

THREE NEW SPECIES OF DACINAE (TRYPETIDAE DIPTERA) FROM QUEENSLAND.

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SUMMARY.

Three new species—Strumeta alyxiae, S. notatagena and Afrodacus tigrinus—are described.

INTRODUCTION.

Recent studies concerned with recording native hosts and the seasonal behaviour of certain species of the sub-family Dacinae have revealed three new species among material identified from North Queensland. Their descriptions are presented here so that the names can be incorporated in a paper dealing with hosts of the Dacinae occurring in this State, which will appear in the next issue of this Journal.

Strumeta alyxiae n.sp.

A small fly with characteristic infuscation on the wings, clear costal cells, large facial spots pointed anteriorly and the greater part of the thorax and abdomen dark brown to black. The female has a dark brown apical spot on the upper surface of each femur.

Female:—Length, excluding ovipositor, 5.6 mm.; wing 4.8 mm.

Male:—Length 5.7 mm.; wing 4.8 mm.

Head:—*Frons* fulvous, length 1.3 times width; orbital spots and antero-medial blotch tending dark brown; bristles: 1 *s. or.*, 2 *i. or.* *Lunule* shining fulvous. *Antennae* slightly longer than face, fulvous, except for outer surfaces of third segment, brown; third segment more than three times second, latter with weak pale dorsal bristle; arista long, dark brown except basal portion fulvous. *Face* pale fulvous, shiny, large subcircular facial spot, pointed anteriorly, in each antennal groove. *Palps* fulvous, flattened. *Genae* pale fulvous with pale brown subocular spot; bristle weak, black. *Occiput* fulvous, occipital row weak, approximately five on each side. *Vertex* fulvous, may be dark brown along transverse carina; ocellar triangle black; bristles: ocellar present, very weak; post-verticals strong, dark brown to black.

Thorax:—Largely dark brown to black except for following areas which are pale reddish brown: medial portion of mesonotum; below and behind postsutural stripes; a narrow band bordering humeral and notopleural calli; immediately behind outer portion of suture and beneath humeral calli. *Mesonotum* between paired shiny longitudinal black vittae covered with hoary pubescence. Also with the following yellow markings: humeral and notopleural calli; pair of postsutural stripes narrowing posteriorly and ending just before

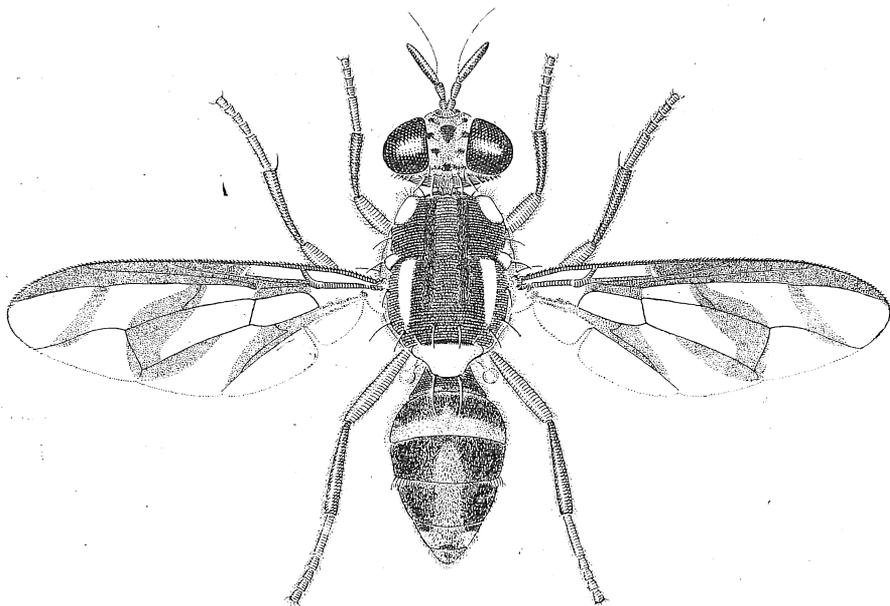


Fig. 1.

