Mosquitoes of New Guinea (Diptera : Culicidae)

Part IX.—Further new species of *Uranotaenia* Lynch Arribálzaga and notes on the genus.

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Synopsis

In the present paper, the third related to the genus *Uranotaenia*[1] and the last of this current series on the taxonomy of mosquitoes from New Guinea, two new species are described, the systematic position of these and the species described in Part VIII are discussed, and the taxonomic status of other species is clarified. A revised checklist of the genus for the South Pacific is presented.

Uranotaenia paralateralis sp. n.

The following species is established on the basis of a very poor series of specimens from light traps but, as it is so distinctive and has a wide distribution ranging from the Sepik District to New Ireland, it is considered advisable to describe and name it. The description is based on two males (one from Yambi near Maprik in the Sepik and the other from Kavieng in New Ireland) and five females (from Maprik). All these specimens are damaged and incomplete in some character or other, except for the males, which at least have intact legs and terminalia, which have important diagnostic characters. This species clearly belongs to the "*atra*" group of which *U. atra* Theobald, *sensu* Belkin, 1953 has been synonymised with *U. lateralis* Ludlow, 1905 by Stone (1957). The characteristic modifications of the male legs, combined with the pale marks of the general type found in the "ornamented group" of this genus, serve to distinguish this species from all but *U. lateralis*, which in turn is separated by details of the secondary sexual characters of the male legs and the pleural scaling and chaetotaxy of both sexes.

Male (fig. 1).—*Head:* proboscis fairly dark brown scaled, with a few small brown hairs (especially apically); swollen at apical one-fifth; labellae yellow; 11 × palpi, 1·2 × fore femur, 0·9 × wing, no pale ventral scaling. Palpi exceeding clypeus by length of apical segment, yellow scaled and with a few brown hairs. Clypeus minute, sharply triangular, yellow. Antennae equal in length to proboscis, light brown segments with sparse whorls of dark brown hairs, first segment not elongated; torus yellowish, bare. Vertex covered with broad, appressed, dull brown scales, which give a peacock blue reflection in certain lights. One pair of large erect vertical scales and a few scattered, black, forked, erect occipital scales. Frontal bristles well separated, 3 or 4 orbital bristles, all dark brown. *Thorax:* scutal integument a light reddish-brown with sparse covering of narrow, curved, hairlike and a few slightly broader and darker scales. A row of pearly white, opalescent, prealar scales dorsal to paratergite, those nearer head smaller than the distal scales. Numerous dorsocentral and acrostichal bristles. Scutellar integument dark reddish-brown, all lobes covered with broad, dark brown scales; bristles: 2 strong pairs on median lobe, 2 strong and 1 weak pair on lateral lobes. Pleural integument dark reddish-brown dorsally, light beige ventrally, the 2 areas separated by a pale, diagonal pruinose area extending from and including *apn*, ventral part of subspiracular area, centre of *stp*, lower *msp* and base of *mts*. Posterior surface of *apn* covered with fairly broad appressed, pearly white scales. Most of *stp* covered with large broad appressed scales, of which those covering the pale pruinose area are pearly-white, whereas the more dorsal and ventral groups are pearly-brown, the scales blending so well with colour of underlying integument that they are hard to distinguish at all. (In 1 female, 3 or 4 broad appressed pearly-brown scales are seen on *ppn* which do not appear to be artefacts). Pleural bristles, 3 strong *apn*, 1 fairly strong *ppn*, 1 weak spiracular, 1 strong prealar, a particularly conspicuous row of strong bristles along upper border of *stp*, a number of weaker bristles along posterior border of *stp*; all bristles dark brown. Mesopostnotum dark chest-

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[1] The other two are Parts VII and VIII of this series (1963, *Proc. R. ent. Soc. Lond.* (B) **32** : 135–44; 203–9.

nut brown, bare. Halteres, stems and base of knobs light yellowish, rest of knobs dark scaled. *Wings:* length 1·5 mm. Dorsal vein scales on costa and subcosta dark brown, fringe dark brown as far as termination of vein *R*3, very pale beyond this. Vein *R* 2·1 about 0·21 of vein *R* 2 + 3; vein *M* 1 + 2 about 0·75 of *M* beyond *m–cu*. *Legs* (fig. 2): coxae and trochanters pale yellow. Midfemur swollen on basal two-thirds, all legs with light brown scales with a bronzy sheen, midfemur lighter ventrally. Proportions of segments as figured (fig. 3). *Fore leg:* tibia with usual apical comb, accompanied by 2 extra long specialised scales. Tarsal segment I very short with 3 or 4 long specialised scales apically, all the apical setae overlapping the elongated articulation with TII. TII with a group of about 5 strong dark red-brown bristles and a curved long scale at extreme base dorsally and a further row of specialised bristle-like scales distal to this. Claws equal in length, one broadened and scimitar-like. *Midleg:* tibia with a sub-basal row of modified scales. TIV very short but with an extended ventral lobe with 2 terminal bristles, claw very strong with 2 unequal branches. *Hind leg:*

