

Syrphidae of Solomon Islands and Fiji (Insecta, Diptera)

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Abstract

Four syrphid species are recorded from Solomon Islands and Fiji. Male genitalia of *Axona chalcopyga* and *Melanostoma univittatum* are described and illustrated.

Introduction

Among the Diptera collected in Solomon Islands and Fiji by the junior author when he joined the Scientific Expedition of Kagoshima University Research Center for the South Pacific, 1982, the Syrphidae is represented by four species. All species, belong to four genera, have a wide distribution almostly throughout the Indo-Australian Region.

Systematic papers on the Syrphidae of Solomon Islands and Fiji are not very numerous, however, the majority of species occurring in these islands, including these four species, can be identified from the comprehensive works by De Meijere (1908), Curran (1928) and Bezzi (1928).

In the present paper, four species are listed, and the male genitalia of *Axona chalcopyga* and *Melanostoma univittatum* are described and illustrated.

I. Solomon Islands

Subfamily Milesiinae
Tribe Eumerini

1. *Eumerus aurifrons* (Wiedemann, 1824)

Pipiza aurifrons Wiedemann, 1824. *Analecta Ent.*, p. 32.

Eumerus aurifrons: De Meijere, 1908. *Tijdschr. v. Ent.*, 51: 218.; Brunetti, 1923.

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Fauna Brit. Ind., 3: 252.; Curran, 1928. J. Fed. Malay St. Mus., 14(2): 188.; Curran, 1931a. J. Fed. Malay St. Mus., 16(3,4): 311.; Knutson et al., 1975. Cat. Dipt. Orient. Reg., 2: 341.

Specimen examined: 1 ♀, Henderson, Honiara, Guadalcanal Is., 7. xii. 1982, K. Kusigemati leg.

Distribution: Taiwan, Philippines, Ceylon, India, Malaysia, Sumbawa, Australia.

Tribe Eristalini

2. *Axona chalcopyga* (Wiedemann, 1830)

Eristalis chalcopyga Wiedemann, 1830. Aussereurop. zweifl. Insekt., 2: 178.

Eristalis maxima Doleschall, 1857. Natuurk. Tijdschr. Ned-Indie, 14: 405.

Eristalis transpositus Walker, 1860. Trans. ent. Soc. Lond. (n. Ser.), 5: 289.

Eristalis volucelloides Walker, 1864. J. Linn. Soc. Lond., 7: 212.

Axona chalcopyga: Curran, 1928. J. Fed. Malay St. Mus., 14(2): 307.; Curran, 1931a. J. Fed. Malay St. Mus., 16(3,4): 338.; Curran, 1931b. J. Fed. Malay St. Mus., 16(3,4): 376.; Shiraki, 1963. Ins. Micronesia, 13(5): 177.; Knutson et al., 1975. Cat. Dipt. Orient. Reg., 2: 346.

Shining bluish black to purplish black, moderately large species, with yellowish orange marking on apical portion of abdomen.

Male. Head as wide as thorax; frons, face and cheek subshining purplish black, lateral portion of face densely grey pollinose; hairs on ocellar tubercle and frons black, those on lateral portion of face pale yellow; occipital hairs grey to white. Eye bare, facets on dorsal portion distinctly larger than ventral ones. Antenna brown to blackish brown, 3rd segment greyish brown pollinose; arista long and slender, bare.

Thorax subshining purplish black, mesonotum with a pair of grey pollinose stripes in the middle from anterior margin to beyond the middle, and densely with short black hairs; scutellum shining purplish black, densely covered with minute black hairs. Wing brown on anterior 1/2, hyaline with brownish tinge on posterior 1/2; middle portion of 2nd basal cell longitudinally hyaline. Legs brown to dark brown with purplish tinge, slender, clothed with black and golden hairs.

Abdomen subshining purplish black on 1st, 2nd and middle portion of 3rd terga; posterior margin and lateral portions of 4th tergum and entire 5th tergum yellowish orange; abdominal sterna shining purplish black.

