

A NEW SPECIES OF THE *CORACINA* GROUP, GENUS *DROSOPHILA* FALLEN (DIPTERA: DROSOPHILIDAE)

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Abstract

Drosophila (*Scaptodrosophila*) *ellenae* sp. n. is described from Jabiru, Northern Territory. It is a member of the *coracina* species-group, which now includes the Japanese *D. coracina* Kikkawa and Peng and nine other Australian species. A key to the Australian species of the group is provided.

Introduction

The Australian *Drosophila* fauna (Bock 1976) includes a small number of species in the dominant subgenus *Scaptodrosophila* Duda collectable about baits that include rotting fruits or (less effectively) vegetables. Most such species are members of the *coracina* species-group (Bock and Parsons 1978); *D. coracina* Kikkawa and Peng is Japanese, but the remaining species of the group are Australian and range from northern Queensland to southwestern Western Australia. The previously known Australian species of the *coracina* group are *D. lativittata* Malloch, *D. enigma* Malloch, *D. specensis* Bock, *D. cancellata* Mather, *D. novamaculosa* Mather, *D. subnitida* Malloch, *D. nitidithorax* Malloch and *D. howensis* Parsons and Bock. *D. lativittata* and *D. enigma* are distributed from southern Queensland to southern Victoria and are common urban species. *D. specensis* occurs in rain forests from northern Queensland to northern New South Wales. *D. cancellata* has been collected in rain forests of northern and southern Queensland and southern New South Wales, but appears to be a very rare species. *D. novamaculosa* is known only from the type locality (Moggill, near Brisbane, Queensland). *D. subnitida* ranges from southern Queensland to central New South Wales and *D. howensis* is known only from, and appears to be endemic to, Lord Howe Island (Parsons and Bock 1979). *D. nitidithorax* is restricted to southwestern Western Australia.

Flies recently received from Jabiru, Northern Territory, represent the new species of the *coracina* group described below.

Drosophila (*Scaptodrosophila*) *ellenae* sp. n. (Figs 1,2)

Types. Holotype ♂ and paratypes, four ♂♂, four ♀♀, pinned ex ethanol; paratypes, 12 ♂♂, 13 ♀♀, in ethanol; all from Jabiru, Northern Territory, 23.viii.1975, swept over compost heap, D. H. Colless. Holotype, one pinned ♂, one pinned ♀ and specimens in ethanol in Australian National Insect Collection, CSIRO, Canberra; two pinned ♂♂ and two pinned ♀♀ in Australian Museum, Sydney; one pinned ♂ and one pinned ♀ in La Trobe University, Bundoora.

Male and female

Distinguishing features. Arista large. Carina prominent, nose-like. Thorax tan, with weak darker lateral band or coloration. Abdominal tergites tan anteriorly, darkened apically.

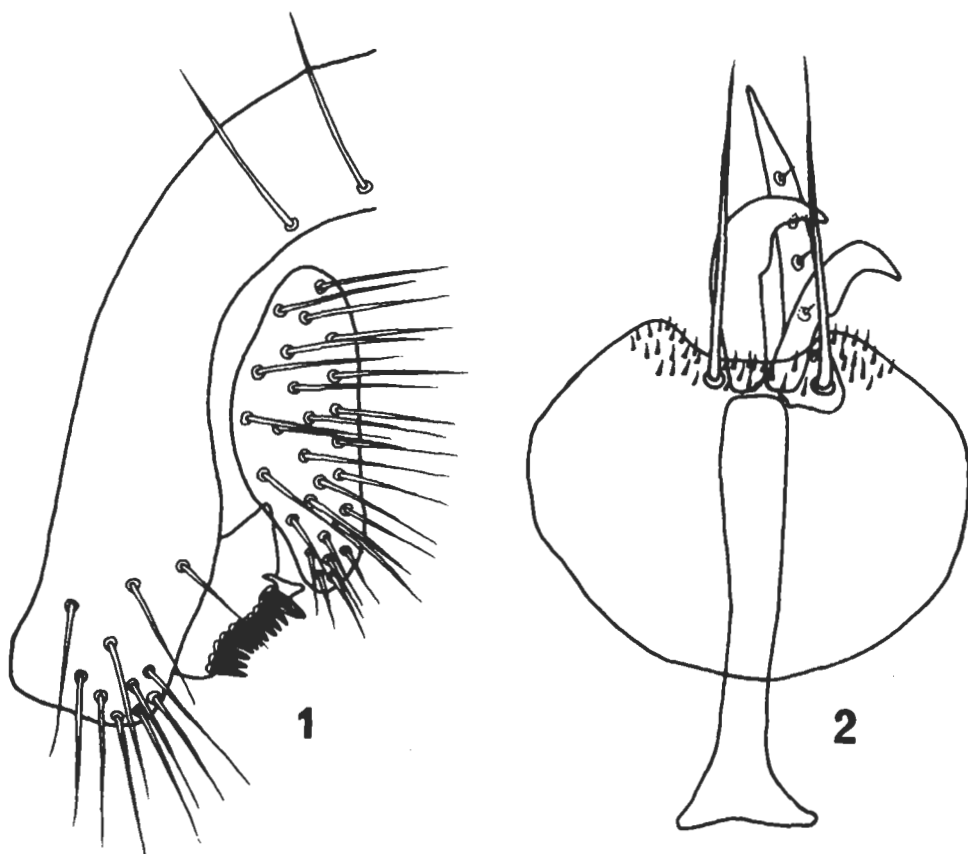
Body length.— 1.7 mm (holotype), 1.7-2.1 mm (paratype range).