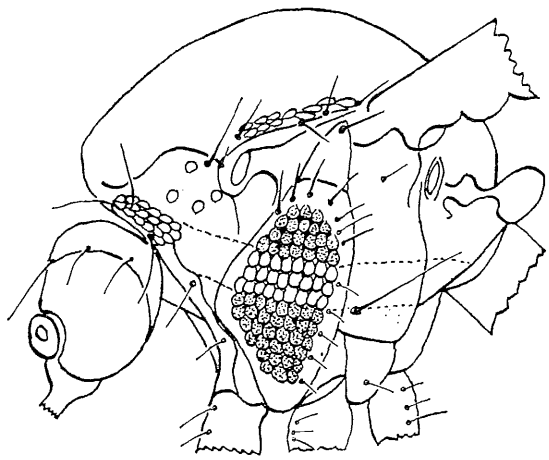

FIG. 1.—*Uranotaenia paralateralis* sp. n., male: lateral view of head and thorax.

tibia with normal comb but a group of about 12 long narrow specialised scales basal to it; base of TI with an apical patch of similar, semi-erect specialised scales. Claws as figured, similar to those of the fore leg. *Abdomen:* tergites all rubbed but apparently with uniformly dark brown scales and normal delicate hairs. Sternites uniformly a paler brown. No evidence of any pale apical patches on abdomen. *Terminalia* (fig. 4): ninth tergite broad and short, with a shallow basal indentation and a deep distal one. A strong sclerotised bar towards distal margin. Proctiger conical in outline, membranous, with a deep terminal cleft. Coxite triangular, basal lobe ill-defined but its position marked by 3 strong and about 7 weak bristles. A few bristles on lateral surface of coxite. Style with a stout subterminal spine and a few short hairs basal to this. Mesosome of 2 plates with a narrow bridge; 1 large tooth situated distally and directed laterally; a second tooth basally and ventrally, recurved as figured, with 2 minute teeth at base.

Female.—General appearance as in the male, including the outstanding curved row of upper sternopleural bristles and *stp* scaling. *Head:* all flat scales of vertex a very light blue. Three pairs of erect, forked, black occipital scales. A pair of very large, slender, erect, forked black scales situated one each side of the midline of the vertex, a little posterior to the orbital margin. Proboscis swollen apically with a number of fairly long hairs laterally on apical one-fourth; 13 × palpi, 1·0 × abdomen, 0·94 × fore femur, 0·66 × wing. Wing length, 1·7 mm. Legs with normal proportions.

Variation.—The holotype from Kavieng has the integument generally lighter than the male from Yambi; other than this the two specimens are identical. In one female paratype the tergal, sternal and femoral scales show a light mauvish reflection in certain lights.

Larva and pupa.—Unknown.

Material Described

Holotype ♂, NEW GUINEA: Kavieng, New Ireland District, 3.vi.1959 (in light trap). *Paratypes*: 1 ♂, 5 ♀ (including allotype), NEW GUINEA: Yambi, 15 miles south of Maprik, Sepik District, 17.v.1959 (light trap). All specimens collected by Dr. W. Peters and deposited in collection of Department of Entomology, C.S.I.R.O., Canberra, A.C.T.

Uranotaenia hirsutifemora sp. n.

A pale species of moderate size, unornamented and readily distinguished from the other species of the " *diagonalis* " group by the rows of long hairs on the femora and absence of a dark, diagonal transpleural band.

Male.—Head (fig. 5): proboscis and labella light brown scaled; distal one-third of proboscis slightly expanded, a few short light brown hairs apically, 11 × palpi, 0·93 × fore femur, 0·64 × wing. Palpi very short, light brown scaled with numerous long hairs on apical segment; exceeding clypeus by one-half length of palpi. Clypeus light brown, bare, pruinose. Antenna long, 1·15 × proboscis,