Male genitalia: Hypandrium trapezoidal in lateral view, anterolateral portion produced ventrally. Cercus large, sclerotized, subquadrate in lateral view. Surstylus large, basal portion strongly produced ventrally, ventral portion curved inwardly and pointed at tip; posterior portion broad with a median ridge, and with many black bristles externally. Hypandrium with a moderately broad membraneous area on its dorsal portion, ventrolateral portion of hypandrium with 5 - 6 short hairs near middle,

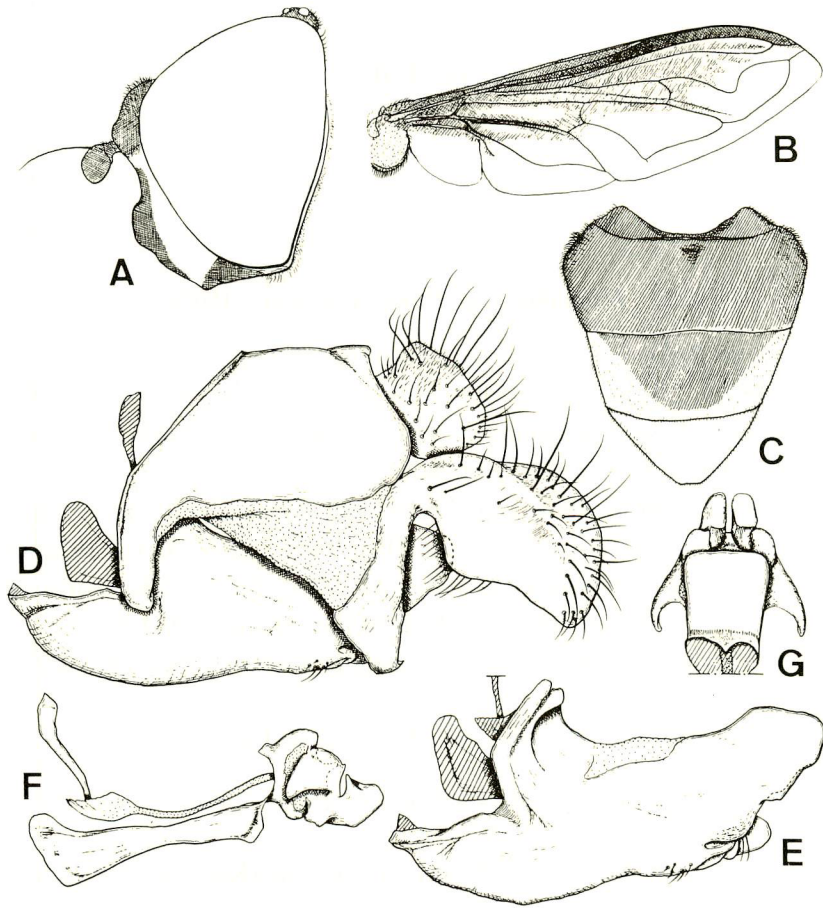


Fig. 1. *Axona chalcopyga*, male. — A, Head in lateral view; B, right wing; C, abdomen in dorsal view; D, whole genitalia in lateral view; E, hypandrium in lateral view; F, aedeagus and associated parts in lateral view; G, aedeagus in dorsal view.

and with 2 ventral hairs on its apical 1/3. Basal portion of aedeagus with a narrow membranous area on each side; middle portion with a pair of triangular plates which are weakly curved inwardly on its apical portion, and with a pair of small subquadrate plates on its ventral portion; distal portion of aedeagus composed of a pair of small subquadrate plate, anterodorsal portions of these plates slightly projecting towards dorsally.

Length: Body 19 mm; wing 15 mm.

Specimen examined: 1♂, Lungga, Honiara, Guadalcanal Is., 7. xii. 1982, K. Kusigemati leg.

