

TWO NEW SPECIES OF DACINAE (DIPTERA: TRYPETIDAE) FROM NEW BRITAIN

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Abstract

Two new species, *Asiadacus triangularis* and *Asiadacus nigrescens* are described and figured.

Asiadacus triangularis sp.n. (Fig. 1)

Types: NEW BRITAIN: *Holotype* male, 22 male *paratypes*, ex lure traps charged with methyl eugenol, December 1966. Collected by Sir Alan Mann. 2 male *paratypes* ex lure trap charged with 1-(p-hydroxyphenyl)-butan-3-one plus 1-(p-acetoxyphenyl)-butan-3-one, May 1967. Collected by D. F. O'Sullivan.

Holotype (Reg. No. T.6574) and 1 *paratype* (Reg. No. T.6575) in the Queensland Museum; 2 *paratypes* in the British Museum (Natural History); 2 *paratypes* in Australian National Insect Collection, C.S.I.R.O., Canberra; 2 *paratypes* in the Papua and New Guinea Public Museum and Art Gallery, Port Moresby; 2 *paratypes* in Dept of Agriculture, Stock and Fisheries, Konedobu, Papua; remaining 15 *paratypes* in Dept of Primary Industries, Brisbane, Queensland.

A medium sized species, generally fulvous in colour, with large facial spots, no post-sutural vittae but with a yellow triangle on mesonotum, first costal cell fulvous, second costal cell colourless, a narrow costal band, transverse infuscations, an anal streak and a black spot in the centre of fifth abdominal tergite.

Male.—

Length 5.4 mm; wing 5.3 mm.

Head.—Generally fulvous. Vertical length 1.4 mm. *Frons* of even width; length 1.5 times breadth; fulvous with no dark markings; bristles black: 1 *s.or.*, 2 *i.or.*; ocellar triangle black. *Face* with large circular spots reaching epistoma; length 0.65 mm; diameter of spot (0.23 mm) greater than width of third antennal segment. *Genae* fulvous, sub-ocular spot absent, bristle black. *Occiput* fulvous; occipital row weak, with 8-12 pale bristles each side. *Antennae* fulvous; arista with basal 1/3 fulvous (remainder dark brown); length of segments: 0.15 mm; 0.25 mm; 0.71 mm.

