

VI. Culicidae from Papua. By FRANK H. TAYLOR,
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PLATES XVII, XVIII.

THE mosquitoes of Papua have, up to the present, received but scanty attention from collectors, only nine species being recorded.

The fact that there is so little known of Papuan mosquitoes has enabled us to describe one new genus and fourteen new species and record seven previously known forms as occurring in the Territory.

The specimens taken by Dr. Breinl were collected on the occasion of a two months' expedition during July and August, when several districts were visited.

Through the courtesy of Dr. Giblin we obtained a collection in a perfect state of preservation; these mosquitoes were collected by him whilst Medical Officer at the Lakekamu Gold Fields.

We are greatly indebted to Dr. Giblin for presenting this interesting collection to the Institute.

Some of the specimens obtained by Dr. Breinl were bred from larvae.

We hope, as opportunity offers, to make a complete mosquito survey of Papua.

Nyssorhynchus annulipes, Walker.

Anopheles annulipes, Walker.

„ *musivus*, Skuse.

„ *musicus*, Giles.

Ins. Saund., I, p. 433 (1850); Skuse, Proc. Linn. Soc. N.S. Wales, III, 2nd series, p. 1754 (1888); Giles, Handbook, Gnats, 2nd ed., p. 313 (1902); Theobald, Mon. Culicid., I, p. 164 (1903); III, p. 104 (1903); IV, p. 97 (1907); V, p. 57 (1910); Taylor, Bull. I. Nor. Terr. Rep. p. 55 (1912).

Additional Localities. PAPUA, Lakekamu Gold Field (Dr. Giblin), Mekeo District (Dr. Breinl).

Cellia punctulata, Dönitz.

Anopheles punctulatus, Dönitz.

„ *tessellatum* (nom. nud.), Theobald.

Myzomyia punctulata, Dönitz—Giles.

Nyssorhynchus punctulatus, Dönitz—Blanchard.

Insekten-Borse, XVIII, p. 372 (1901); Theobald, Mon. Culicid., I, p. 175 (1901); Giles, Handbook, Gnats, 2nd ed., p. 287 (1902); Giles, Revis. Anop., p. 33 (1904); Blanchard, Les Moust., p. 208 (1905); Theobald, Ann. Mus. Nat. Hung., III, p. 68 (1905); Mon. Culicid., IV, p. 109 (1907); V, p. 71 (1910).

Additional Localities. PAPUA, Mekeo District (*Dr. Breinl*), Lakekamu Gold Field (*Dr. Giblin*).

Time of Capture. Mekeo District, August 1912, Lakekamu, 18/10/10.

Observations. The thoracic markings of this species are somewhat variable, but the position of the dark patches of scales and the fork-cells remain constant.

NEOSQUAMOMYIA, n. g.

Head clothed with flat and upright forked scales; clypeus with loosely applied large broad scales; palpi longer than the proboscis, of ♀ about one-fifth as long; proboscis slender, not as long as body.

Thorax with narrow curved scales, broad flat and narrow curved ones on the prothoracic lobes; scutellum with flat scales and narrow curved ones at the base of the lobes. Wings with the first submarginal cell longer than the second posterior cell. Abdomen clothed with large closely applied flat scales.

This forms a very distinct and marked genus easily recognised by its scaled clypeus and long ♂ palpi. The ♂ genitalia are also peculiar, the basal lobes and claspers each possessing a comb composed of very stout teeth.

Neosquamomyia breinli, n. sp.

(Plate XVII, figs. 1-3.)

Head dark brown. Thorax dark brown with narrow curved scales. Abdomen black. Legs black, unbanded.

♀. Head dark brown densely clothed with flat brown scales (with a steel-blue lustre in some lights), a fringe of large white flat scales round the eyes expanding laterally into a patch, a short narrow line of flat white ones on the occiput, and black upright forked ones on the nape; eyes black with a thin fringe of black

chaetae bordering them with two projecting between the eyes; clypeus blackish with large broad white loosely applied flat scales; proboscis clothed with small black scales, slightly hairy; palpi light brown clothed with black scales and a few fairly long dark brown chaetae to the first and second segments, three-jointed, the second longer than the first and third together, apical segment very small and nipple-like; antennae blackish brown, fourteen-jointed, with long black verticillate hairs and fairly densely covered with short hairs on the internodes, basal half of second segment pale, basal lobe brown covered with small dark scales on inner edge and pure white ones beneath.

Thorax brown clothed with dark brown narrow curved scales, anterior margin with a thin border of pure white narrow curved scales and dusky brown bristles, prealar bristles black, fairly dense above the roots of the wings, a patch of white spindle-shaped scales above the roots of the wings; prothoracic lobes prominent, brown, clothed with brown narrow curved scales and white flat ones with a few dusky brown bristles; scutellum brown clothed with dusky flat scales and a few narrow curved ones at the base of the lobes, mid lobe with six brown posterior border bristles, lateral lobes with seven; metanotum brown.

Abdomen pale brown clothed with blackish scales, first segment with numerous fairly long brown hairs, posterior border hairs short, brown, those on the lateral edges of the fifth and sixth segments moderately long and conspicuous, seventh segment with an apical band of white scales, eighth with a few grey scales, last two segments with numerous light brown hairs, segments three to seven with white lateral spots; venter, first segment white scaled, segments two to five white scaled with apical blackish brown bands expanding laterally, segments six and seven white with apical and basal blackish brown banding, last two segments creamy yellow, segments six to apex fairly densely clothed with brownish hairs.