Strumeta alyxiae ♂

upper *p.sa.* bristles; a triangular mesopleural stripe, with anterior edge slightly concave, commencing at posterior margin of humeral callus and ending on sternopleuron; $\frac{3}{4}$ of upper and $\frac{2}{3}$ of lower hypopleurals. (Note:— Newly emerged individuals are more usually pale reddish brown with the following dark brown markings which later coalesce to give the general dark brown colour of aged individuals: paired bands on mesonotum extending from anterior border to point slightly more than midway between suture and posterior margin; bordering inner margin of each postsutural stripe; before suture and bounded by each longitudinal band, the notopleural calli and hind margin of humeri; on suture behind notopleural calli; beneath lower *p.sa.* bristles; bordering anterior margin of mesopleural stripe; greater portion of sternopleuron; at base of wing and in front of lower hypopleurals; above hind coxae; basal $\frac{1}{3}$ of lower and $\frac{1}{4}$ of upper hypopleurals.) *Postnotum* brown except for lateral margins broadly dark brown to black. *Scutellum* yellow with dark brown basal band. *Halteres* pale yellowish. *Bristles*: *scp.* 4 (middle pair weak), *npl.* 2, *mpl.* 1, *a.sa.* 1, *p.sa.* 2, *prsc.* 2, *sc.* 2 (apical), *pt.* 1 (weak), all dark brown. *Legs*: coxae dark brown, remainder fulvous except for tibiae dark brown, and in females a dark brown apical spot on upper surface of femora; apical spur on middle tibiae. *Wings*: Costal cells hyaline, the second cell shorter than stigma, the proportion being 0.67. Costal band fuscous including stigma, cell R_1 , whole of cell R_{2+3} and extending slightly beyond end of vein r_{4+5} . A narrow fuscous transverse band commencing on r_{4+5} midway between junction with *r-m* and wing margin, and running transversely to join m_1 . 2 midway between its junction with *Im* and the wing

margin. A second, U-shaped, fuscous band enclosing *r-m* and widening as it extends obliquely backwards to reach *Im*, then turning at inner margin of wing to run as a thinner band below and for approximately three-quarters of the length of the discal cell. Above median cell fuscous. Anal streak fuscous, not reaching wing margin; *r-m* cross vein oblique and somewhat sinuate, the section of vein $m_1 + 2$ before and after it being in the proportion of 1.2; cell *Cu* restricted basally in female but almost parallel-sided in male, its length in proportion, to $cu_1 + 1a$ being 2.0 in male and 1.4 in female. Supernumerary lobe poorly developed in males. Microtrichia covering wing except for first costal cell, lower $\frac{2}{3}$ of second costal cell, median cell, cell *R* except in that portion above median cell, basal $\frac{1}{3}$ of discal cell except for thin diagonal band and immediately below discoidal cross vein.

Abdomen.—*Male*: dark brown to black except for following: a transverse pale fulvous band between first and second tergites, the posterior third of second tergite whitish except for central pale fulvous area, a fulvous medial band on third and fourth tergites, widening to occupy practically the whole of the fifth tergite. Shining fulvous spots on fifth and a row of cilia on post-lateral margin of third tergite. No medial stripe. *Female*: colouration as for male except that shining spots may be darker brown, and fulvous areas on third, fourth and fifth tergites are less clearly defined. A dark brown median stripe may occur on the fifth tergite in some specimens. *Ovipositor* broad, fulvous, flattened.

Holotype ♂, allotype ♀, 6 ♂♂ and 5 ♀♀ paratypes, bred from fruits of *Alyxia spicata* R.Br., Cook Highway, near Mossman, Queensland, August, 1951. (A. W. S. May).

Types in Queensland Museum; holotype Reg. No. T. 5275, allotype Reg. No. T. 5276.

