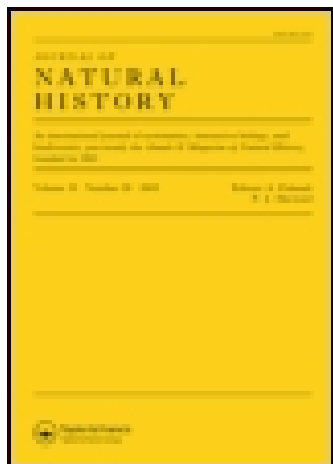


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XXVI.—Entomological notes from the London School of Tropical Medicine.—No. IV. Blood-sucking Diptera from Port Darwin, Australia

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working out certain anomalous material now in my possession.

In the meantime I would recommend that the following specialized genera be regarded as the types of distinct divisions, which we may, for the moment, regard as families:—

T E R E B R A N T I A.

Heterothrips, Hood (nec Buffa) (THRIPIDÆ), on account of the structure and segmentation of the antennæ, the character of the sensoria, and the tarsal appendages. HETEROTHRIPIDÆ, mihi.

Panchætothrips, Bagnall (THRIPIDÆ), on account of the structure of the head, the abdomen, last abdominal segment and ovipositor in female, and venation of fore wings. PANCHÆTOTHRIPIDÆ, mihi.

Ceratothrips, Reuter, chiefly on account of the 6-jointed antennæ, which possess only a single-jointed style, the reduction in the antennal joints not being caused by fusion. CERATOTHRIPIDÆ, mihi.

T U B U L I F E R A.

Ecacanthothrips, Bagnall (PHLÆOTHRIPIDÆ), chiefly on account of the specialized antennal sense-cones congregated (in the form of numerous fingers) on the third antennal joint. ECACANTHOTHRIPIDÆ, mihi.

XXVI.—*Entomological Notes from the London School of Tropical Medicine.*—No. IV. *Blood-sucking Diptera from Port Darwin, Australia.* By SOPHIA L. M. SUMMERS, M.A., B.Sc., Carnegie Student of Aberdeen University.

Dr. C. L. STRANGMAN has recently presented to the School a collection of blood-sucking flies collected by himself in Port Darwin and its neighbourhood, in the northern territory of the Government of South Australia. It includes eighteen species, and as very little seems to be known of the blood-sucking Diptera of this part of the world, it seems advisable in describing several of the new forms to put the names of all the species on record. All the identifications have been confirmed from the collections in the British Museum (Natural History) and may therefore be regarded as authentic.

I take this opportunity of renewing my acknowledgments to Messrs. E. E. Austen and F. W. Edwards for their kindness in giving me access to the collections in their charge.

Family Culicidæ.

Subfamily CULICINÆ.

Section CULICINI.

1. *Taniorhynchus brevicellulus*, Theob.

This species exhibits a considerable range of variety in colour.

2. *Mansonioides uniformis* (Theob.).

3. *Stegomyia fasciata*, Fabr.

4. *Ochlerotatus vigilax* (Skuse).

These four species appear to be common.

5. *Mucidus alternans*, Westwood.

Section ANOPHELINI.

6. *Anopheles (Myzorhynchus) bancroftii*, Giles.

Appears to be common.

I leave the name, as these specimens are not in the best condition, but for my own part I am convinced there is no difference between this species and *A. barbirostris*, V. de Wulp. The spots in the fringe are not merely variable in this and other species of the subgenus, but also they depend to some extent on the angle from which the light is reflected.

7. *Anopheles (Nyssorhynchus) annulipes*, Walker.

This specimen has been compared with those in the British Museum (Nat. Hist.) and differs only in having scales on all the abdominal terga. Scales are extremely scanty on the first tergum, slightly more numerous on the second, still more numerous on the third, and fairly abundant on all the rest. If the artificial classification of Theobald were adopted this specimen would be included in the "genus" *Neocellia*. There seems good reason to suppose that in the subgenus *Nyssorhynchus*, using the term in a wide sense, to include all the forms catalogued by Theobald under *Nyssorhynchus*, *Neocellia*, and *Cellia*, the amount of the scaling on the abdomen is often a fluctuating and inconstant character.

Family **Tabanidæ.**Subfamily **TABANINÆ.**

8. *Tabanus brevivitta*, Walker.
 9. *Tabanus serus*, Walker.
 10. *Tabanus cinerascens*, King.

These three species seem to be common.

11. *Tabanus* sp. prox. *serus*, Walker.