Legs black, with steel blue reflections in some lights; coxae and trochanters yellowish brown with numerous closely applied flat white scales, the former with a line of brown chaetae; femora densely clothed with white flat scales beneath; fore and mid ungues unequal, each with a small tooth, hind equal, each uniserrate.

Wings with the costa black, veins clothed with blackish scales, border scales lanceolate and linear, median flat; first fork-cell longer and narrower than the second fork-cell, base of the latter nearer the base of the wing than that of the former; stem of the first fork-cell about three-quarters the length of the cell, that of the second fork-cell almost as long as its cell; posterior cross-vein scarcely longer than the mid and nearly its own length distant

from it. Halteres with basal half of stalk creamy white, remainder black scaled.

Length 6 mm.

♂. Similar to ♀. Antennae plumose, about two-thirds as long as the proboscis, fifteen-jointed, segments three to thirteen with apical half pale, basal half and the whole of the last two segments brown, the apical segment with long dark brown basal hairs, penultimate segment with the basal third nude; palpi longer than proboscis, four-jointed, second very long, third and fourth with short sparse hairs on the inner margin, longer on the third, apical segment with two fairly long apical chaetae; proboscis slightly more hairy than in the ♀; abdomen with venter densely clothed with hairs; genitalia heavily clothed with dark brown hairs; the basal lobes bear, towards the centre of their inner margin, a small comb composed of strong brown, blunt chitinous teeth, which become gradually shorter towards the posterior end of the lobe; the apical half of the clasper also bears a similar comb in which the teeth gradually increase in length towards the apex of the clasper; wings not as densely scaled as in the ♀; ungues of fore legs very unequal, the smaller thin, the larger stout, about twice the length of the smaller, with a fairly large tooth, mid ungues unequal, slight, each with a small tooth, hind equal and rather small, the inner with a small tooth.

Length 5.5 mm.

Habitat. PAPUA, Milne Bay (*Dr. Breinl*), Mungana (*Dr. Giblin*).

Time of Capture. July (Milne Bay), 2/7/10 (Mungana).

Observations. Described from ♂ and ♀ specimens bred by Dr. Breinl from larvae taken from pools and hollow logs in the vicinity of native villages. It is a very marked species, easily distinguished by the scaled clypeus, long ♂ palpi, and the ungues of ♀.

Stegomyia fasciata, Fabricius.

Syst. Antliatorum, 36, 13 (1805); Rob. Desvoidy, Mem. Soc. d'Hist. Nat. d. Paris, III, p. 406, 14; p. 407; p. 408 25 (1827); Theobald, Mon. Culicid., V, p. 158 (1910).

Habitat. PAPUA, Milne Bay.

Time of Capture. July 1912.

Stegomyia scutellaris, Walker.

Culex scutellaris, Walker.

,, *variegatus*, Doleschall (*nec* Schrank).

,, *albopictus*, Skuse.

Journ. Proc. Linn. Soc., London, III, p. 77 (1859);
Doleschall, Naturg. Tijds., V, Ned. Ind., XVII, p. 77
(1858); Skuse, Ind. Mus. Notes, III, p. 5, 20 (1895);
Theobald, Mon. Culicid., V, p. 155 (1910).

Habitat. PAPUA, Lakekamu Gold Field (*Dr. Giblin*).

Stegomyia ornata, n. sp.

Head black, clothed with iridescent scales and black upright forked ones. Thorax yellowish brown. Abdomen pale brown, unbanded. Legs brown, black, scaled.

♂. Head black with flat black iridescent scales, azure blue in some lights, and numerous black upright forked ones; eyes black, border bristles dark brown, two bristles projecting over the eyes from the centre; antennae brown, with a pale apical ring to the segments, except the second and last two segments, basal lobe testaceous; clypeus brownish; palpi black scaled; proboscis black, long and slender, unbanded.

Thorax yellowish tinged with brown, clothed with brown narrow curved hair-like scales with a few brown flat ones over the wing roots; scutellum yellowish, paler than the thorax, clothed with brown flat scales; metanotum dark brown; prothoracic lobes yellowish, prominent, clothed with brown flat scales and a few brown hairs; pleurae yellow with a brown patch above the coxae, a few scattered white flat scales on the brown area.

Abdomen yellowish brown clothed with dusky brown scales, penultimate segment brown with its apex and last segment fairly densely covered with pale hairs; venter darker than dorsal surface covered with blackish brown scales.

Legs brownish, unbanded, clothed with black iridescent scales, violet in some lights; fore unguis unequal, the larger moderately stout with a strong tooth, mid and hind wanting.

Wings with the veins clothed with dark scales, the lateral ones rather broad; first fork-cell scarcely longer and slightly narrower than the second, base of the latter nearer the base of the wing; stem of first fork-cell about three-quarters the length of its cell; stem of the second about two-thirds the length of its cell; mid cross-vein parallel to the posterior cross-vein, the latter longer than and about one and a half times its own length distant from the former. Halteres with the stalk and knob black.

Length 4.5 mm.

Habitat. PAPUA, Milne Bay.

Observation. Described from a single specimen taken by

Dr. Breinl. It would come after *S. argenteopunctata*, Theobald, in his table of species.*

Stegomyia atra, n. sp.

(Plate XVII, fig. 4.)

Head black with black flat scales. Thorax black with brown spindle-shaped scales; scutellum grey scaled; pleurae with dense pure white scales. Legs black.

♀. Head black, covered with black flat scales (grey in some lights) and a patch of creamy white upright forked ones in the centre of the base and black ones on each side with a narrow border of white flat ones round the eyes expanding laterally; eyes black, fringe dusky brown with two brown bristles overhanging the eyes from the centre; antennae brown, covered with grey pile, second and third segments swollen, the second more so than the third, densely clothed with dusky pile, basal lobe black with apical half grey; clypeus black with the apical half grey; palpi densely clothed with closely applied black scales, apical third pale scaled above.

