

New or little-known species of exotic Tipulidae (Diptera). XIV

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SYNOPSIS

Descriptions are given of eight new species, belonging to the tribe Pediciini, and all from Assam. Three new species of *Malaisemyia* are described, one being subapterous and representing the first such instance in the genus. The remaining novelties include one species of *Nipponomyia*, and two each of *Pedicia* (*Tricyphona*) and *Dicranota*.

THE preceding part in this series of papers was published in 1966 (*Proc. R. ent. Soc. Lond. (B)* 35 : 65–71). At this time I am considering still further species in the tribe Pediciini, some being of unusual interest, particularly the three species of *Malaisemyia*. All materials here treated are from Assam, where they were collected by Dr. Fernand Schmid, to whom I again express my thanks for the opportunity of examining these specimens. The types are preserved in my personal collection.

Malaisemyia Alexander

Malaisemyia Alexander, 1949, *Arkiv för Zoologi* 42 A (2) : 6–7.

This genus includes some of the most beautiful of all known crane flies. The first described species, *Malaisemyia ornatissima* Alexander, from northern Burma, was discovered by Dr. René Malaise, to whom the genus was dedicated. Five species presently are known, all from the eastern Himalayas and adjoining ranges, three being described at this time. One of these has the wings of the female greatly reduced, being the first instance of subapterism known in the genus. This was to be expected, since wing reduction in the tribe is very common and is found in various other genera.

Key to the species of *Malaisemyia*

- 1 Subapterous, the wings greatly reduced, at least in the female sex *raneae* sp.n.
- Fully winged in both sexes 2
- 2 Legs conspicuously patterned with black and yellow . . . *schmidiana* sp.n.
- Legs yellow, the tips of femora and tibiae narrowly and inconspicuously darkened 3
- 3 Wings with the yellow ground areas very large, the one at end of basal cells not interrupted by a darkened seam over *M* *rajah* sp.n.
- Wings with the yellow ground areas smaller, the darkened bands correspondingly broad; ground area in basal cells before cord broken by a darkened seam along vein *M* 4
- 4 Size large (wing of male 23–25 mm.); vein 2nd *A* long, only moderately curved, the distance along margin between vein 2nd *A* and the supernumerary crossvein in cell 1st *A* about one-half the length of the latter, the two darkened areas united at margin . . . *manipurensis* Alexander
- Size smaller (wing of male 16–16.5 mm.); vein 2nd *A* relatively short, curved strongly into the margin, the distance between vein 2nd *A* and the supernumerary crossvein in cell 1st *A* about equal to the latter, the darkened seams on the veins separate at margin . . . *ornatissima* Alexander

Malaisemyia schmidiana sp. n.

Generally as in other members of the genus in the distinctive wing pattern, the brown crossbands narrow, solidly darkened; legs conspicuously patterned black and yellow; male hypopygium with spinoid setae of outer blade of dististyle four; interbase truncated at apex.

Male: length, about 22–28 mm.; wing, 19–22 mm.; antenna, about 1.7–2 mm.; abdomen alone about 17–22 mm.

Rostrum dark brown; palpi light brown, slightly longer than the antennae, terminal segment subequal in length to the preceding 3 combined. Antennae 15-segmented; scape dark brown, remaining segments somewhat paler brown; first flagellar segment short, the second about as broad as long, succeeding segments progressively longer and more slender, terminal segment a trifle longer than the penultimate; verticils of outer segments much longer than the more proximal ones, the extreme about one-third longer than the segment. Eyes conspicuously hairy. Head grey, vertex darker medially, the summit of the conspicuous vertical tubercle black.

Pronotum chestnut brown, laterally brownish-black, scutellum sublaterally light silvery. Mesonotal praescutum silvery-white, paling to clear silvery on sides, with a single dark brown stripe, indistinctly divided at posterior end, lateral stripes pale brown, only vaguely indicated and scarcely differentiated from the ground; scutum silvery-white, each lobe with a major medium brown area with a small paler spot on anterior end, this representing a continuation of the lateral praescutal vitta; scutellum silvery-white, parascutella dark brown; postnotum whitish-silvery, posterior half of mediotergite darker, cephalic half of pleurotergite conspicuously dark brown. Pleura silvery-white, patterned with darker on meron, ventral sternopleurite and vaguely on anepisternum; dorso-pleural membrane and pretergites dark brown. Halteres small, pale yellow, base of knob light brown. Legs with coxae yellowish-grey, trochanters brown; remainder of legs yellow, conspicuously patterned with brownish-black; femora dark with the very narrow base and a slightly more extensive subterminal ring yellow; tibia with more than the outer half blackened, the proximal part yellowed, the base again narrowly blackened; tarsi with proximal three segments dark brown, tips narrowly black, outer segments uniformly blackened. Wings (fig. 1) light yellow, with the characteristic brown pattern of the genus, the bands on disk narrow and solidly darkened; stigma paler brown; cell *C* light brown, *Sc* more yellowed; vein *Cu* narrowly seamed with dark brown but *m* and outer part of *Rs* without such darkenings; veins in the ground clear light yellow, brownish-yellow in the darkened parts. Wing outline conspicuously falcate, the apex being at tip of vein *R*₄ or just beyond; margin of wing inshirred at termination of vein 1st *A*. Venation: vein *R*₄₊₅ very short, *r-m* at or just beyond fork of *Rs*; cell *M*₁ broadly sessile or with a punctiform petiole; vein 2nd *A* curved gently to margin.