Head. Arista very large, with four long curved rays above and two long straight rays below plus terminal fork. Front dark tan; periorbits paler. Antennal segments 2 and 3 tan, 3 very slightly dusky. Carina well developed and protuberant, but narrow, smoothly rounded. Cheek curved, not widened in posterior corner, greatest width 0.1 times greatest diameter of eye. Eyes with short dense pile. Orbital bristles in ratio 5 : 2 : 5; anterior reclinate orbital lateral to proclinate orbital. Ocellar, vertical and postvertical bristles large.

Thorax. Mesonotum tan. Pleura tan with weak longitudinal darker band across middle of mesopleuron and pteropleuron. Halteres pale tan. Acrostichal hairs in eight rows in front of dorsocentral bristles, four irregular rows between dorsocentrals. Prescutellar bristles weakly developed. Anterior dorsocentrals close to posterior dorsocentrals, ca 0.5 length of latter. Anterior scutellar bristles ca 0.5 length of posterior scutellars. Sternopleuron with three large subequal bristles and row of fine hairs. Legs tan. Preapical bristles on all tibiae; apical bristles on fore and mid tibiae only.

Wings.— hyaline. Wing indices (Bock 1976): C-index 1.6, 4V-index 2.7, 5X-index 3.5, M-index 1.0. Third costal section with heavy setation on basal 0.8. Wing length (holotype) 1.4 mm.

Abdomen. Tergite 1 tan. Tergites 2-4 tan anteriorly, with infuscation posteriorly slightly weakened in midline. Incurved portion of tergite 2 dusky; incurved portions of tergites 3-4 dusky laterally, pale tan



FIGS 1,2 *D. ellenae*, male genitalia; (1) external genitalia; (2) internal genitalia (one parandrite only shown).

medially. Tergite 5 tan anteriorly, strongly infuscated posteriorly; incurved portion dusky laterally, pale tan medially. Tergite 6 strongly infuscated except at anterior margin; incurved portion dusky.

Male genitalia.—(Figs 1, 2).—External genitalia with micropubescence except on clasper (not shown in Fig. 1). Clasper with row of closely packed black medial teeth. Hypandrium shallow. Aedeagus bifid, with long basal apodeme. Parandrites long, pointed, with minute sensilla.

Female genitalia. Egg guide rounded apically, with marginal teeth.

Discussion

Morphologically, the species of the *coracina* group may be characterised as follows: body length up to ca 3.5 mm; arista with three to four rays above and two to three rays below plus terminal fork; carina smoothly rounded, nose-like; prescutellar bristles developed; wings hyaline or with brownish tinge, without patterning; hypandrium of male genitalia with pair of very large spines. The species of the group are most readily distinguished by colour and pattern. *D. ellenae* most closely resembles *D. specensis* and *D. howensis* in possessing an unpatterned brown mesonotum (the median mesonotal band which characterises *D. enigma* is also undeveloped in young specimens of that species); *D. ellenae* is distinguished from the latter three species by its darker pleural coloration, its smaller size and different abdominal pattern. A key to the Australian species of the *coracina* group is given below.

Key to Australian species of the *coracina* species-group

- | | |
|--|---|
| 1. Mesonotum with distinct pattern of spots and/or stripes | 2 |
| Mesonotum unicolorous | 5 |

2. Mesonotum dusky, with two pairs of pale spots anteriorly in extended lines of dorsocentral bristles and several additional spots lateral to these **novamaculosa**
 Mesonotum with longitudinal band(s) or more complex pattern than above 3
3. Mesonotum dusky, with complex pattern of pale longitudinal streaks not extending full length of mesonotum **cancellata**
 Mesonotum with median longitudinal band or stripe extending entire length 4
4. Mesonotum pale to midbrown, with median longitudinal greyish band encompassing middle four rows of acrostichal hairs .. **enigma** (part)
 Mesonotum dusky with median longitudinal pale streak between middle two rows of acrostichals and additional pale streak on each side **lativittata**
5. Entire body glossy black **nitidithorax**
 Body pale to dusky black, not shining 6
6. Wings with distinct brownish tinge 7
 Wings hyaline 8
7. Abdominal tergites 2-4 with apical black bands clearly interrupted in midline **specensis**
 Abdominal tergites 2-4 darkening posteriorly, without clearly differentiated bands interrupted in midline. **howensis**
8. Mesonotum dusky **subnitida**
 Mesonotum pale to midbrown 9
9. Anterior abdominal tergites with clearly differentiated apical bands interrupted in midline **enigma** (part)
 Anterior abdominal tergites darkening posteriorly, without clearly differentiated apical bands interrupted in midline. **ellenae**

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