Thorax black, clothed with brown and black spindle-shaped scales with a median patch on the anterior border of mixed white narrow curved and spindle-shaped scales, and a border of dusky brown bristles; prothoracic lobes prominent, black, clothed with narrow curved flat white scales and dark brown bristles, a lateral row of dark brown bristles densest above the wing roots; scutellum dark brown with a narrow black basal edge clothed with pale brown flat scales, in some lights they are mostly blue-black; pleurae brown entirely covered with densely packed pure white flat scales.

Abdomen light brown, densely clothed with blue black flat scales, unbanded, posterior border bristles pale, very short, those on last two segments brown, long and dense, the first segment with numerous fairly long pale bristles in addition to the blue black scales; venter densely clothed with white flat scales.

Legs: coxae and trochanters light brown; femora white scaled beneath nearly the whole length, blue-black above; tibiae and tarsi of fore, mid and hind legs clothed with blue-black scales with violet reflections except tarsi three to five of mid and hind legs which are brownish with yellowish reflections; unguis equal and simple.

Wings with the veins covered with dark brown scales, the costa blue black; fringe brown; veins clothed with lanceolate and flat scales; first fork-cell longer and narrower than the second, base of

* Theobald, Mon. Culicid, V, 144 (1910).

the former nearer the base of the wing than that of the latter; stem of the first fork-cell one-third the length of the cell, stem of the second about half the length of its cell; posterior cross-vein longer than the mid cross-vein and about twice its own length distant from the mid; base of the marginal cell comparatively broad; second incassation (Austen's sixth vein) very distinct. Halteres with base of stem fuscous, rest clothed with blue black scales.

Length 4.5-5.5 mm.

Habitat. PAPUA, Lakekamu Gold Field, Mungana.

Time of Capture. 29/6/10 (Mungana).

Observations. Described from three ♀ specimens taken by Dr. Giblin. It is a very distinct species owing to the absence of abdominal and leg banding.*

Scutomyia notoscripta, Skuse.

Proc. Linn. Soc. N.S. Wales, III, 2nd series, p. 1738 (1888); Theobald, Mon. Culicid., I, p. 286 (1901); III, p. 145 (1903); IV, p. 198 (1907); Baneroff, Ann. Q. Mus., No. 8, p. 24 (1908).

Habitat. PAPUA, Milne Bay.

Time of Capture. July 1912.

Observations. These specimens agree with Skuse's type in all details. The ungues of the mid legs are uniserrate in this species and not simple as stated by Theobald.

Lepidotomyia lineatus, n. sp.

Head with flat scales all over and narrow curved scales bordering the eyes. Thorax black clothed with narrow curved scales. Abdomen with median bands to the segments. Legs unbanded.

♀. Head black covered with flat brown scales with a median line and lateral patches of creamy flat ones, a narrow fringe of narrow curved ones bordering the eyes, border bristles dark brown, two golden yellow ones overhanging the eyes from the centre; eyes black, purple tinted; clypeus black; palpi black scaled and with short black hairs; proboscis slender, clothed with dusky brown scales; antennae brown, clothed with whitish pile, verticillate

* It has been suggested to me, since the above was written, that this insect is most probably *Skusea similis*, Theobald. In *S. similis*, *inter alia*, the scutellum is clothed with *narrow-curved* scales, while in *S. atra* it is entirely clothed with *flat ones*. A sufficient character to render the two insects distinct. The abdomen of *S. similis* possesses median white lateral spots, in *S. atra* it is devoid of all ornamentation.

hairs dark brown, second segment basally yellow, long, about one and a half times as long as the third segment, basal lobe dull golden yellow.

Thorax dark brown, paler above the prothoracic lobes, densely clothed with brown narrow-curved hair-like scales mixed with a few scattered yellowish ones on the posterior end; a median and two lateral lines (one on each side) of golden yellow narrow curved hair-like scales extending the whole length of the thorax, a lateral border of golden bristles dense in front of and above the roots of the wings; prothoracic lobes prominent, brown densely clothed with golden bristles; scutellum clothed with narrow curved brown scales, the mid lobe black, lateral lobes brown, mid lobe with five brown border bristles and lateral lobes with seven, four in front and three behind.

Abdomen black, clothed with densely applied dusky brown scales, first segment clothed with numerous brown bristles in addition, second segment with basal, lateral and median pale creamy white spots with a few scattered basal pale scales, segments three to six with white median bands, on segments two and three the centre of the bands is produced into a conspicuous patch, segment seven with a broad median lateral patch; posterior border bristles pale and short; venter fairly densely covered with short pale hairs with second segment densely covered with white scales, segments three to seven white-scaled with apical brown bands, penultimate and apical segments brown scaled.

Legs black, coxae and trochanters brown, femora white scaled beneath, tarsi of fore, mid and hind legs black except fifth tarsi of hind legs which are dark brown; ungues of fore, mid and hind legs equal and simple.

Wings with the costa, subcostal and first longitudinal veins covered with blue black scales with violet reflections, remaining veins clothed with short brown lateral lanceolate and small median broad scales; first fork-cell longer and narrower than the second, base of the former slightly nearer the base of the wing than that of the latter; stem of the first fork-cell half the length of its cell, stem of the second about two-thirds the length of the cell; posterior cross-vein longer than the mid cross-vein and about its own length distant from it; second and third incassations fairly distinct. The wing has a naked appearance on account of the smallness of the vein scales. Halteres, stem yellowish brown, knob dusky.