Abdominal segments dark brown medially, tergal bases narrowly more yellowed; sides of both tergites and sternites light silvery, the amount increasing posteriorly; on outer segments the silvery pattern is even more extensive, contrasting with the dark brown central stripe on both tergites and sternites; hypopygium brownish-grey. Male hypopygium (fig. 5) with the tergite (*t*) narrowed posteriorly, the truncated central part more darkened. Interbase (*i*) parallel-sided, gently curved, apex truncated. Apical lobe of basistyle (*b*) a broad flattened blade, tip obtuse, surface with relatively sparse setae of various lengths, none spinoid. Dististyle (*d*) bilobed, distal margin of outer blade with four strong black spinoid setae, inner lobe low with seven or eight spinoid setae, the more basal part of lobe with setae small and dense. Phallosome (*p*) as figured, the gonapophyses shorter than the aedeagus, which is recurved at apex into a small acute point.

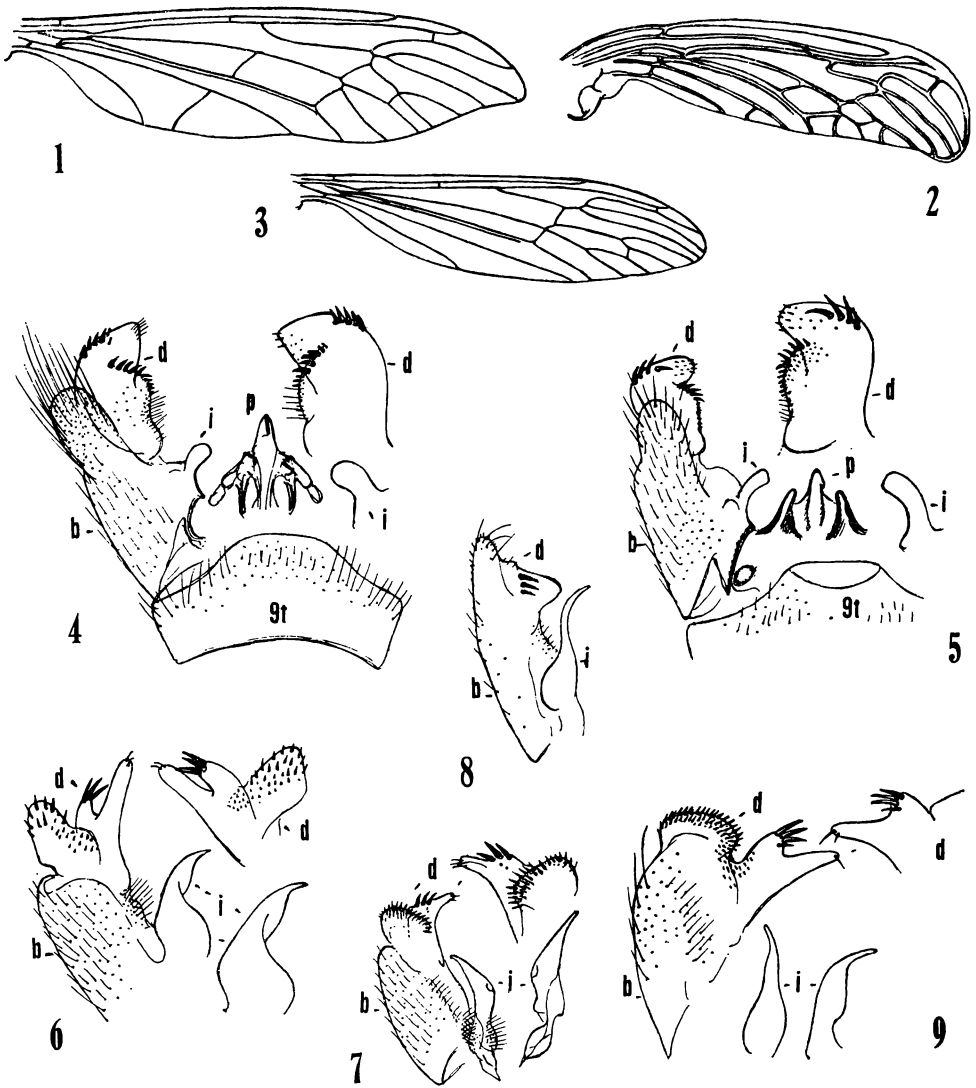
Holotype ♂, INDIA: Nyukamdong, Kameng, North East Frontier Agency, Assam, 8000 feet, 23.iv.1961 (*F. Schmid*). *Paratopotypes*, 2 ♂, 22–23.iv.1961 (*F. Schmid*).