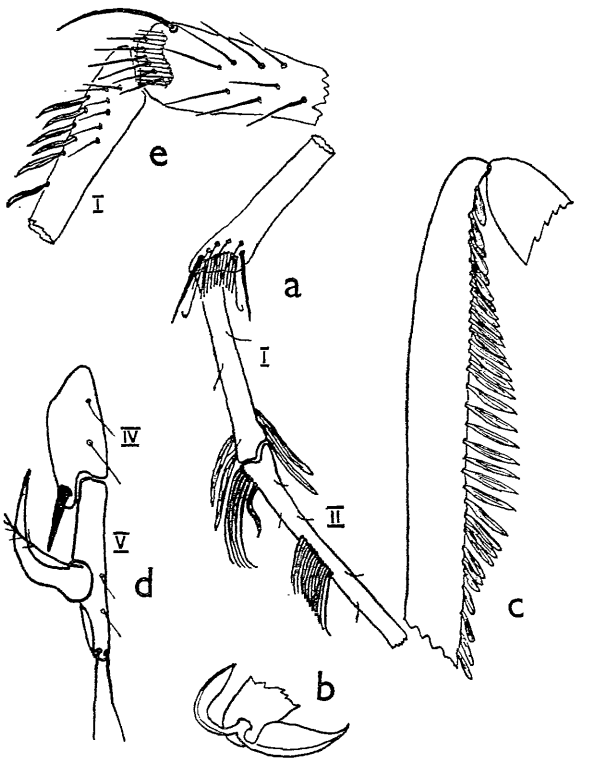

FIG. 2.—*Uranotaenia paralateralis* sp. n., male legs: (*a*) fore leg, distal part of tibia, tarsal segment I and proximal part of II; (*b*) hind leg, tarsal claws; (*c*) midleg, distal tip of femur and basal part of tibia; (*d*) midleg, tarsal segments IV and V; (*e*) hind leg, distal tip of tibia and base of tarsal segment I.

flagellum densely whorled, first segment yellowish basally, light brown distally, about 1·5 × length of second; rest of antenna light brown, 2 terminal segments with numerous short hairs. Torus yellow, bare, pruinose. Vertex and occiput covered with rather small, broad, opalescent dark grey appressed scales, the 2 orbital rows paler in certain lights; frontal tuft not developed; numerous large, erect, forked, dark brown scales scattered among the flat scales on vertex and occiput, except along the 2 rows of orbital marginal flat scales. These erect scales are in form of an inverted triangle, with a short stem from apex of triangle to its attachment, base of the triangle having a number of fine teeth. Frontal bristles with bases close together, 5 pairs of orbital black bristles. *Thorax:* scutal integument a light golden brown colour with a median dark brown line from anterior scutal margin to anterior limit of prescutellar area and a pair of submedian dark brown lines from anterior scutal angle to posterior scutal margin lateral to prescutellar area. A medium brown area filling in space between upper border of *ppn* and anterior 0·4 of submedian line. An indefinite brown area in front of wing root. Scutal scales scanty, long, hair-like, curved, a light golden brown. Dorsocentral bristles dark brown, strong bristles interspersed with weak ones from anterior to posterior scutal margins. Acrostichal bristles present but slender, also dark brown. Scutellar integument light brown, all lobes with semi-transparent, pale brown, flat, broad scales, those on lateral lobes overlapping bases of a pair of strong dark brown bristles. Two pairs of similar bristles on median lobe. Pleural integument uniformly a light fawn colour, pruinose. Posterior surface of *apn* with a number of small, broad, appressed scales, which are semi-transparent and a very light brown colour and hence difficult to see.

Similar but paler scales covering about upper one-half and posterior one-third of lower half of *stp*. No other pleural scaling. Pleural bristles dark brown on dorsal one-half of pleura, light fawn on ventral one-half; 3 strong *apn*, 1 weak *ppn*, 1 strong spiracular; about 16 delicate bristles on upper and posterior margins of *stp*, 1 strong alar, 5 delicate pale upper *msp*, 1 strong lower *msp*, 3 strong propleural. Mesopostnotum light yellow brown, bare, pruinose. Stems of halteres light brown, knobs dark brown scaled. *Wings:* length 1·94 mm. Dorsal wing scales dark brown on anterior veins, paler posteriorly. *R* 2·1 about 0·35 × length of *R* 2 + 3, *M* 1 + 2 about 0·78 of *M* beyond