Length 5 mm.

Habitat. PAPUA, Lakekamu Gold Field and Mekeo District.

Observations. Described from specimens taken by Dr. Giblin and Dr. Breinl.

It is easily distinguished from *L. magna*, Theobald, by the absence of the white scales on the mesonotum and the leg banding.

The wing venation, the squamose character of the head, *inter alia*, are sufficient to separate this insect from undoubted specimens of *Skusea funerea*, Theob., in the collections of the Australian Institute of Tropical Medicine.

Leucomyia australiensis, Theobald.

var. *papuensis*, var. nov.

(Plate XVII, fig. 5.)

Head brown, with scattered brown and pale scales and black upright forked ones; proboscis brown. Thorax ochraceous, the front two-thirds with silvery white scales, the third with brown ones. Abdomen with deep brown scales and basal banding to some of the segments. Legs black scaled and basal banding to hind tarsi. Wings with dark brown scales.

♀. Head brown with scattered brown and creamy narrow curved scales and black upright forked ones, a patch of white narrow curved ones in the centre extending between the eyes; eyes black with a thin fringe of brown hairs overhanging them; antennae dark brown clothed with fairly dense short brown pile; palpi clothed with black scales; proboscis black scaled; clypeus black.

Thorax ochraceous with the front two-thirds densely clothed with white narrow curved scales, the hind third with brown narrow curved ones and a narrow edge of brown ones to the sides, a row of dense dark brown hairs on the sides extending from the scutellum to mid-way between the wing roots and the prothoracic lobes, the latter with narrow curved brown scales and numerous brown hairs; scutellum ochraceous with brown narrow curved scales (pale in some lights); metanotum ochraceous: pleurae brownish with patches of white flat scales.

Abdomen brownish black scaled with violet tints in some lights, and white basal banding to most of the segments; first segment brown scaled with golden brown chaetae; segments two to five with white basal banding, segments six and seven with white lateral patches; penultimate and apical segments black scaled, posterior border bristles pale golden brown; segments two to seven with white lateral spots; venter brown scaled; segments five to eight with white lateral patches, the patch on eighth segment the

smallest, a few scattered pale golden bristles mostly on the lateral edges.

Legs black; femora pale scaled beneath, coxae and trochanters ochraceous; knee joint pale; first and second tarsi of fore legs with narrow white basal bands; first to third tarsi of mid legs with white basal banding; tarsi of hind legs with broad white basal banding; unguis of fore and mid legs equal each with a small tooth; hind unguis equal and simple, straighter than those of fore and mid legs.

Wings with the veins covered with dark brown scales, lateral ones linear, median small and flat; costa black; first fork-cell narrower and scarcely longer than the second fork-cell, base of the latter nearer the base of the wing than that of the first fork-cell, stem of the latter about three-quarters the length of its cell, that of second fork-cell about half the length of its cell; mid cross-vein longer than the supernumerary, the posterior as long as the mid, sloping forwards and about half its length distant from it; fringe brown. Halteres, the stalk pale with the knob black scaled.

Length 5 mm.

Habitat. PAPUA, Milne Bay (*Dr. Breinl*).

The above mosquito differs from *L. australiensis*, Theob., mainly in the leg banding, wing venation and the absence of mottled scales on the wing. Until further material comes to hand it is proposed to retain it as a variety of *L. australiensis*, Theobald.

Leucomyia? albitarsis, n. sp.

Head brown. Thorax brown with mostly brown scales. Abdomen dark brown scaled with basal banding and lateral white spots. Legs dusky brown with basal white banding.

♀. Head brown, clothed with white narrow curved scales in the centre and brown narrow curved and flat white ones on the sides, with numerous black upright forked ones at the sides and on the nape, and dark brown frontal chaetae; antennae brown with dark brown verticillate hairs and whitish pubescence to the internodes, basal lobe and basal half of second segment yellowish brown; palpi pale clothed with dark brown scales; clypeus dark brown; proboscis black scaled.

Thorax brown clothed with narrow curved brown hair-like scales and a median line of pure white ones extending from the anterior margin to the level of the roots of the wings, a lateral border of brown bristles on each side of mesothorax, densest above the roots of the wings; scutellum brown clothed with white narrow curved

scales, the base of the mid lobe clothed with brown narrow curved ones with six dark brown posterior border bristles to the mid lobe, and four to the lateral lobes; prothoracic lobes brown clothed with *white flat* scales and brown bristles; pleurae brown clothed with patches of flat white scales and scattered brown bristles; metanotum light brown.

Legs black scaled; coxae and trochanters pale brown with a patch of white flat scales to each coxa; fore femora brown scaled, a narrow line of white scales beneath, femora of mid and hind legs black scaled with the basal half white scaled beneath, fore, mid, and hind femora each with a narrow basal white band; tibiae black scaled; first and second tarsi of fore and mid legs basally banded white, remaining tarsi black scaled, first to fourth tarsals with white basal banding, fifth black scaled; ungues of fore, mid and hind legs equal, uniserrate.

Abdomen black scaled; first segment clothed with numerous brown bristles with a patch of brown scales in the middle of which is a narrow line of pale ones; segments two to five basally banded white; segments three to seven with lateral white basal patches, penultimate and apical segments black; venter dark scales with basal white banding.