Three females which have been stewed in their own juice, and are consequently too much discoloured for description, resemble *T. serus* very closely, but differ: (1) the antennæ are entirely black, while in *T. serus* only the tips are black; (2) the front is much narrower and the frontal callus is of quite a different shape.

12. *Tabanus elestëem*, sp. n.
 13. *Tabanus badius*, sp. n.
 14. *Tabanus anellosus*, sp. n.

Subfamily **PANGONINÆ.**

15. *Silvius strangmani*, sp. n.
 16. *Silvius masoni*, sp. n.
 17. *Silvius alcocki*, sp. n.

Family **Muscidæ.**Subfamily **STOMOXEINÆ.**

18. *Lyperosia exigua*, Meijere.

This seems to be the first record of any species of *Lyperosia* from Australia. According to Dr. Strangman, it is known locally as the buffalo-fly.

DIAGNOSES OF THE NEW SPECIES.

Tabanus elestëem, sp. n.

Smallish species, length 12 mm.

Two females.

Face and *palps* hoary, covered with long white hairs; *palps* a little more than half the length of the *proboscis*, which is black and rather slender for a *Tabanus*.

Antennæ dark rusty brown, the first two segments covered with short black bristles; basal angle of the third well pronounced.

Front wide, maximum breadth one-sixth that of the head, sides slightly convergent anteriorly, grey with some sparse hairs. *Frontal callus* in two parts, namely a large tumid shiny plug filling the whole front just above the antennæ, and a short somewhat ill-defined streak above. *Eyes* quite bare.

The denuded *scutum* is dark rusty brown inclining to black; *scutellum* reddish brown.

Legs: first pair black, except the proximal two-thirds of the tibiæ, which are reddish brown; the other two pairs are reddish yellow, except the tarsi and tip of the tibiæ, which are dark brown.

Wings hyaline, with a long dark brown spot at the distal end of the first longitudinal vein; the root of the veins is light brown, the rest dark brown. The upper branch of the third longitudinal vein is angulated, a short blind branch running inwards from the angle. *Halteres* reddish brown.

The *abdomen* (which is badly rubbed) appears dorsally to be seven-striped—three light stripes alternating with four black; the middle stripe, which is whitish, is strikingly distinct, the two dorso-lateral light stripes are not so distinct.

Tabanus badius, sp. n.

Also a smallish species, length 11 mm.

Four females.

Face grey, with long white hairs; *palps* about nine-tenths the length of the proboscis, light brown frosted with white; *proboscis* black, rather slender for a *Tabanus*.

Antennæ brown, black at the tip; first two segments with stout black hairs.

Front uniformly narrow (sides parallel), about one-ninth the breadth of the head, dirty yellow with numerous short black hairs. *Frontal callus* shiny black, racquet-shaped with the handle slender and not always well defined. *Eyes* quite bare.

Scutum and *scutellum* black, with a greyish dust and scattered golden and black hairs.

Legs: first pair black, except the proximal half to two-thirds of tibiæ which are reddish brown; second and third pairs reddish brown, tarsi black.

Wings hyaline, with a long very light brown spot at the distal end of the first longitudinal vein; veins dark brown, *Halteres* reddish brown.

Abdomen reddish brown; distal segments darker, with scattered hairs, of which many are black and a few golden.

This species can be readily distinguished from *T. elestëem* by the parallel-sided and much narrower front, by the shape of the frontal callus, by the very much longer palps, and by the nearly uniformly coloured abdomen.

Tabanus anellosus, sp. n.

Small species, length 9 mm.

Five females.

Face grey, with long white hairs. *Palps* reddish yellow, slender, about two-thirds the length of the *proboscis*, which is black and remarkably slender.

Antennæ reddish brown, the rings of the third segment black, and the basal tooth acuminate.

Front uniformly narrow, one-ninth the breadth of the head, dirty yellow; *frontal callus* elongate triangular, shiny black. *Eyes* quite bare.

Scutum and *scutellum* black, with grey dust and scattered hairs, black and a few golden.

Legs: femora and tarsi of all the legs black; tibiæ of the first pair black with red base, tibiæ of the second and third pairs reddish brown with black tip.

Wings hyaline, with a long brown mark at the distal end of the first longitudinal vein. *Halteres* dark brown.

Abdomen: the first three segments of a reddish-brown colour, the second having a small black median triangle; the remaining segments black. At the hinder edge of each segment is a row of golden hairs, which on the black segments form distinct fine cross-bands.

Silvius masoni, sp. n.

Length 11.6–13 mm.

Four females.