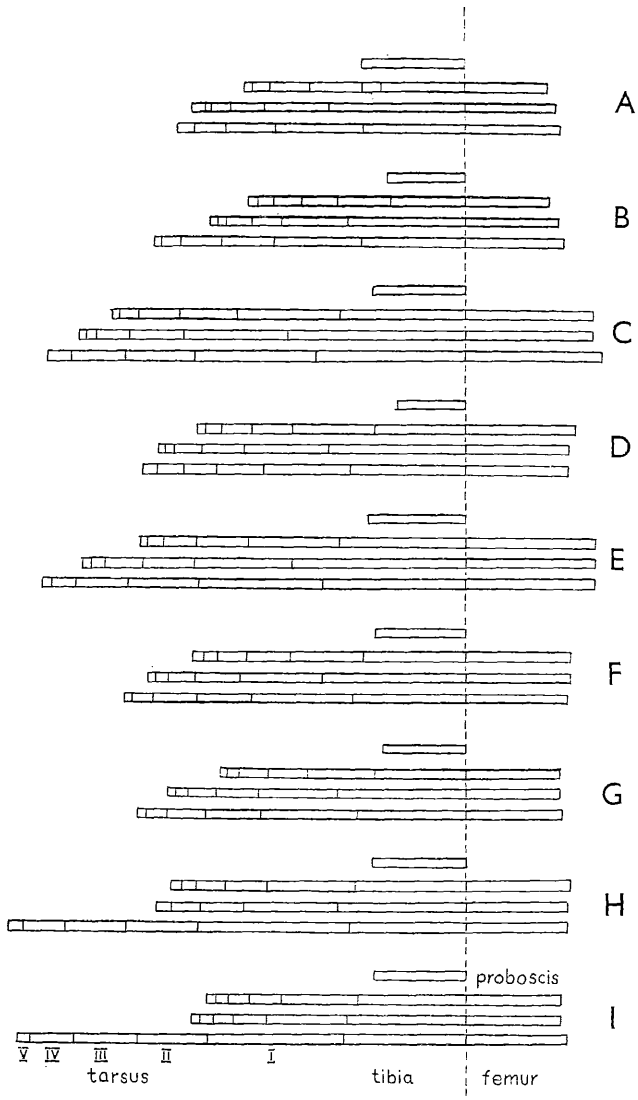

FIG. 3.—Diagram showing relative proportions of male legs and proboscis: (*A*) *Uranotaenia paralateralis* sp. n.; (*B*) *U. moresbyensis* Peters; (*C*) *U. amiensis* Peters; (*D*) *U. albosternopleura* Peters; (*E*) *U. novaguinensis alticola* Peters; (*F*) *U. paranovaguinensis* Peters; (*G*) *U. novaguinensis* Peters; (*H*) *U. diagonalis* Brug, 1934; (*I*) *U. hirsutifemora* sp. n.

m–cu. *Ufc* 0·66 of *lfc*. Posterior wing margin slightly concave between forks of vein *Cu*. Anal vein 6 meeting posterior almost at a right angle and nearer wing base than base of fork of *Cu*. Outstanding plume scales broadly oval and numerous on *R*1 and *M*. Well developed accessory veins *Cu* 2 and *Anal* 2. *Legs* (fig. 3): coxae and trochanters light fawn colour, with transparent scales on anterolateral surfaces (fore and midcoxae) or posterolateral surfaces (hind coxae). Fore coxae with about 6 strong dark bristles anterolaterally; midcoxae with 1 strong dark brown proximal and about 4 weaker and paler distal, lateral bristles; hind coxae with a row of about 7 dark brown,

fairly strong bristles on posterolateral margin Rest of legs with uniformly light brown scaling. *Fore leg:* femur slightly expanded, an anteroventral and posteroventral row of long hair-like bristles, about 12 in each row. Tibia with an anterior and a dorsal row of about 10 strong dark brown spines; posteriorly bristles from base to apex; 5 or 6 apical bristles. TI with about 5 such bristles at various positions around the shaft, 3 or 4 apical bristles and a posterior row of about 23 very short appressed spines. TII, III and IV with subapical spines. Claws black, very small, slender, equal. *Midleg:* femur broadly expanded on basal two-thirds, about 7 long hairs on middle three-fifths of dorso-anterior and ventro-anterior margins and a row of about 3 or 4 on ventro-posterior margin just distal to these; 15 minute appressed spines anteriorly and several short hairs sub-basally. Tibia with about 10 posterior and 10 more delicate anterior dark brown bristles, a strong apical bristle and 2 or 3 smaller ones. TI with about 10 strong bristles at various positions around the

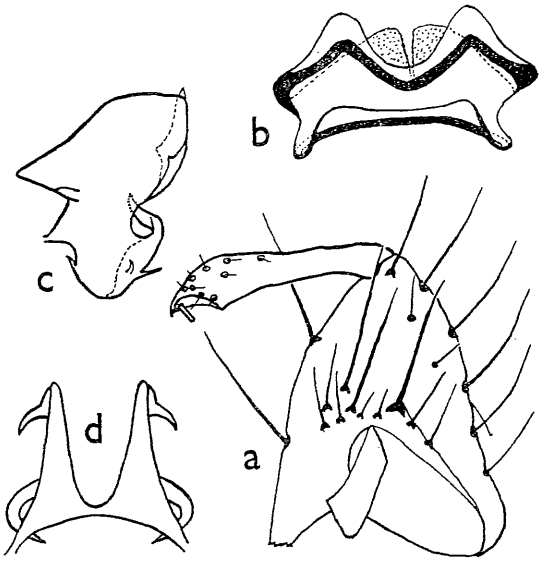

FIG. 4.—*Uranotaenia paralateralis* sp. n., male terminalia: (*a*) ninth tergite and proctiger, dorsal view; (*b*) coxite and style, inner lateral view; (*c*) mesosome, inner lateral view of one side; (*d*) mesosome, dorsal view.

shaft, II, III and IV with terminal spines; claws black, one enlarged but slender, the other small. *Hind leg:* femur slender with 2 apical spines, about 7 ventral and 2 slender short dorsal hairs. Tibia with about 5 long ventral and 7 shorter dorsal bristles, a number of long modified scales apically, 4 terminal spines and a well developed comb. TI longer than tibia, with about 10 short bristles at various positions around the shaft, 3 suberect bristles and about 6 suberect long modified scales apicodorsally, also a row of minute spines laterally from base to apex. TII to V missing from male holotype. *Abdomen:* tergites dark brown scaled, sternites light brown with a mauvish reflexion in certain lights, very hairy. *Terminalia* (fig. 6): ninth tergite very long and membranous with a long apical and 2 basal lateral, lightly-sclerotised bars. Proctiger with lateral sclerotised wings and a terminal membranous tongue thickened at its sides as figured. Coxite broad, basal lobe with about 8 strong bristles, distal medial surface and lateral surface with long bristles. Style as figured. Mesosome with 2 lateral toothed plates with a narrow dorsal bridge, about 5 strong spines in a medial group of 2 and a lateral group of 3. Parameres broadly expanded basally. A narrow medial lobe projecting distally from bridge of mesosome.