Wings with the veins covered with brown scales; the costa and first longitudinal vein black; fringe brown; first fork-cell longer and narrower than the second, base of the latter nearer the base of the wing than that of the former; stem of the first fork-cell about the length of its cell, stem of the second nearly the length of the cell; mid cross-vein longer than the posterior cross-vein, the latter about half its own length distant from the former and nearer the apex of the wing than the mid cross-vein. Halteres stems creamy yellow, knobs dusky with a few small white flat scales.

Length 4.5 mm.

Habitat. PAPUA, Lakekamu Gold Field.

Observations. Described from a single ♀ taken by Dr. Giblin. Though not entirely agreeing with the generic description it was thought best to place it in the genus *Leucomyia* for the present. It is easily recognised by its thoracic markings and the position of the posterior cross-vein.

Culicelsa vigilax, Skuse.

Culex vigilax, Skuse (*nec* Theobald).

„ *marinus*, Theobald.

Proc. Linn. Soc. N.S. Wales, III, 2nd series, p. 1731 (1888); Theobald, Mon. Culicid., I, p. 369 (1901); III, p. 178 (1903); IV, p. 382 (1907); V, p. 317 (1910).

Additional Localities. PAPUA, Mekeo District (*Dr. Breinl*); Sabai Island, Torres Straits (*T. A. Williams*).

Culicelsa annulirostris, Skuse.

(Plate XVII, fig. 6.)

Proc. Linn. Soc. N.S. Wales, III, 2nd series, p. 1737 (1888).

Additional Locality. PAPUA, Lakekamu Gold Field.

Time of Capture. 20/10/10 (*Dr. Giblin*).

Culicelsa annulirostris, Skuse.

var. *milni*, var. nov.

(Plate XVIII, figs. 7-8.)

Thorax black with pale narrow scales. Abdomen with black scales, basal bands of pale creamy white. Legs with dusky brown scales, femora pale beneath.

♀. Head dark brown with creamy white narrow curved scales, a small lateral patch of flat creamy white ones and creamy yellow and brown upright forked ones at the base; antennae brown, second segment dark brown, basal lobe black; eyes purplish black with a fringe of pale yellowish hairs and a few overhanging them from the centre; palpi black scaled; proboscis black with a narrow white band in the middle, in some lights the band appears to be creamy; clypeus brown.

Thorax black densely covered with mixed creamy white and pale brown narrow curved scales with three rows of pale yellowish bristles on each side, brown above the roots of the wings; prothoracic lobes brown, prominent, with pale narrow curved scales and yellowish bristles; scutellum light brown clothed with whitish narrow curved scales with five brownish bristles to the mid lobe and three to each of the lateral lobes; metanotum brown; pleurae brown with patches of white flat scales.

Abdomen pale black scaled, truncate at apex; the base of each segment with a band of creamy white scales expanding in width towards the centre of segments two to six; posterior border bristles pale yellow; venter pale yellowish fairly densely covered with yellowish hairs and with black scales with broad white basal bands which expand laterally, last two segments unbanded, the penultimate with white lateral spots.

Legs: coxae and trochanters pale brown clothed with white scales; femora black scaled above, mottled with brown and white scales beneath, the latter predominating; knee joint creamy; tibiae black scaled with a narrow apical creamy white band; tarsi black scaled first and second of fore legs basally banded white with a trace of banding on the third, first three of mid and hind legs basally banded white; ungues equal and simple.

Wings densely covered with blackish scales; costa black; first fork-cell longer and narrower than the second, the base of the latter slightly nearer the base of the wing than that of the former; stem of first fork-cell about two-thirds the length of its cell, that of second fork-cell a little more than half the length of its cell; mid cross-vein longer than the posterior cross-vein, the latter sloping forwards and about twice its length distant from the mid cross; fringe dusky. Halteres with pale stem and dusky knob.

Length 4.5 mm.

♂. Head dark brown with white narrow curved and brown upright forked scales and flat white ones on the sides; eyes black, fringe dark brown; antennae pale, plumes black with the nodes dark brown, basal lobes brown, penultimate and apical segments brown, very long about half the length of the whole; palpi longer than the proboscis densely covered with black hairs from the apical third of first joint, black scaled, first joint with a band of creamy white scales at the base of the apical third, second and apical joints basally banded creamy white the last joint apically banded also; proboscis black scaled with a narrow white scaled band a little in front of the middle. Abdomen with banding less distinct than in the ♀, scales blacker; venter densely covered with pale brown hairs; wings similar to ♀ but less densely scaled; first fork-cell longer and narrower than the second, stem of the former nearly as long as the cell, that of the latter about two-thirds the length of its cell; posterior cross-vein longer than the mid and twice its own length distant from it. Ungues of fore and mid legs very unequal, uniserrate, hind equal and simple.

Length 4 mm.

Habitat. PAPUA, Milne Bay (*Dr. Breinl*).

Culex fatigans, Wiedemann.

Auss. Zweiflug. Ims., 10 (1828); Theobald, Mon. Culicid., II, p. 151 (1901); V, p. 383 (1910).

Additional Locality. PAPUA, Port Moresby (*Dr. Breinl*).

Observations. The collection contained a single perfect

♂ specimen. It is the first record of its presence in British New Guinea.

For additional references and synonymy see Theobald, *l. c.*

Pseudotaeniorhynchus conopas, Frauentf.

var. *giblini*, var. nov.

Head yellow. Thorax with black spots and lateral patches on the posterior half with golden yellow narrow curved scales. Abdomen brownish. Legs banded.

♀. Head brown; densely clothed with golden yellow narrow curved and upright forked scales with a narrow line of flat ones on the sides bordering the eyes; eyes black with red reflections, border bristles yellow, two overhanging the eyes from the centre; antennae light brown densely clothed with whitish pubescence, verticillate hairs brown, basal lobes and second segment orange yellow, the former slightly the darker; palpi bright orange yellow with brown hairs; proboscis orange yellow with the tip black; clypeus yellowish brown.

