

TWO NEW DACINAE (*TRYPETIDAE*: *DIPTERA*) FROM QUEENSLAND

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SUMMARY

Two new species, *Strumeta bidentata* and *S. quadrata*, are described.

Strumeta bidentata n.sp.

(Figure 1)

A medium-sized species, pale reddish-brown to fulvous in general colour, devoid of black on the thorax, with pale fulvous costal cells, a definite brown basal band on the scutellum, a distinctive pattern of black markings on the abdomen and lobes on the apical segment of the ovipositor.

Male—Length 6.0 mm; wing 6.0 mm.

Female—Length, excluding ovipositor, 6.4 mm; wing 6.1 mm.

Head.—Vertical length 1.5 mm. *Frons* generally fulvous, no pronounced hump in the anterior medial region; length 1.4 times width; bristles: 1 *s.or.*, 2 *i.or.* *Antennae* fulvous, darker on outer surface of third segment; arista brown; length of segments: 0.16 mm, 0.27 mm, 0.7 mm. *Face* fulvous, shiny; length 0.46 mm; facial spot circular, diameter slightly less than width of apical segment of antenna. *Genae* and *occiput* fulvous; occipital row weak with 3 or 4 bristles each side. All cephalic bristles brown.

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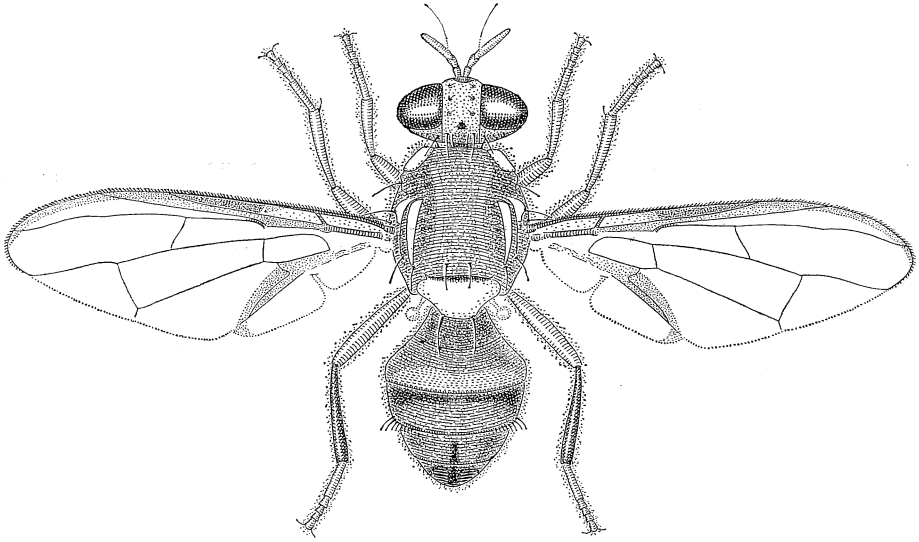


Fig. 1.—*Strumeta bidentata* (X9).

Thorax.—Broad in dorsal aspect; pale reddish-brown tending dark brown laterally before suture and along inner margin of each lateral post-sutural vitta, these darker areas lateral to a pair of bow-shaped thin, brown, shiny, longitudinal bands, each extending from the humeral callus to just short of the posterior extremity of each lateral post-sutural vitta. Yellow areas as follows: humeral and notopleural calli; a triangular mesopleural stripe with upper margin extending from wing base to a point half way between notopleural callus and anterior notopleural bristle and apex ending in a spot, narrower than notopleural callus, on upper portion of sternopleuron, and curved on its anterior margin; $\frac{7}{8}$ of upper and $\frac{1}{2}$ lower hypopleural calli (remainder brown); a moderately broad (as broad as notopleural callus) lateral post-sutural vitta narrowing to a point posteriorly and ending level with upper *p.sa.* bristle. *Scutellum* broad, robust, yellow except for a well defined brown basal band convex posteriorly (this band is broader than for most Queensland *Strumeta* species but is not as pronounced as in *S. halfordiae* (Tryon)). *Postnotum* pale red-brown, blotched with darker brown. *Bristles* as in *Strumeta*, all brown. *Legs* fulvous, except hind tibiae brown. *Wings* hyaline except for pale fulvous costal cells, fuscous costal band and narrow anal streak not attaining wing margin. Costal band narrow, narrower than stigma beyond extremity of $r_2 + 3$, and ending midway between $r_4 + 5$ and $m_1 + 2$. Setae on upper surface of $r_4 + 5$ ending at a point level with end of $r_2 + 3$. Microtrichia in outer quarter of second costal cell and a dense aggregation at end of $cu_1 + 1a$ in male. Proportion of second costal cell to stigma, 0.63:1. *r-m* dividing $m_1 + 2$ in proportion of 1.8:1. Anal cell extension in proportion to $cu_1 + 1a$, 2.1:1 in male and 1.3:1 in female. Supernumerary lobe strongly developed for a *Strumeta*.