Face grey, with long white or yellowish-white hairs; *palps* a little more than three-quarters the length of the *proboscis*, extremely slender, reddish brown with black abruptly truncate tip; *proboscis* black, long and slender.

Antennæ reddish brown, third segment broadly triangular at base and then becoming very slender.

Front wide, about one-sixth the width of head, slightly convergent anteriorly, dirty yellow. *Frontal callus* shiny black, divided into two parts—the upper elongate triangular, almost racquet-shaped, prolonged to the ocelli which are very distinct; the lower a large shiny black plug. *Eyes* quite bare.

Scutum and *scutellum* black dusted with grey, with curved golden hairs.

Legs reddish brown, tarsi dark brown. Spines on the hind tibiæ small but conspicuous in a specimen cleared and mounted in Canada balsam. Spurs on the middle tibiæ long and stout.

Wings hyaline, with a long pale yellow spot at the distal end of the first longitudinal vein, subcostal vein very pale yellow; other veins dark brown. *Halteres* reddish brown.

Abdomen reddish brown, with black and golden hairs; the last two or three segments dark brown or black.

I have much pleasure in naming this species after Sir Patrick Manson, G.C.M.G., F.R.S., &c.

Silvius alcocki, sp. n.

Small species, length 9 mm.

Two females.

Face grey, with long grey hairs; *palps* light brown, slender, about two-thirds the length of the *proboscis*, which is black, long, and slender.

Antennæ black; third segment with a distinct *Tabanus*-like basal angle.

Front uniformly wide, about one-sixth the breadth of the head, grey. *Frontal callus* a rather narrow stripe, neither prominent nor shiny, squarely dilated above the root of the antennæ and somewhat triangularly dilated higher up. *Ocelli* distinct but not prominent. *Eyes* quite bare.

Scutum (denuded) with three dark brown stripes, of which the median one is the broadest; *scutellum* black.

Legs black, the tibiæ and tarsi of the second pair perhaps not quite so dark as other parts; spurs on the hind tibiæ strong and conspicuous, reddish brown.

Wings hyaline, with a very dark brown, almost black, spot at the distal end of the first longitudinal vein. *Halteres* very dark brown.

Abdomen reddish brown to warm sepia, the anterior segments lighter than the others. The extreme hind margin of every segment is lighter and is clad with whitish hairs, so that the whole abdomen appears narrowly cross-banded.

Silvius strangmani, sp. n.

Small species, length 9 mm.

Two females.

Face dark grey, with dark grey hairs. *Palps* very slender, about two-thirds the length of the *proboscis*, truncate tips, reddish brown. *Proboscis* black, long and slender.

Antennæ reddish brown; third segment broadly triangular at the base.

Front uniformly wide, about one-sixth the breadth of the head. *Frontal callus* black, tumid and very shiny, consisting of two separate parts—namely, a large trapezium completely filling the space above the base of the antennæ, and a smaller somewhat oval patch higher up. *Ocelli* large and very prominent. *Eyes* quite bare.

Scutum and *scutellum* (denuded) dark.

Legs reddish brown, tibiæ and tarsi of first pair black. Spurs on hind tibiæ small, reddish brown.

Wings hyaline, with a long light-brown spot at the distal end of the first longitudinal vein. *Halteres* dark brown.

Abdomen very distinctly cross-banded—the after edge of every segment being light brown; the rest of the segment being purplish brown in the case of the first two segments, blackish brown in the case of the other segments.

This species is very similar to *S. alcocki* in size and general appearance. It can be distinguished from the latter, however, by having no angle on the third segment of the antennæ. The colour of the legs is different and the spines on the hind tibiæ are not so distinct. The abdomen in this species is darker in colour and more distinctly banded.

XXVII.—*Two new Species of Nasua.*

By OLDFIELD THOMAS.

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Nasua candace, sp. n.

Allied to *N. dorsalis*, but the black dorsal line scarcely defined.

Size about as in *N. nasua*, though the teeth are smaller. General colour above tawny ochraceous, a median darker area, 2–3 in. in breadth, extending from the nape to the base of the tail, but not forming a sharply defined black dorsal line as in *dorsalis*. Along this area the hairs are cream-buff basally, with tawny or ochraceous tips and black subterminal rings. Under surface brown, the tips of the hairs buffy, throat and chest cream-buff. Muzzle brown. Ears thickly hairy, blackish with white edges. Forearms pale buffy to the metacarpus; digits dark brown. Hind limbs smoky brown, some of the hairs, especially on the metatarsus, pale buffy. Tail heavily haired, completely ringed with black and pale buffy, about 7–8 rings present.