Female.—Generally similar to the male, except for sexual characters. Proboscis of single specimen broken. Leg characters as in male but in addition 3 or 4 anterior hairs on midfemur.

Larva and pupa.—Unknown.

Material Described

Holotype ♂, PAPUA: Port Moresby, Central District, 22.ii.1957 (*Dr. W. Peters*); *paratype* ♀ (allotype), PAPUA: Miwa, Fly River, Western District, 23.xi.1956 (*Dr. W. Peters*). Type specimens deposited in collection of Department of Entomology, C.S.I.R.O., Canberra, A.C.T.

NOTE ON THE *Uranotaenia diagonalis* GROUP

The peculiarities of wing venation and the proportions of the legs noted in *U. hir-*

sutifemora are found also in *U. papua* Brug, 1924 and *U. diagonalis* Brug, 1934. *U. papua*, as identified in our collection, has no long hairs on the femora but does have

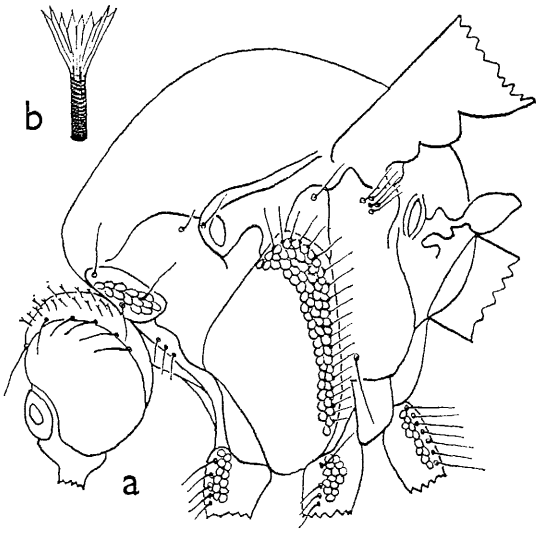

FIG. 5.—*Uranotaenia hirsutifemora* sp. n., male: (*a*) lateral view of head and thorax; (*b*) forked head scale.

the spines on the tibia and TI. The fore tibia has a posterior row of about 20 short dark spines and the hind, an anterior row of 20 or more very short semi-erect spines. In *U. diagonalis*, as we recognise this species, there are also no long hairs on the femora but about seven very short posterior and three or four anterior spines on the fore femur. It must be stated that in an extensive series of this group, consisting of captured adults and others associated with larval and pupal pelts, and through a careful study of the relevant literature, it has become increasingly uncertain whether we are dealing with two distinct species, *U. papua* and *U. diagonalis*, both of which exhibit considerable variation, or with only a single polymorphic species. Further studies of this species complex in various parts of its range of distribution and associated with larvae reared from various habitats are required to clarify this situation.

SYSTEMATIC STATUS OF THE NEW SPECIES

Belkin (1953) suggested that the Solomon Islands species of *Uranotaenia* fall into two of the groups designated by Edwards (1941), groups A and C. Belkin divided group A (which he preferred to call "section A") into sections A1 and A2, the first including *U. lateralis* Ludlow, 1905 (=*atra* sensu Belkin, 1953), *U. barnesi* Belkin, 1953 (of the *tibialis* group), *U. civinskii* Belkin, 1953, *U. solomonis* Belkin, 1953 and *U. sexauri* Belkin, 1953. Section A2 included only *U. wysockii* Belkin, 1953 and section C, *U. quadrimaculata* Edwards, 1929.

Of the new species described in Parts VII to IX of the present series, *U. hirsutifemora* can clearly be classified with section C and *U. paralateralis* is closely related to *U. lateralis* of section A1. *U. albosternopleura* Peters and *U. moresbyi* Peters have some affinities with section A1, but the former appears rather to belong to Edward's group B, in which there is no supra-alar stripe of pale scales, the ninth tergite is bare and not produced to form lateral angles and the mesosome plates have minute apical hooks or teeth. Since *U. hirsutifemora* has a large scale patch on the *stp*, the absence of pleural scaling other than on the *apn* cannot be considered a characteristic of section

C. It should be noted that the *U. diagonalis-papua* complex, on genitalic and other characters, also belongs to section C. The *U. novaguinensis* complex belongs to section A but it is likely that, as new members of this complex are defined, it will be necessary to erect a special subsection to contain them.