I take very great pleasure in dedicating this attractive fly to Dr. Fernand Schmid, world authority on the Trichoptera.

The male hypopygium in the genus *Malaisemyia* is very uniform throughout all species in which this sex is known. The apical lobe of the basistyle bears normal delicate setae only, none being blackened or spinoid. The interbase shows slight but apparently important specific characters. It may be noted that Edwards and others have interpreted this structure as representing a paramere, but I believe that this is incorrect. Throughout the entire tribe Pediciini the true parameres (gonapophyses) appear as small paired structures that subtend the small aedeagus (as shown in figs 4 and 5, for example) whereas the interbase is a direct outgrowth on the mesal face of the basistyle, as found in this tribe and in the more generalised Hexatomini (see Crampton, G. C., 1942, *Diptera of Connecticut*, 1 : 90, fig. 7 J).

Malaisemyia rajah sp. n.

Size large (wing over 20 mm. in both sexes); wings light yellow banded with brown, these areas narrowly margined with darker in the male, in the female the bands more uniformly darkened;



FIGS. 1-9.—(1-3) Venation of: (1) *Malaisemyia schmidiana* sp. n. (2) *Malaisemyia ranee* sp. n., subapterous ♀; (3) *Nipponomyia kamengensis* sp. n. (4-9) Male hypopygium of: (4) *Malaisemyia rajah* sp. n.; (5) *Malaisemyia schmidiana* sp. n.; (6) *Nipponomyia joshii* Alexander; (7) *Nipponomyia kamengensis* sp. n.; (8) *Nipponomyia khasiana* Alexander; (9) *Nipponomyia novempunctata* (Senior-White) (*b*, basistyle; *d*, dististyle; *i*, interbase; *p*, phallosome; *t*, tergite.)

ground areas between the bands large, the distal section of vein *M* not darkened; male hypopygium with interbase short and broad, the enlarged apex rounded.

Male: length, about 23-25 mm.; wing, 20-23 mm.; antenna, about 2-2.2 mm.

Female: length, about 30-33 mm.; wing, 22-24 mm.; antenna, about 2.5-3 mm.

Rostrum brown; palpi light brown, terminal segment blackened. Antennae with proximal six or seven segments fulvous, the remainder black. Head brownish-yellow, grey pruinose, summit of the vertical tubercle cinnamon to dark brown.

Pronotal scutum dark brown, scutellum more yellowed, sides brown. Mesonotal praescutum with 4 brownish-grey stripes, the intermediate pair confluent behind, on anterior half separated by a darkened vitta; lateral stripes clear grey, lateral borders narrowly darkened, ground colour of praescutum dull orange, lateral margin pale brown; scutum yellowed, lobes patterned with grey, more blackened behind; scutellum yellowish-grey, darker basally; mediotergite reddish-brown with a grey central area, the point behind. Pleura silvery-white, patterned with light brown, including the dorsopleural membrane. Halteres yellowed, extreme base of knob slightly darkened. Legs with coxae and trochanters brownish-yellow; femora and tibiae yellow, tips narrowly brown; basal

tarsal segments yellowed, the remainder brownish-black. Wings fully developed in both sexes; ground light yellow with the usual brown pattern, in the male the bands narrow, buffy-brown, the borders narrowly darker brown, the ground areas proportionately large, cells *C* and *Sc* yellow; in the female the bands are slightly wider and more uniformly darkened, the centres only a trifle paler than the borders; no darkening along distal section of vein *M*, as in *ornatissima* and *manipurensis*. Wing outline moderately falcate. Venation: vein 2nd *A* longer than in *ornatissima*, shorter and more arcuated than in *manipurensis*; in the female, the vein longer, virtually contiguous with the supernumerary crossvein in cell 1st *A*.

Abdominal tergites with extensive brown triangles, the outer lateral margins light grey, the bases narrowly more yellowed; basal sternite with central darkening pale brown, outer sternites and the hypopygium dark brown, the outer lobe of basistyle paler. Male hypopygium (fig. 4) with apical lobe of basistyle (*b*) elongate, with numerous very long yellow setae, these longer and more delicate than in *schmidiana*; interbase (*i*) short and broad, enlarged outwardly, apex rounded. Dististyle (*d*) bilobed, the outer blade with 5 or 6 blackened spinoid setae, the inner lobe with 7 or 8 similar bristles. Phallosome (*p*) with gonapophyses closely applied to the stout central aedeagus.