This species somewhat resembles *S. recurrens* Hering in general colouration and size but differs in having no well-defined medial stripe on the abdomen and a dissimilar pattern on the wing. Both *S. frenchi* (Frogg.) and *S. umbrosa* (Fabr.) also have two transverse bands on the wing but can be differentiated from *S. alyxiae* by their size, the position of the *r-m* cross vein and the markings of the abdomen.

***Strumeta notatagena* n.sp.**

A medium-sized fly with a distinct black spot on each cheek, elongate oval facial spots, a broad costal band, brown costal cells and a strongly developed though short ovipositor.

Female.—Length, excluding ovipositor, 5.9 mm.; wing 5.1 mm.

Head.—*Frons* fulvous, flattened, length 1.2 times width; orbital spots and medial blotch faintly brown; 1 *s.or.*, 2 *i.or.* bristles. *Lunule* discoloured though darkened. *Antennae* slightly longer than face, fulvous except for outer surface and extremity of third segment fuscous; third segment almost three times

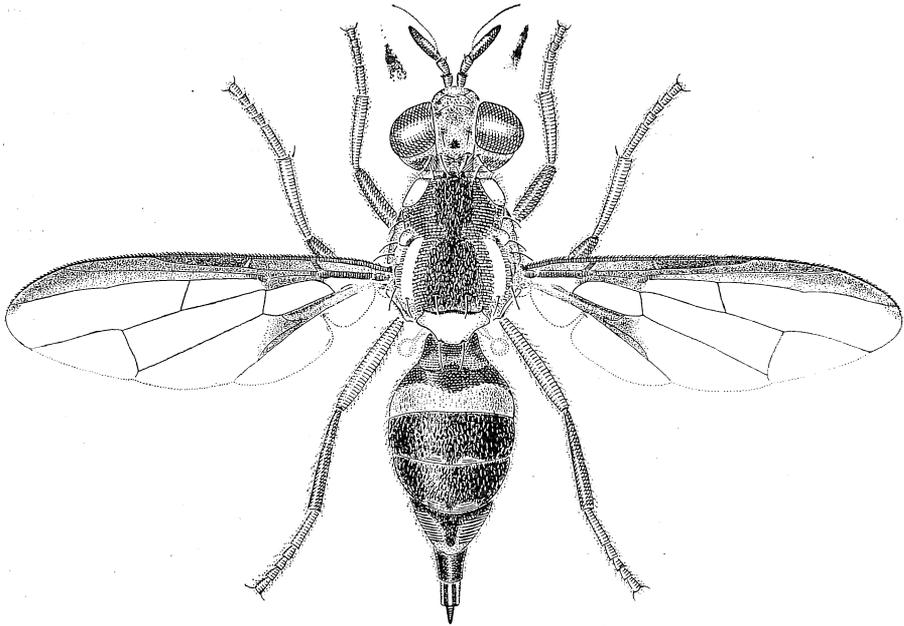


Fig. 2.

Strumeta notatagena. ♀

second. *Face* shiny fulvous, except area between antennal grooves whitish (this may be discoloured); a well defined oval black spot occupying more than $\frac{1}{3}$ length of antennal groove. *Genae* fulvous with large black subocular spot. *Occiput* centrally brown, margin fulvous; occipital row wanting. *Vertex* fulvous; ocellar bristles weak; postverticals strong, black.