Notes on the Taxonomic Status of Other Species

Uranotaenia argyrotarsis Leicester, 1908

1908, Leicester, G. F., Cul. Malaya, *Stud. Inst. med. Res. F.M.S.* 3 : 214.

In his paper on species of *Uranotaenia* from the Solomon Islands, Belkin (1953) discussed the relationship between *U. civinskii* and the *U. argyrotarsis* complex of Malaya, the Philippines and New Guinea. We have examined the following material, which is apparently referable to *U. argyrotarsis*, and compared it with Belkin's description of *U. civinskii*:—

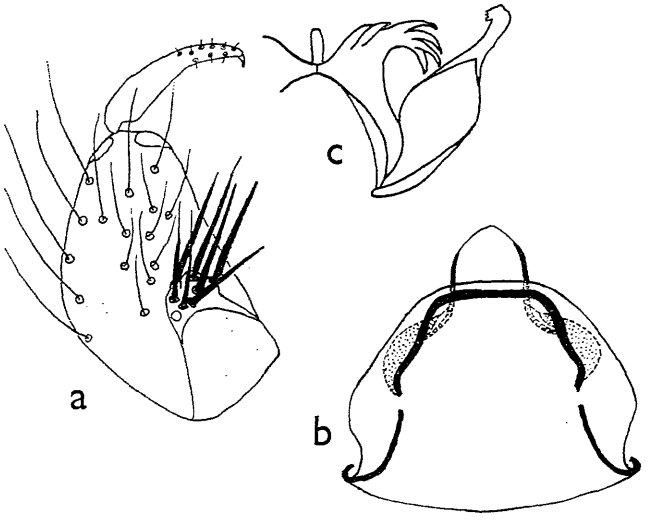

Fig. 6.—*Uranotaenia hirsutifemora* sp. n., male terminalia: (*a*) coxite and style, inner lateral view; (*b*) ninth tergite and proctiger, dorsal view; (*c*) mesosome and paramere of one side, dorsal view.

Larvae

Maprik (Sepik District). All specimens are as described for *U. civinskii*, and any variations in chaetotaxy fall within the range recorded for this species.

Manus (Admiralty Islands). All specimens agree with the description of *U. civinskii*, except that the siphon of our specimens is more heavily pigmented.

Pupae

Maprik.—All setal characters fall within the range recorded for *U. civinskii*.

Manus.—Setae 6–III (2b–vl, as long as two segments). Belkin gives 3–4b as the range but makes no mention of the unusual length. In this character Maprik specimens agree with *U. civinskii*.

Female.—The abdominal pale tergal markings are variable, but Manus specimens have I–IV extensively white whereas most Maprik specimens have from I to IV with a continuous pale median band but occasionally also some pale scales scattered on V. A single specimen has only pale scattered scales on IV. In all specimens hind leg TII is white at the extreme tip only.

Male.--The abdominal tergal markings are variable even within a single batch of reared specimens, but there is never any pale scaling on V. There are usually pale patches on I–IV. Two Manus specimens are pale on III and IV only. Two specimens from Cairns (Queensland) are pale on I–IV. Hind leg TII is white at the extreme tip only in all specimens. Specialised setae on the hind tibia are as described for *U. civinskii* in specimens from Manus and Cairns. In the Maprik specimens these are one long curved, one medium straight and one shorter straight bristle. In other respects the males and females agree with the description given of *U. civinskii*, except for the male terminalia.

Terminalia.—Terminalia from Maprik, Manus and Cairns specimens (fig. 7) are identical. The ninth tergite, proctiger, coxite and style are similar to those of *U. civinskii* but the mesosome differs as follows: three extra distal teeth on the lateral plates, very small, pointed mediad. Large apical and basal teeth both situated laterally and pointing ventrally.

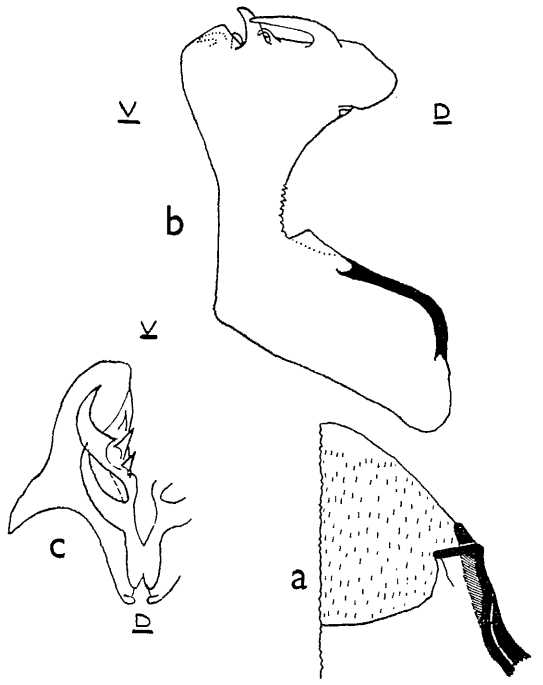

FIG. 7.—*Uranotaenia argyrotarsis* Leicester, 1908, male terminalia: (*a*) right side of ninth tergite (apical lobe) and proctiger from dorsal view; (*b*) mesosome plate, outer lateral view; (*c*) mesosome viewed from caudal end.