Holotype ♂, INDIA: Shergaon, Kameng, North East Frontier Agency, Assam, 6200 feet, 29.iii.1961 (*F. Schmid*). *Paratypes*: 1 ♀ (*allotype*), Talung Dzong, Kameng, 7000 feet, 12.v.1961; 1 ♂ (*paratopotype*), 29.iii.1961; 1 ♂ 1 ♀, with the allotype; 1 ♀, Bilo La, Kameng, 6000 feet, 10.vi.1961; 1 ♂ 1 ♀, Bomdi La, Kameng, 8800 feet, 17-21.vi.1961, 15.vii.1961; 3♂1♀, Rahung, Kameng, 7000 feet, 25.iv.1961; 1 ♂ 1 ♀, Talung Dzong, 7600 feet, 5.vi.1961 (*F. Schmid*).

This striking species is told from the most similar species, *Malaisemyia ornatissima* and *M. manipurensis*, by the wing pattern, including the unusually narrow darkened bands that leave very large ground areas, the one before cord not interrupted by a darkened seam along vein *M* as in the other species.

Malaisemyia raneae sp. n.

Size large (length of female about 27 mm.; wings subatrophied, 6.5 mm.); venation of wings distinct but more or less distorted, ground colour yellow with conspicuous dark brown markings, including extensive areas in the prearcular field and narrow oblique bands at cord and more basally over origin of *Rs* and the supernumerary crossvein in cell *M*; abdomen elongate, conspicuously patterned, tergites dark chestnut brown, the lateral borders broadly silvery-white.

Female: length about 27 mm.; wing 6.5 × 1.6 mm.; antenna, about 2.1 mm.; abdomen alone about 22 mm.

Head small, as compared to the remainder of body; rostrum and palpi dark brown. Antennae 15-segmented; basal segments light brown, the outer 5 or 6 dark brown; proximal flagellar segments subcylindrical, the verticils unilaterally arranged, outer apical angle of each segment slightly produced; succeeding segments progressively smaller, terminal one nearly twice the penultimate, subequal to the longest verticils. Head chestnut brown medially and on sides, broadly bordered by light grey, the conspicuous vertical tubercle dark brown; vestiture of head light yellow.

Pronotal scutum chestnut brown, sides and a narrow transverse central line brownish-black. Mesonotal praescutum brownish-yellow with a broad brown median stripe, the lateral stripes narrow, much paler; scutum brownish-yellow, each lobe with central part darker, especially behind; transverse suture indicated only on central portion, appearing as a shiny brownish-black V-shaped impression; scutellum yellowish-brown, parascutella brownish-black; postnotum light grey, mediotergite broadly brown on sides and behind, dorsal half of pleurotergite similarly darkened. Pleura chiefly grey, variegated by more chestnut brown areas; dorsopleural region darker brown, anterior spiracle very large. Halteres with stem yellowed, knob weakly darkened. Legs with coxae light grey; trochanters light brown; femora and tibiae yellow, tips brown; basitarsi brownish-yellow, succeeding segments dark brown; claws smooth, long and straight. Wings (fig. 2) much atrophied, about one-fourth the length of body, angularly bent at mid-distance to arculus, as common in subapterous Tipulidae; ground colour yellow with a conspicuous spotted and banded dark brown pattern that includes oblique bands at cord and more basally over origin of *Rs* and the supernumerary crossvein in cell *M*; other brown areas in bases of cells *R* and *M* and very extensively before the arculus, especially in the posterior parts; veins yellow, a trifle more obscured in the darkened areas. Outer half of costa incrassated, provided with numerous very dense short dark trichia that continue to the wing tip; *R*₁ likewise with numerous comparable trichia; other veins stout, beyond cord with single rows of abundant delicate trichia. Venation: as in the genus but atrophied to conform to the wing shape; *r-m* long, at fork of the sessile or punctiform *R*₄₊₅; outer medial veins short, cell *M*₁ broad at margin; supernumerary crossvein in cell *M* sinuous.

Abdomen elongate, as shown by the measurements, conspicuously patterned, tergites medially dark chestnut brown, the areas narrowed behind, the lateral margins broadly silvery-white, the extreme

posterior border blackened; seventh tergite more brightened at base; sternites paler brown, sides silvery-white, contiguous with the tergal brightenings, posterior border of sternites narrowly blackened, bases of segments six and seven brightened. Ovipositor with cerci elongate, nearly straight, horn yellow, hypovalvae darker.

Holotype ♀, INDIA: Jhum La, Kameng, North East Frontier Agency, Assam, 7800–9000 feet, 24–25.iii.1961 (*F. Schmid*).

In the female the species is separated by the character given in the key. It seems probable that the male, when discovered, will be found to be fully winged.

Nipponomyia Alexander

Nipponomyia Alexander, 1924, *Insec. Inscit. Menst.* 12 : 158–159.