Distribution: Thailand, Burma, Laos, Malaysia, Philippines, Borneo, Guadalcanal, Micronesia.

II. Fiji

Subfamily Syrphinae Tribe Syrphini

1. *Ischiodon scutellaris* (Fabricius, 1805)

Scaeva scutellaris Fabricius, 1805. Syst. Antl., p. 252.

Syrphus scutellaris: Wiedemann, 1830. Aussereurop. zweifl. Insekt., 2: 130.

Sphaerophoria scutellaris: De Meijere, 1908. Tijdschr. v. Ent., 51: 288.

Ischiodon trocanterica Sack, 1913. Ent. Mitt., 2: 6.

Melithreptus ogasawarensis Matsumura, 1916. Ent. Mag., Kyoto, 2(1): 23.

Ischiodon scutellaris: Brunetti, 1923. Fauna Brit. Ind., 3: 97.; Bezzi, 1928. Dipt. Fiji Is., p. 72.; Curran, 1928. J. Fed. Malay St. Mus., 14(2): 243.; Hull, 1929. Ins. Samoa, 6: 192.; Curran, 1931a. J. Fed. Malay St. Mus., 16(3,4): 321.; Shiraki, 1963. Ins. Micronesia, 13(5): 132.; Knutson et al., 1975. Cat. Dipt. Orient. Reg., 2: 315

Epistrophe magnicornis Shiraki, 1963. Ins. Micronesia, 13(5): 141.

Specimens examined: 2 ♂♂, Macuata, Dreketi, Vanua Levu, 14. xii. 1982 (emerged), K. Kusigemati.

The larvae of this species fed on *Toxoptera citricidus* (Kirkaldy) on *Citrus sinensis* Osbeck, at Macuata, Dreketi.

Distribution: South East Asia to Japan (Kyushu, Ogasawara, Ryukyu), Hawaii, Micronesia, Australia.

Tribe Melanostomatini

2. *Melanostoma univittatum* (Wiedemann, 1824)

Syrphus univittatum Wiedemann, 1824. Analecta Ent., p. 36.

Syrphus planifacies Macquart, 1848. Dipt. Exot. Suppl., 3: 43.

Melanostoma planifacies: De Meijere, 1908. Tijdschr. v. Ent., 51: 313.

Melanostoma univittatum: Brunetti, 1915. Rec. Ind. Mus., 11: 208.; Brunetti, 1923. Fauna Brit. Ind., 3: 50.; Bezzi, 1928. Dipt. Fiji Is., p. 70.; Curran, 1928. J. Fed. Malay St. Mus., 14(2): 257.; Hull, 1929. Ins. Samoa, 6: 191.; Curran, 1931a. J. Fed. Malay St. Mus., 16(3,4): 327.; Knutson et al., 1975. Cat. Dipt. Orient. Reg., 2: 325.

Head black, distinctly wider than thorax; eye bare, frons shining, face and lateral portion of frons thinly greyish yellow pollinose. Hairs on ocellar tubercle, frons and

face pale brown to pale yellow; occipital hairs whitish above, yellowish below. Antenna yellow, 3rd segment with dense yellow piles.

Thorax subshining black, pleura thinly greyish yellow pollinose, clothed with short yellow hairs. Wing hyaline, with brownish tinge. Legs yellow to brownish yellow; hairs on legs yellow, hairs on posterior surfaces of anterior and middle femora, and entire surface of posterior femur distinctly longer than those of other portions.

Abdomen nearly parallel-sided, 1st tergum black with greyish yellow pollinosity, 2nd to 5th terga yellowish orange, 2nd and 3rd terga with a narrow longitudinal median black marking, posterolateral corners of these terga also black; posterior margins of 4th and 5th terga black; following abdominal segments subshining black, 7th and 8th sterna well developed.