Abdomen.—Not fused. First tergite brown; second tergite rich fulvous on anterior half, remainder whitish; remaining tergites rich fulvous except for a thin black band along the anterior margin of third (may be interrupted medially), paired shiny brown fulvous spots on fifth and a pronounced black, medial, longitudinal band on tergites four and five (this band is often lacking on the anterior half of the fourth tergite and may thicken appreciably in the posterior half of the fifth tergite). Pecten on third tergite of male. *Ovipositor* very strongly developed, basal segment *in situ* as long as fifth segment, conical, not flattened, shiny orange-brown; apical segment (aculeus) strongly chitinized, dark brown, peculiarly and conspicuously lobed at its tip (Figure 2).

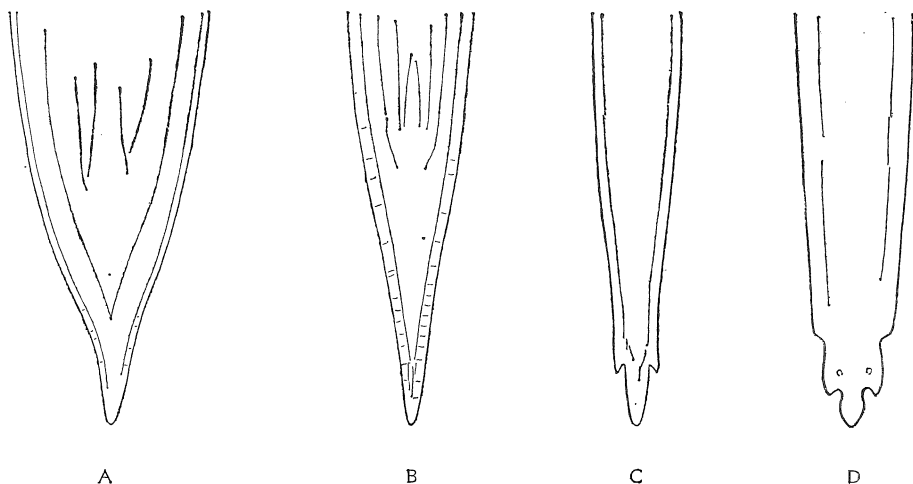


Fig. 2.—Tip of aculeus (X90) of A, *Strumeta pallidus* Perkins and May; B, *S. robiginosa* May; C, *Paratridacus expandens* (Walker); and D, *S. bidentata* n.sp.

Holotype male, allotype female, 1 male and 5 female paratypes, ex lure traps in citrus, Byfield, Queensland, October, 1961. (A. W. S. May).

3 male and 4 female paratypes, ex lure traps in citrus, Cairns, Queensland, October, 1953. (A. W. S. May).

Holotype, allotype and 5 paratypes in Queensland Museum; holotype Reg. No. T. 5890, allotype Reg. No. T. 5891, paratypes Reg. Nos. T. 5892-6.

In general colouration, *bidentata* may be confused with *pallidus* Perkins and May and *robiginosa* May. It differs from the former in the colour of the costal cells, the narrower costal band, and the stronger supernumerary lobe in the male; from the latter in the shape of the lateral post-sutural vittae; and from both in having a narrower mesopleural stripe, the characters of the scutellum and ovipositor and markings of the mesonotum and abdomen.

The unusually shaped aculeus readily distinguishes *bidentata* from all other Queensland *Strumeta*. *Paratridacus expandens* (Walker) has a lobed aculeus (see Figure 2). *S. froggatti* (Bezzi), *S. latifrons* (Hendel) and *S. propinquus* Hardy, not recorded from Queensland, also possess lobes on the aculeus (see Hardy and Adachi 1954: figs. 11, 13 and 21). None is as pronounced as those of *bidentata*. These three species may be separated from *bidentata* on readily discernible macroscopic characters.

***Strumeta quadrata* n.sp.**

(Figure 3)

A medium sized species, red-brown in general colour with a large oval facial spot, a narrow, parallel-sided mesopleural stripe, a broad elongate-rectangular lateral post-sutural vitta, a narrow costal band, clear costal cells, brown areas on apical half of each femur and a short medial black stripe on the abdomen.

Male—Length 6·7 mm; wing 6·1 mm.

Head.—Vertical length 1·6 mm. *Frons* fulvous, flattened; length 1·4 times width; bristles: 1 *s.or.*, 2 *i.or.*, black. *Antennae* fulvous except fuscous on outer surface of apical segment; length of segments: 0·21 mm, 0·36 mm, 0·72 mm. *Face* shiny, fulvous; length 0·5 mm; facial spot large, oval, black, shiny, in long axis equal to third length of antennal groove. *Genae* fulvous; genal bristle weak, pale, brown. *Occiput* fulvous; occipital row strong, black, 6-8 each side. Vertical bristles brown.