Thorax:—Mesonotum reddish-brown with longitudinal median black band as wide as outer scapulars anteriorly but broadening slightly at posterior margin to almost attain width of scutellum, and interrupted with reddish brown areas in region of suture. Pleurae mostly dark brown to black except reddish brown beneath humeri and immediately beneath wing. Yellow markings as follows: humeral callus except anterior margin brown; notopleural callus; broad parallel-sided postsutural lateral stripes reaching to upper *p.sa.* bristle; narrowly triangular mesopleural stripe ending on sternopleuron, with anterior edge straight and commencing beneath anterior notopleural bristle; $\frac{2}{4}$ of lower and $\frac{5}{6}$ of upper hypopleurals. *Postnotum* centrally brown, marginally dark brown. *Scutellum* yellow, with very narrow dark basal band. *a.sa.* bristle weak, reclinate; all other bristles strongly developed, black. *Legs* fulvous except hind tibiae, middle and fore femora brown. Coxae dark brown. *Wings* hyaline except fuscous costal band and anal streak. Costal band occupying stigma, cell R_1 , outer portion of cell R_2 and ending just beyond extremity of vein $r_4 + s$; the remainder of cell R_{2+s} brown. Costal cells brown, with microtrichia over all but basal $\frac{1}{3}$ of first cell. Almost whole of vein

cu pale tending fulvous. *r-m* cross vein oblique, straight, the section of vein $m_1 + 2$ bordering discal cell, before and after it being in the proportion of 1.4. Anal cell extension restricted basally, its length in proportion to $cu_1 + 1a$ being 1.4.

Abdomen:—Not broad. Dark brown to black except yellowish brown band along junction of first and second tergites; whitish on posterior half of second; paired yellowish-brown spots centrally placed on posterior margins of third and fourth tergites. Yellowish-brown around inner margins and posterior to large brown shining spots on fifth tergite. Sixth tergite pale fulvous. Basal segment of ovipositor strongly developed, convex, broad based, dark brown, shiny. Inversion membrane with four equally placed longitudinal brown ridges.

Holotype ♀, *ex lure* traps in mangoes, Kamerunga Experiment Station, Cairns, Queensland, 1952. (A. W. S. May.)

Type in Queensland Museum, Reg. No. T. 5277.

Though resembling *S. fuscatus* Perk. & May in general colouration of thorax and abdomen, these two species can be separated readily on the wing markings. The coloured costal cells and abdominal pattern separate *S. notatagena* from both *S. cacuminata* Hering and *S. bilineata* Perk. & May, two species with black medial markings on the thorax. *S. bryoniae* (Tryon), though agreeing somewhat in having a broad costal band, is a much larger species with an entirely black thorax and different abdominal markings.

AFRODACUS Bez.

The species described below has been placed in this genus provisionally but its correct status can only be decided when a male has been examined. The combination of characters, namely, 2 *sc.*, 2 *pr. sc.*, no *a.sa.* bristles, conform to this genus.

Afrodacus tigrinus n.sp.

A relatively small but robust fly with characteristic yellowish brown and black markings on the abdomen, a yellow oval medial blotch towards the posterior margin of the mesonotum, short, thick antennae, and no facial spots.

Female:—Length, excluding ovipositor, 5.3 mm.; wing 4.5 mm.

Head:—*Frons* fulvous, broad, parallel-sided, length 1.3 times width, antero-medial blotch yellowish; bristles: 1 *s.or.*, 2 *i.or.* *Lunule* shining fulvous. *Antennae* not as long as face, thickened, uniformly coloured yellow-brown; arista brown, very long. *Face* shiny, pale fulvous; no facial spots. *Palps* flattened, fulvous. *Genae* pale, no subocular spot evident; bristle weak, black. *Occiput* broadly fulvous on margins, medially brown to dark brown; occipital row wanting. *Vertex* fulvous; ocellar triangle black; bristles: ocellar present, very weak; postverticals strong, black.