We have no specimens of *U. argyrotarsis* from Malaya or the Philippines with which to compare the terminalia, nor any accurate figures of these. As seen in Maprik, Port Moresby and Cairns, the *U. argyrotarsis* group appears to be represented by a single species, as far as can be judged from a limited number of specimens, and these differ from Manus specimens only in seta 6–III of the pupa and the darker larval siphon. All New Guinea and Australian specimens that we have seen differ from the description of *U. civinskii* in that both males and females have the hind leg TII white at the extreme tip only and in the males the mesosome appears to be distinct. Dr. E. N. Marks (*personal communication*) has noted that female specimens from Kavieng (New Ireland) and Madang (Madang District) as well as a male from Lae (Morobe District) appear to agree with the description of *U. civinskii*, but that the larvae and pupae associated with these have yet to be examined more closely. In conclusion, our obser-

vations would appear to confirm Belkin's establishment of *U. civinskii* as a distinct species from those seen in New Guinea west of the island of Bougainville, but further study is indicated to establish the identity of the mainland forms with *U. argyrotarsis* sensu stricto.

Uranotaenia albescens Taylor, 1914

1914, Taylor, F. H., *Trans. ent. Soc. Lond.* **1913** : 705.

Pupa (fig. 8).—The pupa described and figured by Penn (1949) does not belong to this species but is possibly that of a species in the *tibialis* group and is very similar to

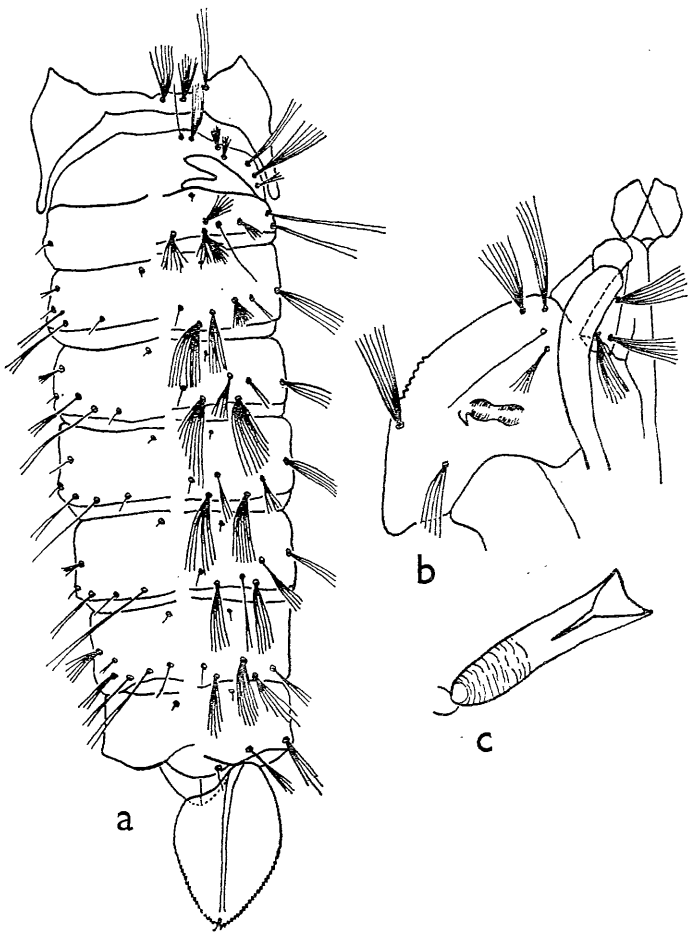

FIG. 8.—*Uranotaenia albescens* Taylor, 1914, pupa: (*a*) metathorax and abdomen (right side dorsal, left ventral); (*b*) cephalothorax; (*c*) respiratory trumpet.

that described for *U. paranovaguinensis* Peters in part VII of this series. In a comparison of one male and two female pupal pelts from Maprik and one female pelt from Yorkey's Knob (Queensland), we have found that the only apparent differences between these and that described by Belkin (1953) for *U. solomonis* Belkin, 1953, are as follows:—

Larva.—Eighteen larvae from Maprik and one from Queensland all fall within the range of variation of *U. solomonis*, except that Maprik specimens have saddle seta 4a with two instead of the three branches seen in *U. solomonis* and the Queensland form.