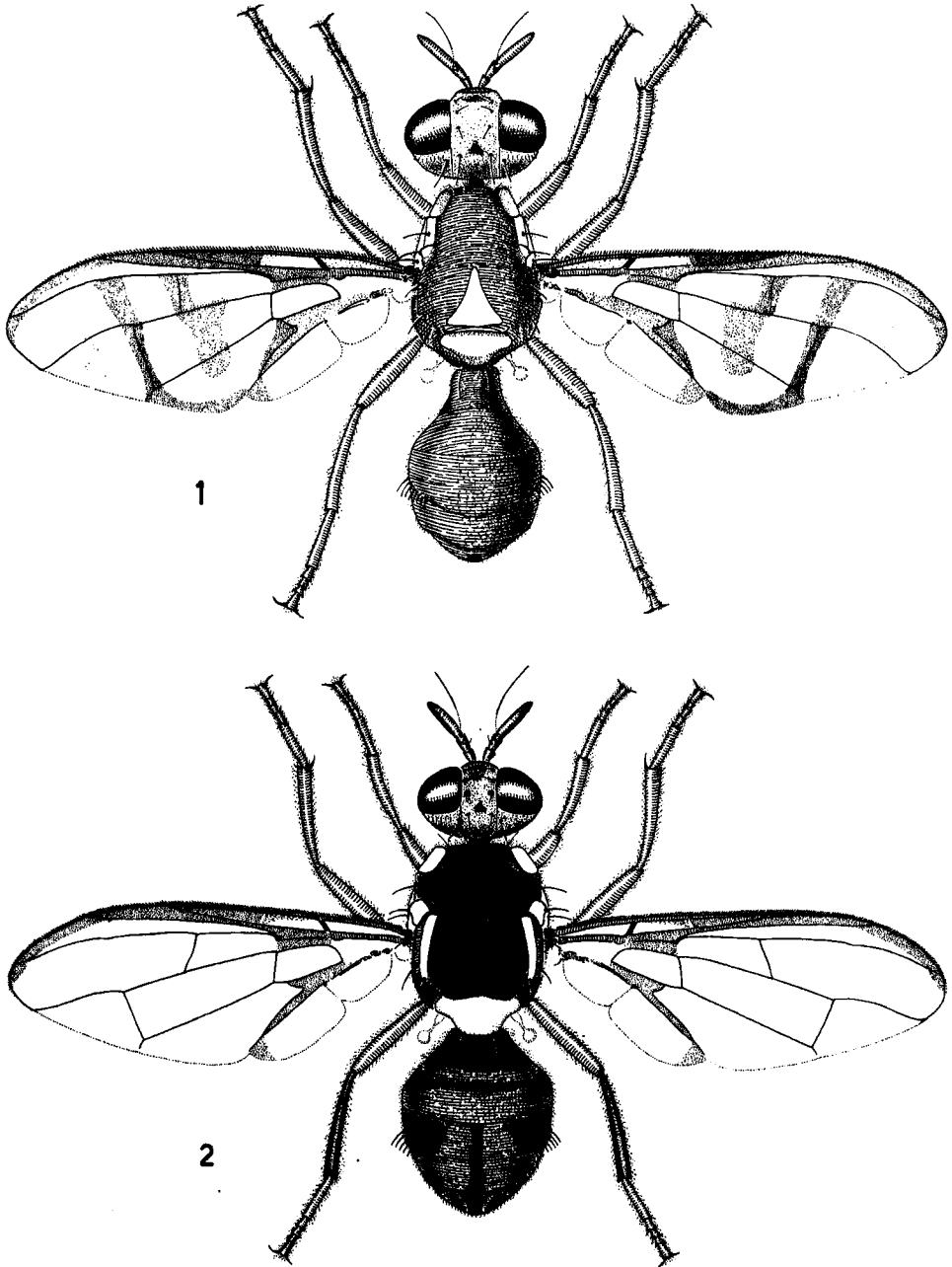
Thorax.—Fulvous, often with variable dark markings dorsally, which correspond with areas of attachment of flight muscles and vary with maturation of specimen. *Yellow markings* as follows: posterior 1/3 humeral calli; anterior 1/2 notopleural calli; band connecting humeral and notopleural calli; triangular mesopleural stripe reaching humeral callus above and continuing onto sternopleuron below as a transverse spot; upper 3/4 lower hypopleural calli (remainder of lower and the upper hypopleural calli fulvous); broad triangle on dorsal surface of mesonotum with base of triangle along posterior margin. *Postnotum* fulvous. *Scutellum* fulvous with yellow dorsally almost to posterior margin. *Bristles*: *sc.* 2, *prsc.* wanting, *p.sa.* 2, *a.sa.* 1, *mpl.* 1, *npl.* 2, *scp.* 4; bristles black, except upper *p.sa.* fulvous. *Legs* fulvous; middle tibiae each with an apical black spur. *Wings*: first costal cell fulvous, second costal cell colourless; sparse microtrichia in outer portion of second costal cell only; remainder of wing colourless, except for the following fuscous markings—narrow costal band widening slightly after crossing R_{2+3} and ending midway between extremities of R_{4+5} and M_{1+2} ; broad anal streak terminating at extremity of anal cell extension; transverse infuscation from R_{4+5} , enclosing outer median cross vein, the distal extremity of M_{3+4} and continuing along the wing margin to $Cu_1 + 1A$; infuscation enclosing r-m cross vein and widening into an irregular shape across veins M_{1+2} and M_{3+4} ; a very pale area around extremity of M_{1+2} . The second costal cell shorter than stigma in the proportion 0.6:1. r-m dividing M_{1+2} above discoidal cell in proportion of 1.5:1. Proportion of anal cell extension to $Cu_1 + 1A$, 2.6:1. A strong supernumerary lobe and a dense aggregation of microtrichia at the extremity of $Cu_1 + 1A$.

Abdomen.—Rounded; tergites free; colour fulvous with a black spot in the centre of fifth tergite; pecten present on third tergite.