Thorax fuscous densely covered with narrow curved hair-like golden yellow scales with six rows of golden yellow bristles, the lateral rows especially dense over the roots of the wings, on the posterior half of thorax extending towards the scutellum is a U-shaped blackish brown area with the open end facing the scutellum, the latter lemon yellow (in one specimen it is orange yellow) with narrow curved golden scales to the mid lobe, lateral lobes black, nude, mid lobe with five yellow posterior border bristles, the lateral lobes with a double row, four in front and three behind; pleurae mottled with light and dark brown with a few pale creamy scales and golden bristles (most of the scales seem to have been rubbed off); metanotum bright yellow.

Abdomen brown densely covered with rich orange yellow scales, lateral bristles prominent, posterior border bristles golden; the first segment greyish densely clothed with golden yellow bristles and a patch of orange yellow scales in the centre; venter brown with orange yellow scales and densely covered with yellowish hairs,

Legs golden yellow scaled; coxae and trochanters pale yellow; femora and tibiae orange yellow the latter in the fore and mid legs with pale violet brown spots, in the hind legs with violet brown bands; tarsi golden yellow with apical violet brown bands, the fifth tarsals of fore and mid legs appear to be only spotted; ungues equal, simple, and sickle-shaped.

Wings with the veins covered with golden yellow thick elongated scales mostly ending diagonally and convexly; first fork-cell about same length and narrower than the second, base of the latter much

nearer the base of the wing than that of the former; posterior cross-vein about as long as the mid cross and about one and a half times its own length distant from the mid cross; fringe golden yellow; halteres with the stem pale yellow and knob darker.

Length 5.5 to 6 mm.

♂. Head pale yellowish brown, scales paler than in the ♀; antennae pale, nodes brown, penultimate and apical segments brown moderately long, basal lobes orange yellow, plumes brown with their base orange coloured; palpi longer than proboscis, orange yellow with the penultimate and apical segments violet-brown scaled, apex of ante-penultimate, penultimate and apical segments with fairly long orange yellow hairs; proboscis golden yellow with apex dusky.

Thorax with a blackish-brown \sqcup -shaped area covering most of the thorax, the rest lemon yellow, fairly densely clothed with bright lemon yellow narrow curved hair-like scales; scutellum lemon yellow covered with golden yellow narrow curved scales, lateral lobes black, four posterior border bristles to mid lobe and five to lateral lobes three in front and two behind; pleurae mottled with lemon yellow and brown with scattered pale scales and golden hairs; metanotum brown.

Abdomen pale covered with orange yellow scales and with golden yellow posterior border bristles, with a few violet brown scales in the centre towards the apex on most of the segments, first segment greyish with numerous golden yellow bristles and a small patch of golden scales in the centre, segments five to seven with apical lateral nude brown patches; lateral border bristles dense, yellow, apical segment densely covered with golden hairs; venter clothed with orange yellow scales, densely covered with golden hairs, the character of the genitals could not be correctly observed owing to the dense hairy clothing.

Legs similar to ♀; unguis of fore and mid legs unequal, the larger with two teeth, the smaller simple, hind ones missing.

Wings with the costa and subcostal vein with golden scales, scales on remaining veins pale dusky brown; fringe pale; first fork-cell longer and narrower than the second, the base of the latter nearer the base of the wing than that of the former; stem of the first fork-cell about seven-eighths the length of its cell, that of the second about five-sevenths the length of the cell; posterior cross-vein longer than the mid cross-vein and about twice its own length distant from it. Halteres with pale stem and darker knob.

Length 5.5. mm.

Habitat. PAPUA, Lakekamu Gold Field (*Dr. Giblin*).

Observations. Described from three ♀ specimens and

one ♂ and dedicated to its discoverer. It is a very handsome variety, easily recognised by the thoracic and leg ornamentations. The wing clothing of the ♂ is different to that of the ♀; the ground colour of the thorax also shows some variations.

Chrysoconops brevicellulus, Theobald.
Taeniorhynchus brevicellulus, Theobald.

(Plate XVIII, fig. 9.)

Theobald, Mon. Culicid., II, p. 212 (1901), III, p. 268 (1903); IV, p. 492 (1907); Rec. Ind. Mus., II, pt. III, No. 30, p. 300 (1908); Mon. Culicid., V, p. 438 (1910); Summers, Ann. & Mag. Nat. Hist. 10, No. 56, 223 (1912).

Additional Locality. PAPUA, Lakekamu Gold Field (Dr. Giblin).

Taeniorhynchus septempunctata, Theobald.

Mansonia septempunctata, Theobald.

Theobald, Ann. Mus. Nat. Hung., III, p. 187 (1905); Mon. Culicid., IV, p. 494 (1907); V, p. 448 (1910).

Additional Localities. PAPUA, Lakekamu Gold Field (Dr. Giblin), Mekeo District (Dr. Breinl).

Taeniorhynchus uniformis, Theobald.

Mansonia uniformis, Theobald.

Panoplites uniformis, Theobald.

Panoplites australiensis, Giles.

Theobald, Mon. Culicid., II, p. 180 (1901); Giles, Handbook, Gnats, 2nd ed., 355 (1903); Blanchard, Les Moust., p. 379 (1905); Neven-Lemaire, Archiv. Parasitologie, 10, p. 266 (1906-7).

Additional Localities. PAPUA, Lakekamu Gold Field (Dr. Giblin); Milne Bay (Dr. Breinl).