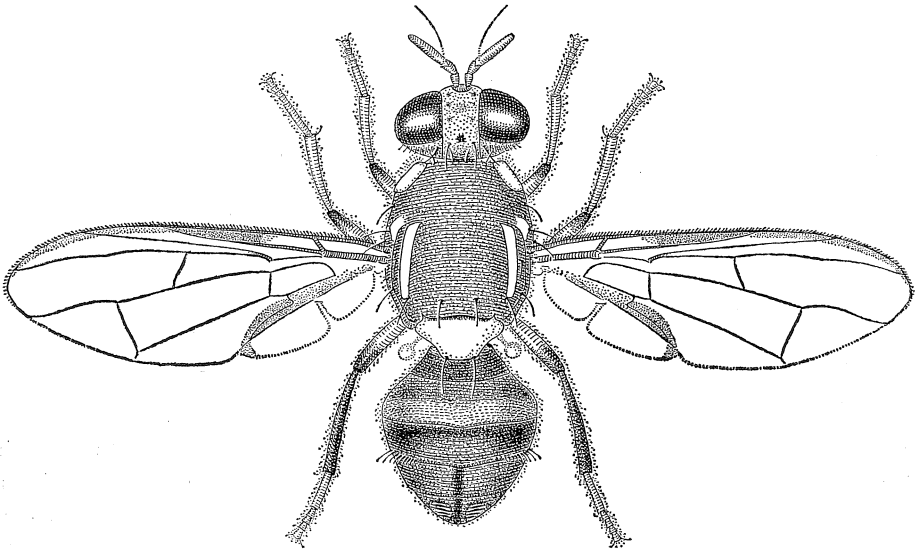


Fig. 3.—*Strumeta quadrata* (X8).

Thorax.—Rich red-brown except for a fuscous area beneath wing on each pleuron. Yellow markings as follows: humeral and notopleural calli; a narrow, more or less rectangular mesopleural stripe, only slightly wider than notopleural callus and ending in a spot of equal width on sternopleuron; a moderately broad, parallel-sided, almost rectangular lateral post-sutural vitta ending level with upper *p.sa.* bristle; $\frac{7}{8}$ of upper and $\frac{1}{2}$ of lower hypopleural calli (remainder fuscous). *Scutellum* yellow except for very narrow dark brown basal band. *Postnotum* red-brown. *Bristles* as in *Strumeta*, all brown. *Legs*: coxae red-brown; apical half of each femur brown; hind tibiae dark brown, remainder fulvous. *Wings*: hyaline except for narrow brown costal band, not as wide as stigma and ending just beyond extremity of vein $r_4 + 5$; and a narrow fuscous anal streak not attaining wing margin. Costal cells colourless with microtrichia only in extreme outer corner of second cell. Proportion of second costal cell to stigma, 0.63:1. *r-m* dividing $m_1 + 2$ in proportion of 1.7:1. Proportion of anal cell extension to $cu_1 + 1a$, 2.7:1. A definite supernumerary lobe, more pronounced than in *S. silvicola* May but weaker than for *S. tryoni* (Frogg.); and an aggregation of microtrichia at end of $cu_1 + 1a$.

Abdomen.—Not fused. First tergite fuscous. Anterior half of second tergite dark fulvous tending fuscous laterally, remainder whitish. Third tergite fuscous except posterior half of medial portion rich fulvous. Whole of fourth and fifth tergites rich fulvous except for moderately broad (not as broad as for *silvicola*) black medial band. Paired spots on fifth tergite shiny and slightly sunken. A pecten on third tergite.

Holotype male, ex trap charged with male fruit fly attractant†, Atherton, Queensland, March, 1962. (W. Yarrow).

1 male paratype, ex trap charged with ammonium carbonate lure, Brisbane, Queensland, February, 1952. (A. W. S. May).

1 male paratype* captured on flower of *Dendrobium superbiens* G. Reichb., El Arish, Queensland, October, 1959. (P. C. Benn).

49 male paratypes, ex traps charged with male fruit fly attractant†, Atherton, Byfield, Rita Island (near Ayr), Queensland, December, 1960 and January, February and March, 1962. (A. W. S. May and W. Yarrow).

Holotype and 10 paratypes in Queensland Museum; holotype Reg. No. T. 5897, paratypes Reg. Nos. T. 5898-5907.

† 1-p-hydroxyphenyl butan-3-one

* This specimen was wrongly identified as *S. pallidus*—see May, A. W. S. (1960).—*Qd J. Agric. Sci.* 17:p. 6

This species, in general appearance, is somewhat like *S. silvicola* but differs in having a much narrower costal band, a differently coloured abdomen, larger facial spots, a narrower mesopleural stripe, parallel-sided lateral post-sutural vittae, a stronger supernumerary lobe in the male and differently coloured legs.

Three other Queensland species—*S. bilineata* Perkins and May, *S. cacuminata* Hering and *S. pallidus*—also possess a somewhat similarly coloured abdomen. *S. quadrata* is separated from *bilineata* and *cacuminata* by the colouration of the mesonotum and shape of the lateral post-sutural vittae; from *pallidus* by the generally darker colouration and shape of the mesopleural stripe; and from all three by the colour of the legs, width of the costal band and characters of the medial longitudinal black band on the abdomen.

REFERENCE

- HARDY, D. E., and ADACHI, MARIAN S. (1954).—Studies in the fruit flies of the Philippine Islands, Indonesia and Malaya. Part I. Dacini (Tephritidae-Diptera). *Pacif. Sci.* 8:147-204.

(Received for publication September 5, 1962)