A well defined group, ranging from Japan and China in the eastern Palaearctic region, southward to Nepal and India, eastward to Sumatra and northern Borneo.

Nipponomyia kamengensis sp. n.

Wings with a conspicuous brown pattern that includes numerous small marks in costal cell, these irregular in shape, not forming transverse bands; *m* nearly transverse, about equal to basal section of *M*₂; male hypopygium with dististyle bearing three blackened spinoid setae that are not on an elevation.

Male: length, about 12 mm.; wing, 10.5 mm.; antenna, about 1.2 mm.

Female: length, about 15 mm.; wing, 12.5 mm.

Rostrum very short, yellow; palpi brown, the elongate terminal segment subequal to the combined basal 3, pale, tip narrowly darkened. Antennae pale. Head light brown.

Pronotum light yellow, darkened laterally. Mesonotal praescutum yellow, with a poorly indicated darker central stripe that becomes obsolete behind, posterior half of sclerite with 4 black spots arranged in a gently arcuated line; scutum yellow medially, each lobe brown, intensely blackened at anterior end, and mid-region of the suture similarly blackened; scutellum brown, narrowly pale medially, parascutella yellow with a triangular black area; mediotergite yellow basally, the posterior two-thirds brownish-grey. Pleura and pleurotergite yellow, patterned with pale brown on ventral anepisternum and sternopleurite. Halteres with stem yellow, knob pale brown. Legs with coxae and trochanters light yellow; femora and tibiae yellow, the tips narrowly brown; tarsi light yellow, outer segments light brown. Wings (fig. 3) faintly yellowed, with a conspicuous brown pattern as is usual in the genus; costal cells with numerous irregular brown spots and bars, not arranged in a definite transverse pattern; cell *Sc* and anterior margin of cells *R* and *R*₁ light yellow, with darkened spots at base of cell *Sc*, *Sc*₂, and above origin of *Rs*, the areas not including the yellow veins; stigma paler brown; pale brown clouds in bases of cells *R* and *M*, over the cord, and as an oblique band extending from stigma backward through vein *m*; yellow costal brightening extending to the wing tip, bordered posteriorly by pale brown; veins yellow, pale brown in the darkened areas except in the costal field, as described. Venation: *m* nearly transverse, about equal to the basal section of vein *M*₂.

Abdominal tergites brown, the incisures yellow, lateral margins narrowly lined with black; sub-terminal segments uniformly dark brown; sternites and hypopygium yellowed. Male hypopygium (fig. 7) with the beak of dististyle (*d*) sloping directly from the summit without an emargination; spinoid blackened setae 3, not placed on an elevation as in *joshii* and *novempunctata*. Interbase (*i*) narrowed to a slender point, as shown.

Holotype ♂, INDIA: Foothills, Kameng, North East Frontier Agency, Assam, 7000 feet, 5.ii.1961 (*F. Schmid*). *Paratype*: 1 ♀ (*allotopotype*), pinned with type.

The other regional members of the genus that have an abundant darkened pattern in the costal cell of wing are *Nipponomyia joshii* Alexander and *N. novempunctata* (Senior-White), which differ evidently from the present fly in hypopygial characters, especially in the arrangement of the modified spinoid setae of the dististyle. I have provided figures to show the hypopygia of these local species, *N. joshii* (fig. 6), *N. kamengensis* (fig. 7), *N. khasiana* (fig. 8) and *N. novempunctata* (fig. 9).

Pedicia (Tricyphona) bicollis sp. n.

Allied to *invaripes*: mesonotal praescutum brownish-grey with 3 dark brown stripes, pleura obscure yellow, mesopleura dark brown; legs light yellow; wings yellow, unpatterned except for the pale brown stigma; male hypopygium with lateral tergal arms slender; dististyle large, bilobed, each lobe with spinoid setae; phallosome chiefly appearing as two divergent horns.