Taeniorhynchus papuensis, n. sp.

Palpi brown scaled; proboscis yellowish brown with apical third deep black. Thorax brown. Abdomen dark brown, dark brown scaled. Legs unbanded. Wings not mottled.

♀. Head brown with pale creamy narrow curved scales and flat creamy ones on the sides with numerous dusky brown upright

forked ones over the whole head; eyes purple black, fringe scanty, brown; antennae brown with very fine pile, verticillate hairs brown; proboscis yellowish with basal half covered with loosely applied brown scales, apical to the basal half is a distinct narrow yellowish band, the rest black; palpi pale, covered with brown scales; clypeus brown.

Thorax dark brown, somewhat denuded, covered with yellowish brown narrow curved scales, a lateral row of dusky brown bristles extending from the scutellum to the roots of the wings and two short rows in front of the scutellum; prothoracic lobes brown, fairly prominent with a few long and numerous short brown hairs (no scales could be seen); pleurae yellowish (almost denuded) with a few creamy flat scales; scutellum brown with yellowish brown narrow curved scales with four dusky brown bristles to the mid lobe and five to the lateral lobes, three in front and two behind; metanotum brown.

Abdomen dark brown, truncate, covered with brown scales, posterior border bristles golden yellow with brown lateral bristles, segments three to five with apical lateral creamy spots, not so prominent on the fifth; venter covered with pale ochraceous scales and short yellowish hairs.

Legs brown scaled; femora and tibiae with three patches of pale equidistant ochraceous scales; ungues equal and simple.

Wings with the veins covered with brown scales; costa dusky brown; fringe pale brown; first fork-cell longer and narrower than the second, the base of the latter slightly nearer the base of the wing; stem of the first fork-cell about half the length of its cell, stem of the second about one-third the length of the cell; posterior cross-vein longer than the mid and twice its own length distant from it. Halteres with stem creamy and knob brownish.

Length 3.5 mm.

Habitat. Lakekamu Gold Field.

Observations. Described from four specimens taken by Dr. Giblin.

Melanoconion papuensis, n. sp.

Head densely clothed with narrow curved and upright forked scales. Thorax brown. Abdomen densely clothed with brown scales. Legs dark brown.

♀. Head brown densely clothed with light brown narrow curved hair-like scales, pale upright forked ones in the centre and dark ones on the sides, a narrow border of flat white ones at the sides round the eyes, the latter purple black, border fringe pale brown; antennae

brown, verticillate hairs dark brown, internodes densely covered with pale pubescence, second segment clothed with short dark brown hairs, basal lobes yellowish brown; clypeus pale brown; palpi dark brown scaled about one-quarter the length of the proboscis, the latter dark brown, the apex covered with short brown hairs.

Thorax dark brown densely covered with narrow curved brown hair-like scales, posterior portion of mesothorax yellowish brown; scutellum yellowish brown covered with very narrow hair-like scales, six brown border bristles to the mid lobe and four to the lateral lobes; pleurae pale yellowish brown, denuded, with a few scattered brown hairs; metanotum light brown.

Abdomen pale creamy densely clothed with brown scales; first segment pale brown with numerous fairly long brown hairs, posterior border bristles brown, lateral border bristles brown; venter pale brown scaled with numerous brown hairs.

Legs dark brown; coxae and trochanters pale yellowish brown; femora with the basal half greyish white beneath; tarsi of fore and mid legs pale brown; hind tarsi dark brown; ungues small, equal and simple.

Wings with the veins covered with very small linear lateral and median flat scales; first fork-cell longer and narrower than the second, base of the latter nearer the base of the wing than that of the former; stem of the first fork-cell slightly more than half the length of its cell; stem of the second fork-cell nearly the length of the cell; mid cross-vein longer than the posterior cross-vein, the latter about three times its own length distant from the former; fringe dark. Halteres with creamy stems and dusky knobs.

Length 4.5 mm.

Habitat. PAPUA, Lakekamu Gold Field.

Observations. Described from one ♀ specimen taken by Dr. Giblin. It is closely related to *M. indecorabilis*, Theob., but can easily be separated from it by its pale pleurae and pale scaled head, etc.

Finlaya poicilia, Theobald.

Mon. Culicid., III, p. 283 (1903); IV, p. 520 (1907); Giles, Journ. Trop. Med., VII, p. 366 (1904); Theobald, Gen. Ins. Culicid., p. 33 (1905); Banks, Philip. Journ. Sci., I, p. 9, 990 (1906); Ludlow, Mosq. Philip. 9 (1908).

Additional Localities. PAPUA, Samarai Island, Mekeo District, (*Dr. Breinl*); Lakekamu Gold Field (*Dr. Giblin*).

Skusea funerea, Theobald.

Mon. Culicid., III, p. 292 (1903); IV, 542 (1907); V, p. 488 (1910); Bancroft, Ann. Queensland Mus., No. 8, p. 55 (1908).

Additional Locality. PAPUA, Mekeo District (*Dr. Breinl.*)

Observations. The abdomen of the specimens are in an imperfect condition, but there can be little doubt that it is the above species as it agrees in other details.

Uranotaenia nigerrima, n. sp.

(Plate XVIII, fig. 10.)

Head brown with white scales. Thorax pale brown. Abdomen jet black. Legs dark brown scaled.

♀. Head brown with loosely applied white flat scales with numerous dark brown upright forked scales; eyes deep black; antennae deep brown, verticillate hairs blackish, pile brown; proboscis black, hairy, apex with a creamy yellow tinge; palpi black.