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Comments

This species has been placed in the genus *Asiadacus* as defined by May (1963). It is similar in size and general body shape to *Asiadacus strigifinis* (Walker, 1861), but differs in shape of the yellow triangle on the mesonotum, larger facial spots, pattern of wing infuscation, absence of lateral post-sutural yellow vittae, and abdominal colouration. *A. triangularis* differs from *Asiadacus curvifer* (Walker) and *Asiadacus seguyi* (Hering) in size, body colouration and pattern of wing infuscation and from *Asiadacus emarginatus* (Perkins) and *Asiadacus pepisalae* (Froggatt) in



FIGS. 1, 2.—(1) *Asiadacus triangularis* sp.n. (x 10); (2) *Asiadacus nigrescens* sp.n. (x 9.5).

the presence of yellow triangle on mesonotum, pattern of wing infuscation and body colouration. *A. emarginatus* (Perkins) has smaller facial spots.

The *a.sa.* bristle is absent in three paratypes. The upper *p.sa.* bristle is weak.

Vestiges of an outer crossvein between $R_4 + 5$ and $M_1 + 2$ are present in three paratypes. Figure 3 is a drawing of the wing venation of one of these specimens.

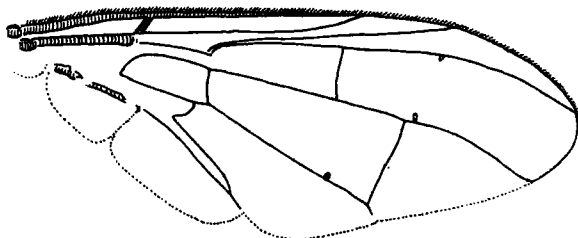


FIG. 3.—Wing venation of 3 paratypes of *Asiadacus triangularis* sp.n. showing vestiges of an outer crossvein between $R_4 + 5$ and $M_1 + 2$

Asiadacus nigrescens sp.n. (Fig. 2)

Types: NEW BRITAIN: *Holotype* male, 2 male *paratypes*, ex lure traps charged with methyl eugenol, December 1966. Collected by Sir Alan Mann.

Holotype (Reg. No. T.6576) in Queensland Museum; 1 *paratype* in British Museum (Natural History); 1 *paratype* in Dept of Primary Industries, Brisbane, Queensland.

A dark coloured, medium sized species, facial spots trapezoidal, thorax black with lateral post-sutural vittae, mesopleural stripe narrow, wing with a narrow costal band and an anal streak, costal cells colourless, distinct medial black stripe on last three abdominal tergites.

Male.—

Length 6.6 mm; wing 5.8 mm.

Head.—Generally fulvous. Vertical length 1.6 mm. Bristles black. *Frons* of even width; Length 1.57 times breadth; fulvous except fuscous around orbital bristles and tending fuscous on central raised hump; latter covered with short black setae; bristles fuscous: 1 *s.or.*, 2 *i.or.*; ocellar triangle black. *Face*, length 0.7 mm; with trapezoidal facial spots slightly drawn out to a point anteriorly; width of spot (0.18 mm) less than width of third antennal segment; colour fulvous; lunule darkened. *Genae* fulvous; medium sized, brown, sub-ocular spots present; bristle black. *Occiput* fulvous, yellow along eye margin; occipital row strong, 6 bristles each side. *Antennae* fulvous, with fuscous on the apex and outer surface of the third segment; a strong black bristle on the second segment; arista fulvous proximally (remainder black); length of segments: 0.25 mm; 0.33 mm; 0.78 mm.

Thorax.—Black, with brown below humeral calli and lateral to post-sutural vittae; yellow markings as follows: humeral calli; notopleural calli; narrow mesopleural stripe, slightly broader than notopleural callus above and continuing onto sternopleuron below as a transverse spot; upper hypopleural callus (posterior apex black); 5/8 lower hypopleural callus (remainder black); two moderately broad, lateral post-sutural vittae ending at the upper *p.sa.* bristle. *Postnotum* black. *Scutellum* pale yellow, except for narrow black basal band. *Bristles*: *sc.* 2, *prsc.* wanting, *p.sa.* 2, *a.sa.* 1, *mpl.* 1, *npl.* 2, *scp.* 4; all bristles well developed and black. *Legs* fulvous except for middle and hind coxae and hind tibiae fuscous, and front coxae red-brown; middle tibiae each with an apical black spur. *Wings*: costal cells colourless, with microtrichia in outer portion of second costal cell only; remainder of wings colourless except narrow fuscous costal band widening slightly after crossing R_{2+3} and ending midway between