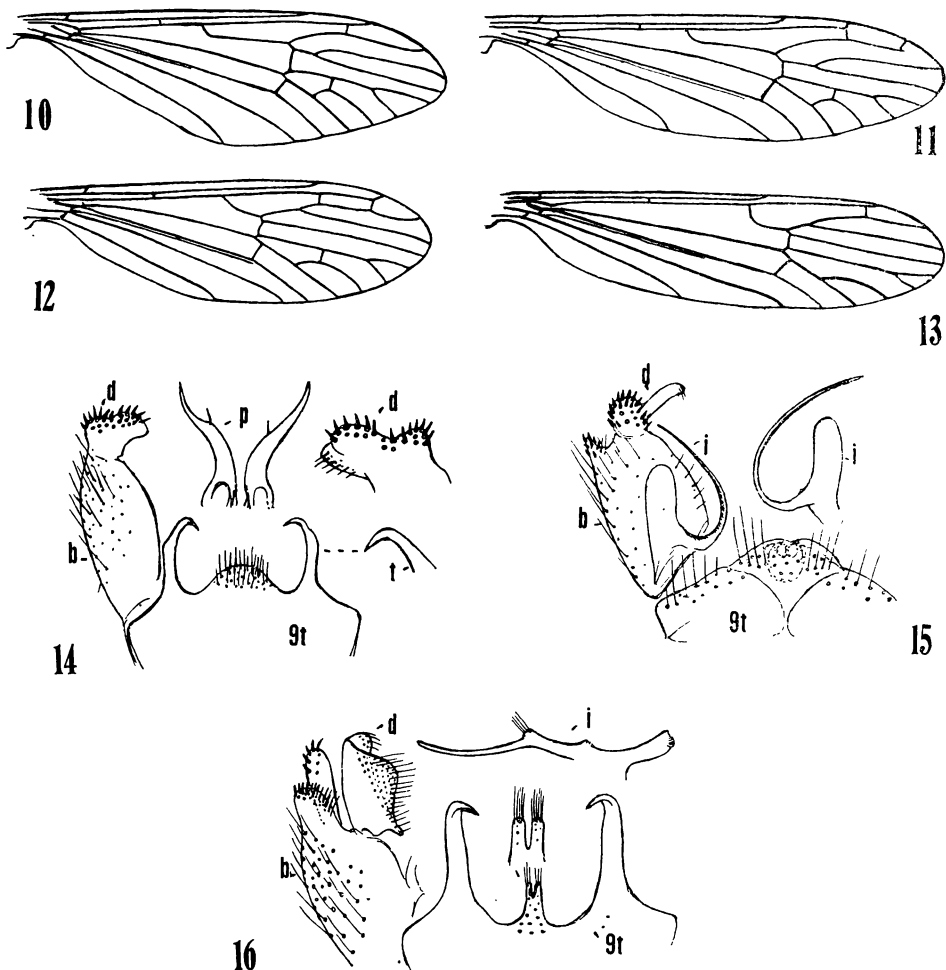
Male: length, about 5.5 mm.; wing, 6 mm.

Female: length, about 6-6.5 mm.; wing, 7-7.5 mm.

Rostrum yellow; palpi light brown. Antennae short, brown. Head light brown.

Pronotum brown anteriorly, light yellow behind. Mesonotal praescutum brown, grey pruinose, with 3 dark brown stripes, in the holotype the median stripe with a very narrow slightly paler central vitta; scutum obscure yellow medially, lobes dark brown; posterior sclerites of notum light greyish-brown, parascutella yellow, mediotergite slightly darker on nearly the posterior half. Pleura with propleura and metapleura obscure yellow, mesopleura dark brown to produce a transverse girdle. Halteres with stem whitened, knob slightly infuscated. Legs with coxae brownish-yellow, clearer yellow apically; trochanters yellow; remainder of legs light yellow, only the terminal tarsal segments slightly infuscated. Wings (fig. 10) yellowed, the prearcular and costal fields light yellow, stigma pale brown; veins light brown, more yellowed in the brightened fields. Wings of male somewhat broader than in female, widest opposite termination of vein 2nd *A*. Venation: *Sc*₁ ending about opposite mid-length of *R*₄₊₅; cell 1st *M*₂ closed; cell *M*₁ shorter than its petiole.

Abdomen dark reddish-brown, sometimes with posterior borders of tergites slightly paler. Ovipositor with cerci yellowed, long, curved slightly upward. Male hypopygium (fig. 14) with tergite (*t*) large, median area of posterior border produced, obtuse, with numerous long delicate setae; lateral arms slender, pale, tips curved into acute points. Basistyle (*b*) terminating in a single structure that may be interpreted as being a dististyle, its outer border emarginate to form 2 separate lobes, each provided with several blackened spinoid setae. Phallosome (*p*) with apophyses appearing as



Figs. 10-16.—(10-13) Venation of: (10) *Pedicia (Tricyphona) bicollis* sp. n.; (11) *Pedicia (Tricyphona) megastigma* sp. n.; (12) *Dicanota (Eudicranota) tigriventris* sp. n.; (13) *Dicanota (Rhaphidolabis) chorisa* sp. n. (14-16) Male hypopygium of: (14) *Pedicia (Tricyphona) bicollis* sp. n.; (15) *Dicanota (Eudicranota) tigriventris* sp. n.; (16) *Dicanota (Rhaphidolabis) chorisa* sp. n. (*b*, basistyle; *d*, dististyle; *i*, interbase; *p*, phallosome; *t*, tergite.)

two conspicuous sinuous horns, approximated at near mid-line, the slender acute tips divergent, on inner margin at point of narrowing with a delicate setoid point; an extensive pale membrane with abundant areas of microscopic setulae subtends the apophysis.

Holotype ♂, INDIA: Chattrik, Manipur, Assam, 1500 feet, 21. vii. 1960 (*F. Schmid*).

