

REDESCRIPTION OF *STETHORUS OBSCURIPENNIS* (LEA) (COLEOPTERA: COCCINELLIDAE) FROM NORFOLK ISLAND

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Abstract

Scymnus obscuripennis Lea from Norfolk Island is redescribed and transferred to *Stethorus* Weise.

Introduction

Houston (1980) recorded 4 species of *Stethorus* Weise from Australia, while Chazeau (1979) noted 10 species from Oceania. *Stethorus obscuripennis* (Lea), redescribed below, is the only member of this genus recorded from Norfolk Island.

Stethorus obscuripennis (Lea) comb. n. (Figs 1-8)

Scymnus obscuripennis Lea, 1929: 243-244.

Types.—*Holotype* ♀, on card with 2 other specimens with "TY" handwritten beneath holotype, labelled "obscuripennis" handwritten, "Lea, TYPE" printed and "Norfolk I." handwritten on small white label and below this a larger white label with "I. 11761 *Scymnus obscuripennis* Lea Norfolk I." handwritten and "TYPE" handwritten in red ink. *Paratypes*: 2 ♂♂, 2 ♀♀, same data as holotype (1 ♂ remounted on separate card with genitalia in vial below specimen, 1 ♀ remounted on slide); 2 ♂♂, 2 ♀♀, labelled "Norfolk I, A. M. Lea" printed on green label, "Co-type" printed on white label and below these a larger white label with "19888 *Scymnus obscuripennis* Lea Norfolk I." handwritten and "Cotype" handwritten in red ink (2 ♂♂ remounted in separate vials with genitalia dissected out, 1 ♀ remounted on separate card with genitalia between coverslips below specimen). All specimens in South Australian Museum, Adelaide.

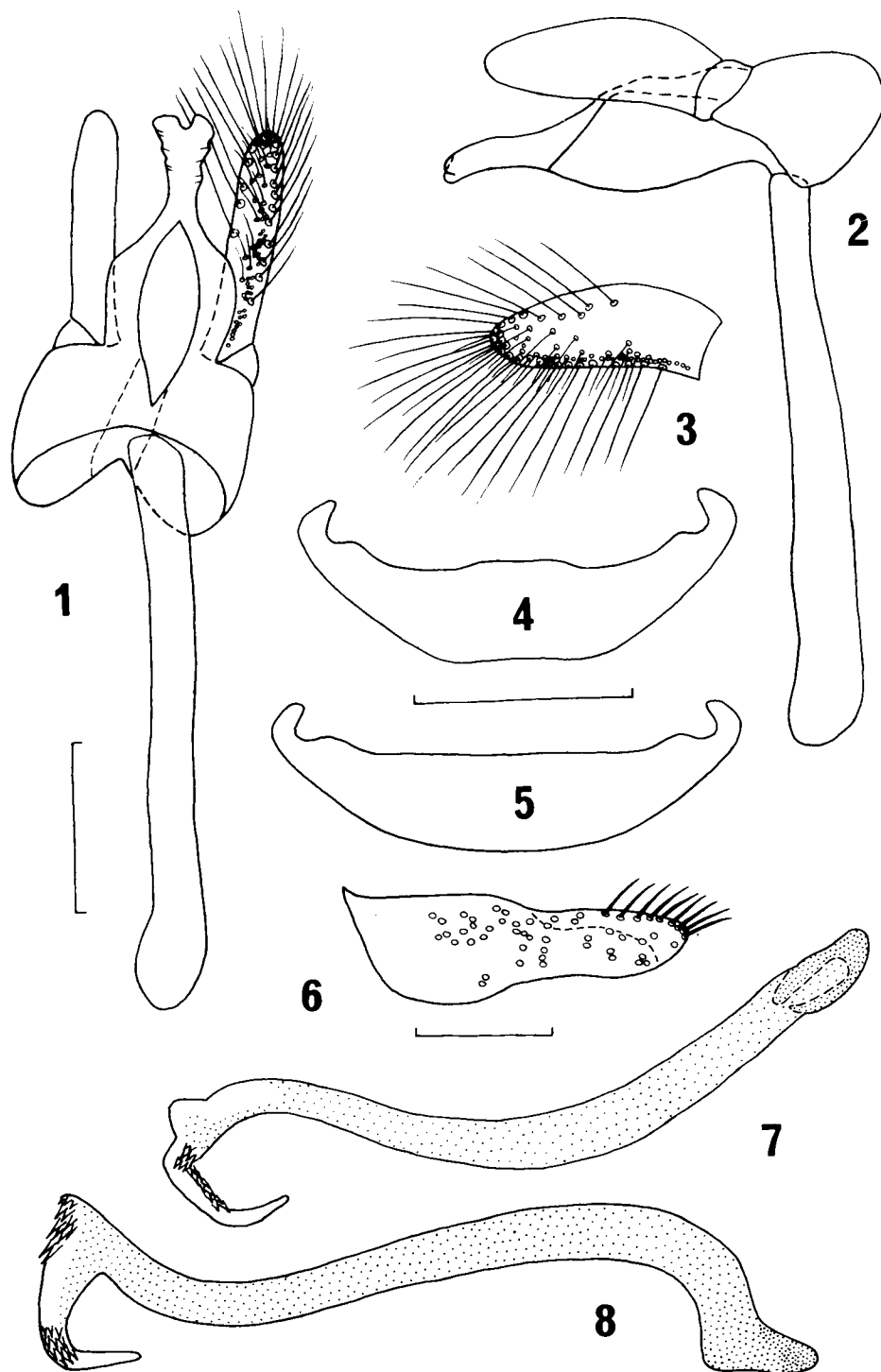
Adult

Coloration.—Head, pronotum and elytra light to dark reddish brown; pronotum usually darker than elytra; apex of elytra yellow; anterior part of head between eyes yellow, size of this area varying from anterior one-third to most of area between eyes, usually more extensive in males. Body reddish black to reddish brown ventrally with mid and hind coxae slightly lighter; hypomeron, fore coxae and epipleura yellow brown; most of abdominal sternite 6 except anterior border and often posterior part of sternite 5 yellow or light brown; labrum, antennae, mouthparts and legs yellow.