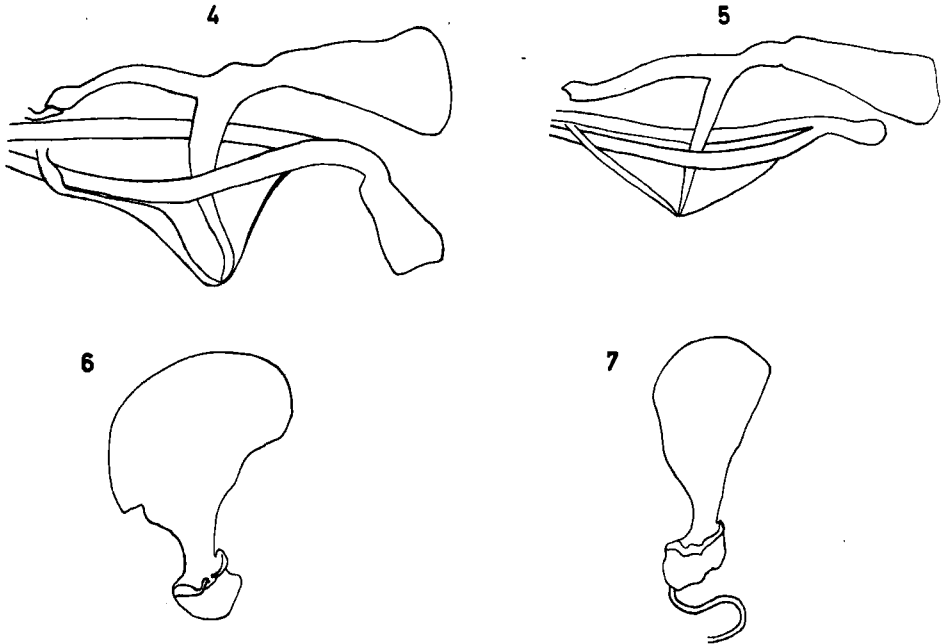
extremities of R_{4+5} and M_{1+2} , and a narrow fuscous anal streak ending at extremity of anal cell extension. A dense aggregation of microtrichia around extremity of vein $Cu_1 + 1A$. A strong supernumerary lobe. The second costal cell shorter than stigma in the proportion 0.8:1. r-m dividing M_{1+2} above discoidal cell in proportion of 1.4:1. Proportion of anal cell extension to $Cu_1 + 1A$, 2.2:1.

Abdomen.—Oval; tergites free; pecten present on third abdominal tergite. First tergite black; second tergite fulvous with a dark brown or black transverse line expanding into black areas laterally; third and fourth tergites reddish-brown with black laterally; fifth tergite dark amber with fuscous laterally; a prominent, medial, longitudinal, black band on last three tergites; a pair of shining spots on fifth tergite.

Comments

This species has been placed in the genus *Asiadacus* as defined by May (1963). It differs from *Asiadacus seguyi* (Hering) and *Asiadacus curvifer* (Walker) in size and in pattern of wing infuscation. *Asiadacus pepisalae* (Froggatt) and *Asiadacus strigifinis* (Walker) differ from *A. nigrescens* in pattern of wing infuscation, and *A. strigifinis* (Walker) has a medial post-sutural vitta. *Asiadacus emarginatus* (Perkins) differs from *A. nigrescens* in having a medial post-sutural vitta, a broad costal band, and lacking a medial abdominal stripe.

Differences are evident between characters of the male terminalia of *A. nigrescens* and *A. triangularis* (Figs. 4-7), including shape and size of fultella, width of vane, shape and size of sternal apodeme, and shape of the ejaculatory apodeme.



FIGS. 4-7.—Male terminalia: (4-5) lateral view of fultella and genital ring—(4) *Asiadacus nigrescens* sp.n., (5) *Asiadacus triangularis* sp.n.; (6-7) ejaculatory apodeme—(6) *A. nigrescens*, (7) *A. triangularis*.

ACKNOWLEDGEMENT

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REFERENCE

MAY, A. W. S. (1963).—An investigation of fruit flies (Fam. Trypetidae) in Queensland 1. Introduction, species, pest status and distribution. *Qd J. agric. Sci.* 20: 1-82.