDER	<i>rivularis</i> OSTEN SACKEN	Holarctic
<i>Plectromyia</i> OSTEN SACKEN	<i>modesta</i> (OSTEN SACKEN)	Holarctic; Indo-Hi- malayan
<i>Polyangaeus</i> DOANE	<i>maculata</i> (DOANE)	Western Nearctic
<i>Rhaphidolabina</i> ALEXANDER	<i>flaveola</i> (OSTEN SACKEN)	Eastern Nearctic; Indo-Himalayan;
		Eastern Palaearctic
<i>Rhaphidolabis</i> OSTEN SACKEN	<i>tenuipes</i> (OSTEN SACKEN)	Holarctic; Indo-Hi- malayan

On the basis of such a distribution, *Dicranotella* includes also *delectata* ALEXANDER and *nebulipennis* ALEXANDER; *Eudicranota*, besides the subgenotype, *dicranotoides* ALEXANDER; *Rhaphidolabina* also *fumicostata* ALEXANDER, *spectralis* (BRUNETTI) and *simplex* ALEXANDER. Other species, as *gibbera* ALEXANDER, *hyalipennis* ALEXANDER, and *megaplagiata* ALEXANDER, would run to *Rhaphidolabis* and may be placed there until more is known of the species of Eastern Asia.

#### *Dicranota* (*Amalopinodes*) *phantasma* sp. n.

General coloration pale yellow, the praescutum and postnotum patterned with brown; legs pale, the tips of the femora and tibiae narrowly but very conspicuously blackened; wings (male) broad, whitish subhyaline, with restricted brown clouds over certain of the veins, including the cord and outer end of cell 1st  $M_2$ ; cell  $R_3$  sessile or very short-petiolate by a reduced element  $R_{2+3+4}$ ; cell 1st  $M_2$  closed, cell  $M_1$  long-petiolate; a supernumerary crossvein in cell  $M$ ; male hypopygium with the lateral tergal arms appearing as strong pale blades, at apex produced mesad into an acute pale spinous point; interbasal rods unusually approximated on their basal portions.

*Male.* Length about 7—7.5 mm; wing 8—8.5 mm.

Described from alcoholic material. Rostrum and palpi pale yellow. Antennae short, pale yellow, the scape and pedicel a trifle darker. Head yellow.

Thoracic notum with the ground color yellow, patterned with pale brown, including a major area on the side of praescutum before the suture and even larger markings on both the mediotergite and pleurotergite, most intense at the suture between these two subsclerites, the central part of the mediotergite again pale. Pleura yellow. Halteres white. Legs white, the tips of the femora and tibiae narrowly but conspicuously blackened, involving less than one-fifteenth of the length; tarsi white, the tips of the individual segments even more narrowly infuscated. Wings (Fig. 13) whitish subhyaline, with restricted brown clouds, as follows:  $Sc_2$ , origin of  $R_s$  and the supernumerary crossvein in cell  $M$ ; cord and outer end of cell 1st  $M_2$  and over  $R_2$ , the dark color indicated especially by the veins which elsewhere are very pale and difficult to see. Wings very broad, widest opposite the end of vein 2nd  $A$ . Venation:  $R_{2+3+4}$  variable, in cases barely evident as a tiny element that is subequal to the basal section of vein  $R_5$ , in other cases and even on the opposite wings of a single specimen with vein  $R_4$  definitely on the lower fork, forming a short  $R_{4+5}$  (as figured); thus veins  $R_{2+3}$ ,  $R_4$  and  $R_5$  all appear to arise at or close to the end of  $R_s$ ; cell  $M_1$  long-petiolate; cell 1st  $M_2$  closed;  $m-cu$  nearly in transverse alignment with the remainder of cord.

Abdominal sternites whitened, the tergites weakly patterned with pale brown; segments eight and nine conspicuously dark brown, the styli yellow. Male hypopygium (Fig. 19) with the tergite,  $9t$ , relatively large, the central portion produced into a low subtriangular lobe that is provided with coarse setae; lateral tergal arms appearing as strong flattened pale blades that are directed caudad, near apex produced mesad into an acute pale spinous point. Basistyle,  $b$ , terminating in a single semioval lobe that is provided with numerous long-cylindrical blackened pegs with truncated tips. Dististyle,  $d$ , flattened, more or less mitten-shaped, the obtuse apex glabrous and feebly sclerotized; back from this smooth edge with a series of about 10 to 12 long strong setae. What presumably represent interbases,  $i$ , appear as powerful arms, at near one-third the length narrowed into divergent slender horns, on outer margin near point of narrowing with a lobe or flange of pale membrane. These supposed interbases are almost contiguous with one another at the midline but their enlarged bases are directed cephalad and laterad and appear to connect with the base of the dorsomesal face of the basistyle immediately beneath the tergal arm.