Male genitalia: Epandrium small, cercus large and weakly sclerotized; surstylus very long and slender, subparallel, subacute apex, with 5-6 ventral bristles at the middle, and with several short hairs on lateral and inner surfaces. Hypandrium excavated on ventrolateral and dorsolateral surfaces on its posterior 1/3-1/2; superior lobe long and slender, anterodorsal and ventral portions of inner surface projecting into small teeth, inner surface of the lobe membranous on its anteroventral 1/2.

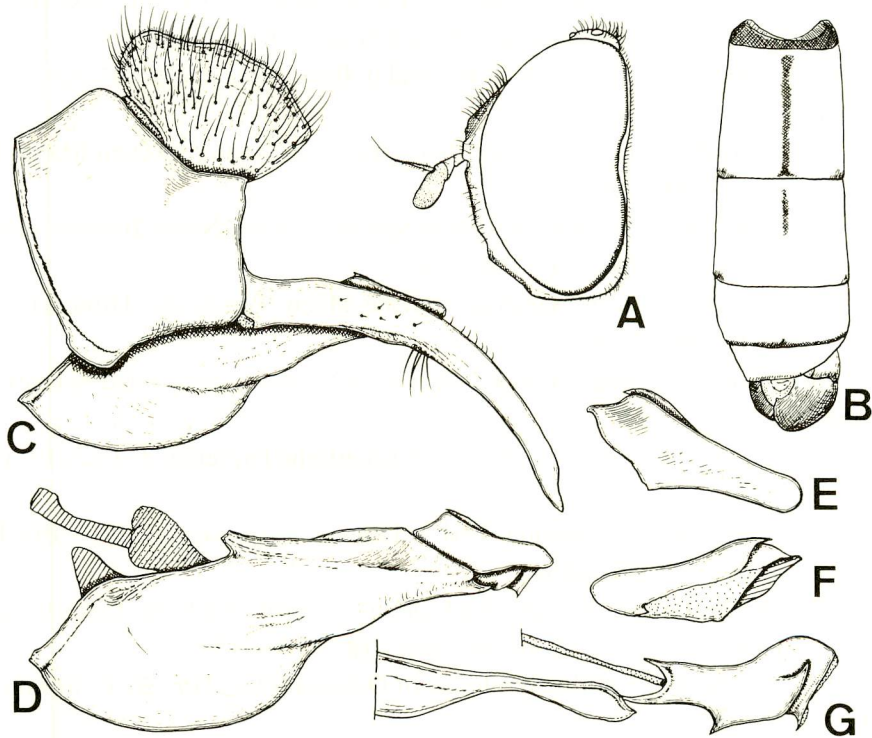


Fig. 2. *Melanostoma univittatum*, male. — A, Head in lateral view; B, abdomen in dorsal view; C, whole genitalia in lateral view; D, hypandrium, superior lobe and aedeagus in lateral view; E, left superior lobe in lateral view; F, same in inner view; G, aedeagus and associated parts in lateral view.

Aedeagus simple, tubular, posterior 1/3 - 1/2 weakly compressed laterally, with a pair of lateral flanges, dorsal and ventral tips of the flange pointed.

Length: ♂, body 6.0 - 7.5 mm, wing 5.5 - 6.5 mm; ♀, body 6.5 - 7.0 mm, wing 6.0 - 6.5 mm.

Specimens examined: [Viti Levu]. 15♂♂ 7♀♀, Ngaloa, Nuku, 27. xi. 1982, K. Kusigemati leg.; 1♀, Navua, Veivatuloa, 27. xi. 1982, K. Kusigemati leg.; 1♀, Korotongo, Sigatoka, 27. xi. 1982, K. Kusigemati leg.; 1♂, Ngaloa, Nuku, 28. xi. 1982, K. Kusigemati leg. [Vanua Levu]. 3♂♂ 5♀♀, Mbatir, Dreketi, 29. xi. 1982. K. Kusigemati leg.

Distribution: Throughout South East Asia, Fiji, New Caledonia, Samoa.

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