Thorax pale yellowish brown (in two specimens it is brown) densely clothed with brown narrow curved scales with a small median area in front of the scutellum nude, a row of brown bristles extending from the roots of the wings to the scutellum; prothoracic lobes brown clothed with flat pale scales and brown bristles; scutellum pale brown clothed with flat brown scales; metanotum brown; pleurae yellowish with a central brown patch.

Abdomen pitchy black, unbanded, truncate; venter black.

Legs brownish black; coxae and trochanters yellowish; femora pale beneath, fore femora swollen; ungues equal and simple.

Wings with the veins covered with dusky brown scales; costa black; fringe dusky; first submarginal cell three-fifths the length of the second posterior cell; stem of the former slightly more than twice the length of its cell, stem of second fork-cell about one and a half times the length of the cell; posterior cross-vein longer than the mid cross-vein and scarcely its own length distant from it. Halteres black.

Length 3 mm.

♂. Head similar to ♀; antennae pale brown, nodes blackish, plumes brown; palpi and proboscis as in ♀, last two segments of the former very long; clypeus brown.

Thorax yellowish brown, clothing as in ♀; scutellum similar to ♀ mid lobe with four black bristles to mid lobe and three to lateral lobes; metanotum chestnut brown.

Abdomen with brownish black scales, hairy at the sides; venter as in ♀.

Legs similar to ♀; fore and mid ungues unequal, simple, hind equal and simple.

Wings with scales similar to ♀; stem of first fork-cell about three times the length of its cell, stem of second fork-cell about one and a half times the length of the cell; posterior cross-vein longer and slightly more than its own length distant from the mid.

Length 3 mm.

Habitat. PAPUA, Milne Bay (*Dr. Breinl*); Lakekamu Gold Field (*Dr. Giblin*).

Observations. This is a very distinct species and would come next to *Uranotaenia atra*, Theobald, in his synoptic table.*

Hodgesia triangulatus, n. sp.

Head clothed with flat scales. Thorax black clothed with narrow curved hair-like scales. Abdomen dark brown scaled. Legs unbanded.

♀. Head densely covered with white flat scales except on the nape where they are brown and slightly larger, the white scales in front form a distinct triangle; eyes purplish black, fringe dusky, two dark brown bristles overhanging the eyes from the centre; antennae brown, fourteen-jointed, verticillate hairs black, pubescence on internodes grey-white, basal lobe black; palpi very short, black scaled; clypeus brown; proboscis brown slender, expanded apically, about the length of the abdomen with a few pale very short hairs on the apex.

Thorax shining black clothed with dark brown narrow curved scales and two rows of dusky brown bristles; scutellum dark brown (denuded of scales), mid lobe with apparently six border bristles, lateral lobes with three; pleurae black with the remains of white small fairly broad flat scales; metanotum black.

Abdomen brown, clothed with dark brown scales, segments seven to the end black scaled, segments six and seven with fairly large apical lateral white spots, first segment with numerous brown hairs in addition to the brown scales; venter brown with pale brown scales.

Legs brown; coxae pallid; undersurfaces of femora densely clothed with creamy white scales; ungues small, equal and simple.

Wings about twice as long as the abdomen, with brown scales to the veins; costa, subcostal and first longitudinal veins black

* Theobald, Mon. Culicid., V, p. 500 (1910).

sealed; fringe brown; the basal end of the second long vein carried well beyond the marginal transverse vein, veins clothed with very small median flat scales and short linear lateral ones with *ragged* ends, the lateral ones dense on the fork-cells; first fork-cell longer and slightly wider than the second, base of the latter nearer the base of the wing than that of the former; stems of the fork-cells about two-thirds the length of their cells; posterior cross-vein shorter than the mid cross-vein and about twice its own length from it; second incrossation well marked; halteres with yellowish stems and dusky knobs.

Length 2.5 mm.

Habitat. PAPUA, Lakekamu Gold Field.

Observations. Described from one ♀ specimen taken by Dr. Giblin. The scutellum was unfortunately denuded of scales. The basal end of the second long vein is very marked.

EXPLANATION OF PLATES.

PLATE XVII.

- | | |
|---|--------|
| FIG. 1. <i>Neosquamomyia breinli</i> , n. sp. | ♂ head |
| 2. <i>Neosquamomyia breinli</i> , n. sp. | ♂ wing |
| 3. <i>Neosquamomyia breinli</i> , n. sp. | ♀ wing |
| 4. <i>Stegomyia atra</i> , n. sp. | ♀ wing |
| 5. <i>Leucomyia papuensis</i> , n. sp. | ♀ wing |
| 6. <i>Culicelsa annulirostris</i> , Skuse | ♀ wing |

PLATE XVIII.

- | | |
|--|--------|
| 7. <i>Culex annulirostris</i> , Skuse, var. <i>mibni</i> , n. var. | ♂ head |
| 8. <i>Culex annulirostris</i> , Skuse, var. <i>mibni</i> , n. var. | ♂ wing |
| 9. <i>Chrysoconops brevicellulus</i> , Theob. | ♀ wing |
| 10. <i>Uranotaenia nigerrima</i> , n. sp. | ♂ head |

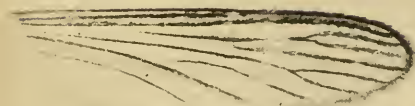
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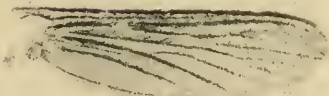
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Photo, F. H. T.

PAPUAN CULICIDAE

C. Hentschel.



7



8



9



10

Photo, F. H. T.

C. Hentschel.

PAPUAN CULICIDAE.