Paratopotypes: 1 ♀ (*allotype*), pinned with type; 1 further ♂ and 1 ♀.

Pedicia (Tricyphona) bicollis is most similar to *P. (T.) invaripes* Alexander, differing in the coloration of the body, halteres and wings, the last being unpatterned except for the stigma. The male of *invaripes* remains unknown. From other allied regional species of the subgenus, in which the male is known, the present fly differs in hypopygial structure, particularly the tergite, dististyle and gonapophyses.

Pedicia (Tricyphona) megastigma sp. n.

Allied to *elegans*; rostrum and proximal antennal segments light yellow; pronotum yellowed; mesonotal praescutum obscure yellow with 4 brownish-grey stripes, propleura and pteropleurite yellow, mesepisternum dark brownish-grey; fore coxae and trochanters light yellow, the middle and hind pairs brown; femora light yellow, tips conspicuously blackened, tibiae similar with narrower blackened apices; wings whitened, with a brown pattern that includes a large stigmal area; abdomen dark brown laterally, both the tergites and sternites with a broad obscure yellow central stripe.

Female: length, about 7 mm.; wing, 6.8 mm.

Rostrum light yellow; palpi brown. Antennae obscure brownish-yellow, outer segments slightly darker; scape and pedicel large, the latter with abundant setae; proximal flagellar segments short and crowded, transverse, succeeding ones longer; outer segments broken. Head brownish-grey.

Pronotum obscure brownish-yellow. Mesonotal praescutum obscure yellow with 4 brownish-grey stripes, the intermediate pair narrowly separated, not reaching the suture, lateral borders behind the foveae less evidently darkened; scutum obscure yellow medially, each lobe with 2 confluent brown areas: scutellum brownish-grey, parascutella pale yellow; postnotum brownish-grey. Propleura and pteropleurite light yellow, mesepisternum dark brownish-grey, metapleura brownish-yellow, meron darker. Halteres with stem yellow, knob weakly darkened. Legs with fore coxae and trochanters light yellow, middle and hind pairs brown; femora light yellow, tips conspicuously black, including about the outer eighth of middle legs, one-tenth of posterior pair; tibiae light yellow, tips more narrowly black; basitarsi light yellow, outer tarsal segments brown. Wings (fig. 11) whitened, with a relatively conspicuous brown pattern including especially the large stigma that extends from the tip of vein Sc_1 to R_2 , its posterior border somewhat more intensely darkened; conspicuous brown seams at Sc_2 , origin of Rs , cord and outer end of cell $1st M_2$; further areas at forks of R_{4+5} and M_{1+2} and as small marginal clouds at ends of all longitudinal veins, smallest on R_5 ; cells at and beyond arculus darkened, more conspicuous in cell Sc ; veins yellow, darker in the clouded parts. Venation: Sc_1 ending shortly beyond level of $r-m$, Sc_2 some distance before origin of Rs ; R_2 close to tip of R_{1+2} ; tip of R_3 bent angularly cephalad near outer end; $r-m$ at near one-fourth the length of R_{4+5} ; cell $1st M_2$ closed; cell M_1 subequal to its petiole; $m-cu$ at fork of M .

Abdominal segments dark brown laterally with a broad obscure yellow central stripe on both tergites and sternites, outer segments more uniformly darkened. Ovipositor with cerci very long, basal half darkened, paling to horn yellow outwardly.

Holotype ♀, INDIA: Amatulla, Kameng, North East Frontier Agency, Assam, 1250–2000 feet, 10. iii. 1961 (*F. Schmid*).

Pedicia (Tricyphona) megastigma is most similar to *P. (T.) elegans* (Brunetti), differing in the coloration of the body, legs and wings, including the broad blackened tips of the femora and the wing pattern, including the conspicuous stigmal area.

Dicranota (Eudicranota) tigriventris sp. n.

General coloration yellow, mesonotum and pleura patterned with brown; antennae 16-segmented; legs yellowish-brown; wings yellow, conspicuously patterned with medium brown, cell $1st M_2$ closed; abdomen of male bicolored, segments dark brown, their posterior borders yellow; male hypopygium with the interbase large and conspicuous, including a flattened basal plate that is extended caudad into a very long slender spine.

Male: length, about 5 mm.; wing, 5.5 mm.; antenna, about 0.7 mm.

Female: length, about 6 mm.; wing, 6 mm.

Rostrum yellow; palpi brown. Antennae short, 16-segmented; scape yellow, remaining segments black; proximal flagellar segments short-cylindrical, the succeeding ones progressively longer, with conspicuous verticils. Head with disk light greyish-brown, light yellow posteriorly.