	No. of branches in specimens from:—		
	Maprik	*Queensland*	*Solomons* (*U. solomonis*)
Cephalothorax			
seta 10 . .	4, 5	4–6	2–4
seta 11 . .	4–7	4–6	4–6
Abdomen			
seta 5–III . .	3–10	7–9	3–8
seta 6–III . .	2–6	2–4	2–4
seta 5–V . .	7	7	4–6
seta 3–VIII .	5–8	3–6	3–6

Adults.—Specimens from north Queensland have only a narrow line of pale scales on the *apn* as in *U. solomonis* and not (as Belkin implies) a broad covering of pale scales on this lobe, as was suggested by Taylor. Two females from Yorkey's Knob and Ingham (N. Queensland, coll. E. N. Marks) have no pale scales on tergite IV and the apical one-third only of the hind leg TIII is white. A male from Townsville (Queensland, coll. O'Gower) has extensive pale scaling covering the dorsal surface of tergites I and II, the apical three-fourths of III, the apical one-half of IV and V and the apical one-third only of the hind leg TIII is white. Among the New Guinea specimens one male (Sogeri, Central District) has pale scales on the apical one-half only of tergite III, none on IV, a narrow apical band only on V. Maprik specimens have tergal scaling variable on III (from one-half to the entire segment), IV (nil to one-half the segment) and V (one-half the segment to a narrow band). The apical pale area occupies a maximum of one-third of the hind leg TIII. The male terminalia in all the specimens examined are indistinguishable from those of *U. solomonis*.

Without an examination of the type series of *U. solomonis*, one cannot be dogmatic about the absence of differences between the male terminalia of this species and *U. albescens* as the latter is recognised in north Queensland and New Guinea. It appears, however, most likely that *U. solomonis* should be treated as a geographical variation or subspecies of *U. albescens* and not as a distinct species, the only constant difference in the adults being apparently in the pale markings of hind leg TIII. There are also a few minor setal variations in the larvae and pupae as noted above. The larva described by Lee (1944) from Milne Bay is not referable to any specimens we have seen of *U. albescens* and is also different from *U. solomonis* as described by its author.

Revised Checklist of the South Pacific Species of *Uranotaenia*

The following list includes all the described species listed by Iyengar (1960), plus those described in the present series of papers, but not their distribution outside the South Pacific. The species groups refer to groups A to D of Edwards (1941), supplemented by the subsections A1 and A2 of Belkin (1953). Within these divisions species associations are indicated by brackets. The following abbreviations are employed:—

A = Admiralty Islands
DE = D'Entrecastaux Islands
L = Louisiade Archipelago
NB = New Britain
NG = New Guinea, mainland (M=Maprik area) (NGH=highlands)
NI = New Ireland (NS=Nissan Island)
NNG = Netherlands New Guinea (H=Hollandia area)
P = Papua, mainland (PM=Port Moresby)
Q = Queensland
SI = Solomon Islands (G=Guadalcanal)

Species group	Species and author	Type locality	Distribution
A1	*tibialis* Taylor, 1919	Cairns	Q, ? NG, ? New Hebrides
	(? = *antennalis* Taylor, 1919)	Cairns	Q, ? NG
	barnesi Belkin, 1953	SI (G)	SI
	fimbriata King & Hoogstraal 1946	NNG (H)	NNG, DE
	neotibialis K. & H. 1946	NNG (H)	NNG
	setosa K. & H. 1946	NNG (H)	NNG, NG (M)
	subtibioclada K. & H. 1946	NNG (H)	NNG
	tibioclada K. & H. 1946	NNG (H)	NNG, NG (M)
	paranovaguinensis sp. n.	NG (M)	NG, P
	novaguinensis sp. n.	NG (M)	NG, P
	novaguinensis alticola ssp. n.	Goroka	NGH
	albescens Taylor, 1914	Q (Townsville)	Q, P, NG, ? NB, ? NI
	albescens solomonis Belkin, 1953	SI (G)	SI
	argyrotarsis Leicester, 1908	Kuala Lumpur	Q, P, NG, A
	civinskii Belkin, 1953	SI (G)	SI
	pygmaea Theobald, 1901	Q (Burpengary)	Q
	moresbyensis sp. n.	P (PM)	P
	albosternopleura sp. n.	NG (M)	NG
	nivipes (Theobald) 1905	Q	Q, ? NG
	sexauri Belkin, 1953	SI (G)	SI, ? NG
	lateralis Ludlow, 1905 (=*atra* Theobald, 1905)	Philippines	Q, NG, NNG, NB, NI, SI
	paralateralis sp. n.	NG (M), Kavieng	NG, NI
A2	*wysockii* Belkin, 1953	SI (G)	SI
B	*amiensis* sp. n.	NG (M)	NG, DE
C	*atra* Theobald, 1905 (=*nigerrima* Taylor, 1914)	NG (Muina)	NG, P, NNG, NB, NI (NS)
	quadrimaculata Edwards, 1929	SI (G)	SI
	hirsutifemora sp. n.	P (PM), Fly R.	P
	papua Brug, 1924	NNG (Pionierbivak)	NNG, NG
	diagonalis Brug, 1934	NNG (Tanah Merah)	NNG, P, NB, NI, L
? C	*colocasiae* Edwards, 1928	Ovalau I.	Fiji, ? Marianas
	painei Edwards, 1935	Taveuni I.	Fiji

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