Body.—Length 1.23-1.31 mm, width 0.78-0.88 mm. Elytra with long, dense, subdepressed to semierect pubescence; body with short, depressed pubescence ventrally. Elytral punctures small to medium, shallow and closely spaced; closer on pronotum. Ventral punctures small, shallow and closely spaced but smaller and sparse on midposterior part of metasternum. Abdominal sternites and metasternum reticulate laterally; metasternum with many narrow, shallow, transverse grooves medially [similar to those of *Stethorus histrio* Chazeau (see Chazeau *et al.* 1974)]. Femoral line incomplete, extending about three-quarters distance between hind coxa and posterior margin of abdominal sternite 1; anterior area within femoral line punctate and sometimes also lightly reticulate, posterior half smooth. Posterior margin of abdominal sternite 6 shallowly convex or truncate in females (Fig. 5), shallowly concave in males (Fig. 4). Wings similar to those of *S. histrio* (see Britton and Lee 1972, Fig. 10); with R1 present, R3 not reaching wing margin, and Mr fused to M4 + Cu for most of its length but detached proximally for a longer distance (about one-quarter length of Mr) than shown in that Fig.

Female genitalia.—Genital plates curved and twisted, so that inner half is almost at right angles to outer half (Fig. 6 shows plate flattened out on slide); pores on most of plate except outer quarter; plate doubled over along inner margin which has 5-13 setae. Sclerotised spermatheca absent.

Male genitalia.—Sipho in lateral view (Fig. 8) with short almost right-angled curve basally, then proximal two-thirds shallowly curved and distal one-third more strongly curved in opposite direction; with apical appendix recurved at right angles with row of spines dorsally on distal edge, then curved sideways with rows of spines along inner edge and finally apex curved back towards siphon (appendix membranous except for light sclerotisation on proximal edge of basal part); siphonal capsule small with large outer lobe. Siphon in dorsal view (Fig. 7) shallowly curved in basal one-third, median part strongly curved sideways, and apical part curved in opposite direction with side opposite apical appendix membranous with a distal dilation. Trabes longer than tegmen (Figs 1-2) and slightly expanded distally. Basal piece wider than long, depth slightly shorter than length. Median lobe wide (about half length) and deep basally, distal half narrow with a slightly expanded and notched apex. Parameres deeper than wide and slightly shorter than median lobe; with setae and pores on inner side (Fig. 3), most pores on ventral edge with fewer distally, long setae along most of ventral edge and distal half of dorsal submargin, short setae along submarginal ventral edge and also medially on distal part.



FIGS 1-8—*Stethorus obscuripennis* (Lea): (1) ♂, tegmen and trapes, ventral aspect (setae and pores shown on 1 paramere only); (2) ♂, tegmen and trapes, lateral aspect (setae and pores of parameres not shown); (3) ♂, parameres, inner lateral aspect; (4) ♂, abdominal sternite 6; (5) ♀, abdominal sternite 6; (6) ♀, genital plate; (7) ♂, siphon, dorsal aspect; (8) ♂, siphon, lateral aspect. (Scales = 0.1 mm for 1-3, 7-8; = 0.2 mm for 4-5; = 0.05 mm for 6.)

Comments

S. obscuripennis has the convex prosternum, without carinae, produced forward in an arch anteromedially characteristic of *Stethorus* species. The shape of the median lobe and the siphon is unusual but the male genitalia are most similar to those species with the apex of the median lobe strongly convergent and narrowly notched, e.g. *Stethorus indira* Kapur from India, *S. guangxiensis* Pang and Mao from China and *S. gutierrezii* Chazeau from the New Hebrides. In common with *S. obscuripennis*, the latter 2 species also have incomplete femoral lines and a siphonal capsule with a large outer lobe. The female genital plates of *S. obscuripennis* are similar to those of *S. gutierrezii* and *S. indira*, although the marginal setae are more extensive in the latter. In addition the plates of *S. indira* are curved and twisted in a similar manner to those of *S. obscuripennis* (this condition is not mentioned in Chazeau's description of *S. gutierrezii*).

Except for its lighter coloration, *S. obscuripennis* is externally similar to *S. histrio*, and keys to *S. histrio* (despite some minor discrepancies) in the key to adults of Australian species of *Stethorus* (Houston 1980). It can be included in this key by substituting the number "4" for "**histrio** Chazeau" and adding the following couplet:

4. Trochanters and femora light to dark brown; antennae and mouthparts light brown (sometimes yellow); area within femoral line punctate and reticulate except along smooth inner posterior edge (Houston 1980, Fig. 28); apex of elytra black or brown; male abdominal sternite 6 truncate posteriorly **histrio** Chazeau
Trochanters, femora, antennae and mouthparts yellow; anterior half of area within femoral line punctate with no or only light reticulation, posterior half smooth; apex of elytra yellow; male abdominal sternite 6 slightly concave posteriorly . . . **obscuripennis** (Lea)

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