Pronotum clear light yellow. Mesonotal praescutum light yellow with 3 fulvous brown stripes,

the laterals paler; scutum yellow, the lobes pale brown; scutellum pale brown, parascutella yellow; postnotum brownish-grey, the sutures light yellow. Pleura with propleura and mesepimeron light yellow, mesepisternum and meron dark brown to form a transverse girdle. Halteres with stem light yellow, knob light brown. Legs with coxae and trochanters yellow; remainder of legs yellowish-brown, the outer tarsal segments slightly darker. Wings (fig. 12) yellow, conspicuously patterned with medium brown, including small areas at arculus, Sc_2 , the tip of Sc_1 extended backward over the supernumerary crossvein, R_{1+2} and R_2 , with seams over cord and outer end of cell 1st M_2 ; small marginal spots at ends of all longitudinal veins; veins yellow, brown in the patterned areas. Venation: a supernumerary crossvein in cell R_1 opposite Sc_1 ; cell 1st M_2 closed.

Abdominal segments in male conspicuously bicolored, dark brown, the narrower posterior borders and incisures light yellow to produce a banded appearance, segments 8 and 9 dark brown, remainder of hypopygium brownish-yellow. In the female the segments are chiefly dark brown, posterior borders narrowly obscure yellow, the banded appearance less conspicuous. Male hypopygium (fig. 15) with the tergite (t) large, the central area of posterior border triangular in outline, tergal setae long and conspicuous. Basistyle (b) with two outer lobes, both with blackened spinoid setae, lateral lobe smaller; interbase (i) of unusual length and conformation, with a large elongate flattened basal plate that is extended into a long slender spine, at base directed slightly cephalad, thence recurved and directed caudad. Dististyle (d) a pale flattened blade with a few setae near apex, the base of style united or closely approximated to the larger lobe of the basistyle.

Holotype ♂, INDIA: Nyukmadong, Kameng, North East Frontier Agency, Assam, 8000 feet, 22. iv. 1961 (*F. Schmid*). *Paratype*: 1 ♀ (*allotype*), 21. iv. 1961.

Among the numerous regional species of the genus, the present fly is most similar to *Dicranota* (*Eudicranota*) *garhwalensis* Alexander, which differs evidently in the open cell M_2 of the wings and in the hypopygial structure, especially the very different interbase. A key to the subgenera of *Dicranota* has been given by the writer (1949, *Arkiv för Zoologi* 42 A (2) : 17-18).

Dicranota (*Rhaphidolabis*) *chorisa* sp. n.

General coloration of body dark brown to brownish-black; antennae of male unusually short, 13-segmented; halteres and legs dark brown; wings strongly darkened, Sc short, R_{2+3+4} long; male hypopygium with median region of tergite produced, the apex divided into 2 slender lobes, interbase long and slender, especially the outer half.

Male: length, about 4.5 mm.; wing, 5 mm.; antenna, about 0.65 mm.

Rostrum brownish-black; palpi black. Antennae of male 13-segmented, short, black throughout; first flagellar segment about one-half longer than the second, remaining segments progressively shorter, exceeding their verticils; terminal segment small, oval, about one-half the size of the penultimate. Head dark brown.

Pronotum dark brown. Mesonotum almost uniformly brownish-black, praescutal disk without distinct stripes, lateral borders slightly more pruinose; setae of praescutal interspaces sparse, black. Pleura brownish-black. Halteres dark brown. Legs with coxae and trochanters brown; remainder of legs dark brown. Wings (fig. 13) strongly darkened, stigma slightly darker brown, its borders poorly delimited; veins brown. Venation: Sc short, Sc_1 ending shortly beyond origin of the angulated R_5 ; R_{2+3+4} long, subequal to $m-cu$, the latter more than one-half its length beyond the fork of M .

Abdomen brownish-black. Male hypopygium (fig. 16) with the tergite (t) large, lateral arms appearing as elongate yellow blades that terminate in an appressed acute spine, mid-region of tergal border broadly emarginate, the central area produced into a lobe that divides on outer half into 2 slender lobes, each terminating in a few long setae. Basistyle (b) large, with 2 apical lobes, the short broader dorsal lobe with numerous spinoid setae, the more basal ones longer, the dorsal lobe slender, with fewer strong setae; interbase (i) extended caudad as a yellow arm, at near mid-length narrowed into a slender rod, the margin at point of narrowing bearing a small tubercle that is tipped with a few long setae; cephalic end of interbasal region produced anteriorly into a stouter blade (in figure, the interbase shown separately). Dististyle (d) a large flattened structure that is folded or rolled, provided with abundant long yellow setae.

Holotype ♂, INDIA: Sirhoi Kashong, Manipur, Assam, 7500 feet, 10. vi. 1960 (*F. Schmid*).

Other regional species with vein Sc short include *Dicranota* (*Rhaphidolabis*) *brachyneura* Alexander, *D. (R.) khumyarae* Alexander, *D. (R.) perproducta* Alexander and *D. (R.) unilobata* Alexander, all differing evidently from the present fly and among themselves in hypopygial characters. The most similar species is *unilobata*.

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