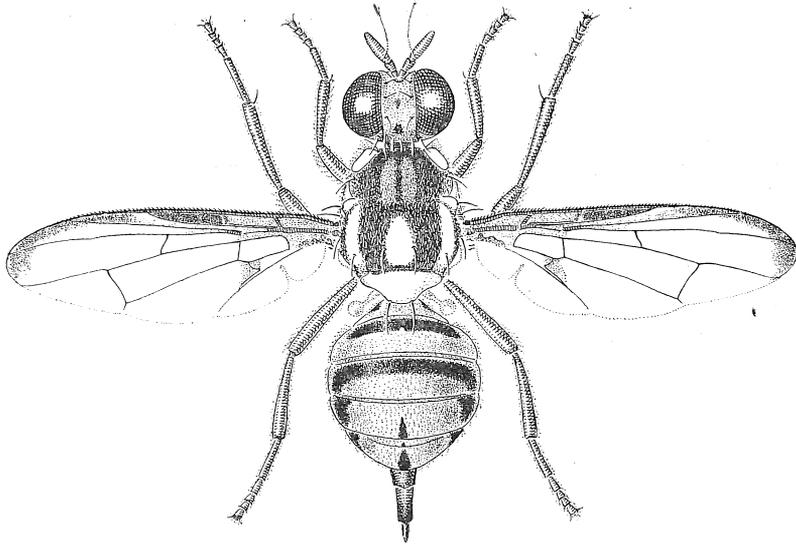


Fig. 3.

Afrodaeus tigrinus. ♀

Thorax:—Broad, punctulate, black. A hoary pubescence covering medial portion of mesonotum, and with following markings:—brown: beneath humeri, above second coxae, between humeral and notopleural calli, below and behind postsutural stripes; yellow: humeral calli; broad parallel-sided postsutural stripes extending to and including upper *p.sa.* bristles; an oval postsutural medial blotch, pointed anteriorly, widening to touch the *prsc.* bristles laterally and ending at posterior margin of mesonotum; notopleural calli; a broad triangular mesopleural stripe with base attaining humeral callus and apex ending on upper sternopleuron; $\frac{2}{3}$ of upper and $\frac{2}{3}$ of lower hypopleural calli. *Scutellum* yellow with black basal band. *Postnotum* black. *Bristles*: *scp.* 4 (brown, of approximately equal length), *npl.* 2 (strong, black), *mpl.* 1 (black), *p.sa.* 2 (lower black, upper brown to dark brown), *prsc.* 2, *sc.* 2 (apical, brown), *pt.* 1 (weak). *Legs* fulvous; apical spur on middle tibiae. *Wings* hyaline. Costal cells fulvous (microtrichia covering whole of second and upper $\frac{1}{3}$ of basal cell), the second cell shorter than stigma, the proportion being 0.7. Costal band fuscous, occupying stigma, most of cell R_1 , the extremity of cell R_{2+3} and broadening into an apical spot between the extremities of veins r_{4+5} and m_{1+2} ; a pale area on costal band at the extremity of vein r_1 . Base of cell R_{2+3} and also towards its apex beneath costal band, together with basal portion of cell R , fulvous. *r-m* oblique, sinuate, the proportion of vein m_{1+2} before and after it being in the proportion of 1.4. Anal streak pale fulvous, short. Extension of cell Cu short, parallel-sided, its length in proportion to $cu_1 + 1a$ being 1.7. Microtrichia covering wing except over basal $\frac{2}{3}$ of first costal cell, median cell, a small portion of cell R beneath junction of stigma with second costal cell, the extension of cell Cu and the alula.

Abdomen.—Tergites yellowish tending fulvous except for following clearly defined black markings:—spots on anterior margins of first; band across anterior $\frac{1}{4}$ of second; a band along anterior portion of third, which is continued laterally and terminates on fifth. A distinct medial black stripe commencing at posterior margin of fifth but fading and narrowing before attaining anterior margin only to appear again on distal half of fourth. Shining spots not conspicuous. Sixth tergite pale creamy yellow. Sternites pale. Ovipositor strongly developed, shining fulvous, broad at base, surface convex.

Holotype ♀; 1 ♀ paratype *ex* lure traps in mangoes, Kamerunga Experiment Station, Cairns, Queensland, December, 1951, and February, 1952. (A. W. S. May).

Type in Queensland Museum, Reg. No. T. 5274.

This species somewhat resembles *A. javanensis* Perk. in general colouration but differs in the relative position of the medial postsutural stripe, the absence of a well-defined abdominal stripe, the markings on the face and the lack of infuscation on the posterior cross vein.