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Notes on Australian *Laius* Guérin-Méneville, *Dicranolaius* Champion and *Intybia* Pascoe with description of new species related to *Dicranolaius c-purpureus* (Lea) (Coleoptera: Melyridae: Malachiinae)

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Abstract

Remarks on *Laius* Guérin-Méneville and *Dicranolaius* Champion are provided. *Laius falcifer* Champion, 1921 is designated as the type species of *Dicranolaius* Champion, 1921. *Dicranolaius bellulus* is attributed to Boisduval (1835) not to Guérin-Méneville (1830). *Dicranolaius c-purpureus* (Lea) is redescribed and two closely related new species are described: *D. weiri* sp. n., and *D. similis* sp. n. *Intybia* Pascoe, 1866 is recorded from Australia for the first time and *Laius filamentarius* Lea, 1917 is regarded as member of *Intybia* comb. n..

Key words: Coleoptera, Melyridae, Malachiinae, *Laius*, *Dicranolaius*, *Intybia*, Australia, taxonomy, new species

Introduction

The flower beetles of the subfamily Malachiinae are usually easily recognised among other Australian beetles due to their brightly coloured surfaces and lateral eversible vesicles that become inflated and brightly red when the beetle is disturbed (Lawrence and Ślipiński, 2013). The Malachiinae have been popular subject of taxonomic research in the last 100 years, mostly due to the concerted efforts of Walter Wittmer and Alfons Evers who described a large number of genera and species from all over the world.

The Australian Melyridae were extensively studied only at the beginning of the 20th Century by Arthur M. Lea who described a large number of new species and reviewed the taxa described earlier by Thomas Blackburn and others. He and his British contemporary, George Champion provided detailed illustrations of diagnostic characters located on male antennomeres in *Laius* Guérin-Méneville and related taxa. Champion (1921a, b) reviewed *Laius* species at the British Museum and established the subgenus *Dicranolaius* to include four Asian species with males bearing modified basal antennomeres and fore tarsomere 2 projecting and bearing apical comb. Wittmer (1952) reviewed Australian *Laius* species and concluded that only *L. filamentarius* Lea (and possibly *L. minutus* Lea) belonged to that genus. He described two new genera (*Troglolaius* and *Flabellolaius*) for a few *Laius* species bearing peculiar characters on male pronotum and antennae but transferred the bulk of the species to elevated to the genus level *Dicranolaius* Champion based on the observation by Lea that the male protarsomere 2 was of a “peculiar shape and tipped with black” (Lea, 1909: 151).

Champion (1921a, b) included *Intybia* Pascoe (1866) as a synonym or subgenus of *Laius*, which was followed until Evers (1994) revalidated *Intybia* as independent genus. Evers’ concepts of *Laius*, *Intybia* and *Dicranolaius* have been accepted by Wittmer (1995) and others, e.g., Yoshitomi (2008, 2014), Asano & Kawashima (2010), Yoshitomi and Lee (2010), Asano (2012) and Plonski (2013), resulting in transfer of most *Laius* species to *Intybia*.

Laius contains 35 species of uniformly bluish melyrids with modified male protibia confined to the rocky

***Dicranolaius similis* sp. n.**

(Figures 1C, 1D, 2C, 2F, 2G, 3B, 3E, 3H)

Etymology. Species name has been derived from the Latin adjective *similis*, as this new species is very similar to both *D. c-purpureus* and *D. weiri*.

Diagnosis. This species differs from *D. c-purpureus* and *D. weiri* in being somewhat shorter with black head, the dorsal bristles longer and the elytral markings more extensive at base. However, the male dimorphic characters and the male terminalia are the best distinguishing features.

Description. Length 4.40–5.79mm, PL/PW 0.71–0.76, EL/EW 2.81–3.25, HW/PW 0.75–0.77, EL/PL 2.65–2.76.

Male. Head and scutellum black, prothorax uniformly yellow or orange, elytra orange or yellow with dark blue slightly iridescent humeral area and C-shaped preapical marking with slightly lighter centre (Figs 1C, 1D). Antennomeres 1–3 orange, remaining segments dark brown or black (Fig. 2F); fore leg black with dark brown tarsus, mid and hind legs black. Meso- and metaventrites dark, abdomen yellow with terminal segment dark. Vestiture double, consisting of short and dense yellow setae and sparse, longer and thicker black bristles.

Head with dense white setae and sparse black bristles, very finely punctured. Antennal scape expanded and triangular (Fig. 2F); antennomere 3 expanded and flat (Fig. 2G). Pronotum broader than head, widest at anterior third; lateral margins and pronotal base with narrow bead, posterior edge more or less emarginate medially; pronotal disk without apparent punctures, shiny. Scutellum truncate, apically with dense silver adpressed setae. Elytra widest at apical third; sides gradually expanded posterolaterally; surface densely and weakly punctured, punctures about the same size as eye facets, separated by 1 diameter. Fore leg with dense white and yellow adpressed setae and few black bristles on tibiae, femur with deep excavation medially on upper surface as in Figure 2C, tarsomere 2 elongate with dense comb along the anterior edge; mid and hind legs with dense white and yellow adpressed setae and few black bristles on femora and tibiae.

Tergite VIII with deep incision medially without spine (Fig. 3E); sternite VIII divided (Fig. 3H). Aedeagus (Fig. 3B) with very dense spines in endophallus.

Female. Unknown.

Types. Holotype male, **Queensland:** Camooweal, Q. 19.55S 138.06E 16.v.68. K. Armstrong (ANIC). Paratype: Katherine, N.T., 7-10.68, E. Matthews (1, male; ANIC, dissected).

Distribution. Queensland and Northern Territory.

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