*Holotype*, alcoholic ♂, Kambaiti, altitude 7 000 feet, June 4, 1934 (MALAISE). *Paratopotypes*, ♂♂.

The present fly is readily told from all allied species by the subgeneric character of a supernumerary crossvein in cell *M* of the wings. Superficially it is most similar to *Dicranota* (*Rhaphidolabina*) *spectralis* (BRUNETTI), of the eastern Himalayas (Darjiling to Assam).

### Subgenus *Euamalopina* subgen. n.

Wings (Fig. 14) with two supernumerary crossveins in cell *R*<sub>3</sub>, both lying distad of the level of vein *R*<sub>2</sub>; *Rs* unusually long, exceeding *R* alone; *Sc*<sub>2</sub> lying far basad, shortly beyond midlength of the distance between arculus and origin of *Rs*. Male hypopygium (Fig. 18) with the lateral tergal arms and the interbases both well-developed, the latter with setae near base; basistyle with four apical and subapical lobes, all but the most basal one set with blackened pegs.

Type of subgenus. — *Dicranota* (*Euamalopina*) *perelegantula* sp. n.; Oriental: Indo-Himalayan.

The position of this new group among the other subgenera in *Dicranota* is indicated in the key given under the preceding species.

### *Dicranota* (*Euamalopina*) *perelegantula* sp. n.

General coloration brownish yellow; wings whitish hyaline, extensively patterned with brown; *Rs* very long; two supernumerary crossveins in cell *R*<sub>3</sub>; male hypopygium with the basistyle terminating in three lobes that are set with blackened spinous pegs; interbase with setae at proximal end; tergal arms long and conspicuous.

*Male*. Length about 5.5 mm; wing 5.5 mm.

Described from alcoholic material. Rostrum and palpi obscure brownish yellow. Antennae short, if bent backward extending about to the posterior end of head; scape black, remainder of organ obscure brownish yellow; pedicel large; basal flagellar segments short-oval, the outer ones rapidly decreasing in size to the outermost. Head brownish black; eyes with coarse ommatidia, provided with coarse setae; eyes broadly contiguous beneath; anterior vertex wide, at least four times the diameter of scape.

Thorax brownish yellow, apparently patterned on the dorsum but the color not readily apparent in the alcoholic type, the central portion of the scutellum and mediotergite more evidently darkened. Halteres pale. Legs with the coxae and trochanters

yellow; remainder of legs broken. Wings (Fig. 14) whitish hyaline, extensively and handsomely patterned with brown, as follows: The major area is a very irregular one at the level of the cord, extending from the costal border to beyond  $m-cu$ , widest at costa, fork of  $R_s$  and over  $m-cu$ ; distad of cord several spots and clouds over the transverse veins and forks, the largest area at end of vein  $R_5$ ; basad of cord with a major area over the origin of  $R_s$  and in alignment with this on vein 1st  $A$ ; smaller spots at  $Sc_5$  and at end of vein 2nd  $A$ ; veins pale yellow, brown in the patterned areas. Venation:  $R_s$  unusually long, square and spurred at origin;  $R_{1+2}$  about one-half  $R_2$ ;  $R_{2+3+4}$  long, more than one-half longer than  $r-m$ ;  $R_{2+3}$  angulated and spurred near origin; cell  $M_2$  open by the atrophy of  $m$ ;  $m-cu$  gently arcuated, about one-half its length beyond the fork of  $M$ .

Abdomen yellow, patterned with brown; caudal and lateral borders of tergites darkened, of the sternites less evidently so. Male hypopygium (Fig. 18) with the tergite, 9t, extensive, the median region produced caudad into a low obtuse lobe that is provided with several elongate setae; lateral tergal arms long and conspicuous, produced into flattened twisted blades, their tips narrowed to acute points. Basistyle,  $b$ , with an unusual development of apical and subapical lobes, the apical two set with blackened pegs, the outer one conspicuously bilobed, the more basal lobe semioval; subapical lobe longer and more slender, with several coarse spinous setae but without blackened pegs. Interbase,  $i$ , a powerful horn, expanded at base and here with about seven setae from conspicuous whitened punctures; at near two-thirds its length the interbase bends at an angle and narrows to an acute point. Dististyle,  $d$ , single. Phallosome small and inconspicuous. The interpretation of various outer appendages of the basistyle as being lobes of the latter or as a dististyle is more or less arbitrary, since in several of the smaller Pediciine crane-flies it is almost impossible to determine which are lobes and which are true styli. In the present fly, what is considered as being a dististyle certainly is connected with the outer bilobed structure above described as being part of the basistyle. In this case, all of the various appendages of the basistyle might be held to be merely lobes of the latter.

*Holotype*, alcoholic ♂, Kambaiti, altitude 7 000 feet, June 16, 1934 (MALAISE).

The present fly is readily told from all other regional members of the genus by the subgeneric characters.