

Fact Sheet

Lepidiota Kirby 1828

Taxonomy

Sub family: Melolonthinae / Tribe: Melolonthini / Genus: *Lepidiota*

Distinguishing Features

Large cylindrical beetles, body length 15-38mm. Body colouration black, brown, dark brown or reddish brown. Body surfaces commonly covered in white or yellowish scales, sometimes sparsely, sometimes wholly contained within punctations. Clypeus emarginate, commonly appearing bi-lobed. Anterior face shallow, and usually smooth and unpunctured medially. Antennae 10 segmented (rarely 9 segmented), with a 3-segmented lamellate club (though 2 Australian species with 5 lamellae). Antennal club not elongated, usually shorter than the length of first 7 segments. Metasternal process absent. Tarsal claws with a median tooth.

Related and Similar Species

There are over a 150 known species of *Lepidiota*, with 55 present in Australia. Outside of Britton's 1978 revision of the Australian fauna, there have been no publications revising the group as a whole. Miller and Allsop (2000) provide a key for Australian species in sugarcane. In Australia it has been placed within the tribe Melolonthini which share the following features:

Abdominal sternites at least partially fused, sutural lines present between sternites, even when fused. Meso and metatibia with 2 spurs placed below the tarsal articulation. Tarsal claws usually equal and toothed. Antennae 9 or 10 segmented (rarely 8), Antennal lamellae 3-7 segmented. Labrum located below clypeus, distinct. 5th Abdominal sternite and propygidium separated by a suture. Protibia with apical spurs.

An updated key to the Australian genera of Melolonthini is provided by Weir et.al. (2019). Exotic *Lepidiota* can be most easily confused with *Leucopholis*, which are similar sized, and scale covered.

All species of *Leucopholis* possess scales over the entirety of the body, a mesometasternal process and a flattened prosternal process. The presence or absence of body scales is variable for *Lepidiota*, and the mesometasternal process, while absent in all Australian *Lepidiota*, appears to occasionally be present in species from South East Asia. Calcetas and Aldorada (2019) note the prosternal process for *Leucopholis* as flattened and glabrous, while in *Lepidiota* it is without a flattened area and setose, though this is not always a reliable feature. The labrum of *Leucopholis* is also noted as generally narrower than *Lepidiota*. Further work needs to be undertaken to provide clear separations between the genera.

Diagnostic notes and image sets for 15 species of Australian *Lepidiota* are available on PaDIL: <http://www.padil.gov.au/pests-and-diseases/search?queryText1=Lepidiota&queryType1=all>

Lepidiota stigma is an exotic pest species absent from Australia and recorded from many Asian countries. The name, however, appears to be widely used historically without proper specimen examination and comparison, so care should be taken when viewing online records. Unlike Australian *Lepidiota*, it possesses a large, pointed mesometasternal process.

Biological Data

Larvae of *Lepidiota* are root feeders, with some species capable of significant economic damage to a number of crops including sugarcane, maize, coffee and cassava. Others species such as *L. laevis* are known to damage pastures. Larvae development can take 1-2 years. Adult beetles are active at night and can be attracted to lights.

Distribution

Lepidiota are found across the Oriental region, from India, China, Thailand, Malaysia, the Phillipines, and southwards into Papua New Guinea and northern Australia. Most Australian species are quite restricted in their known localities. The main exception is *L. squamulata*'s broad distribution across the northern half of Australia.



Lepidiota stigma dorsal view

Photographer:

Pia Scanlon



Lepidiota stigma head front

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Pia Scanlon



Lepidiota stigma lateral view

Photographer:

Pia Scanlon



Lepidiota stigma lateral abdomen

Photographer:

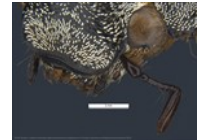
Pia Scanlon



Lepidiota stigma ventral view

Photographer:

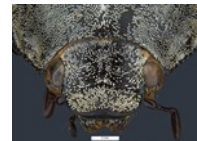
Pia Scanlon



Lepidiota stigma antennae

Photographer:

Pia Scanlon



Lepidiota stigma clypeus

Photographer:

Pia Scanlon

Useful Links

Lepidiota carolinensis species page (Hawaiian Scarab Website):
<http://idtools.org/id/beetles/scarab/factsheet.php?name=15230>

References

- Britton, E.B. 1978. A revision of the Australian chafers (Coleoptera: Scarabaeidae: Melolonthinae) Vol. 2. Tribe Melolonthini. Australian Journal of Zoology, Supplementary Series 60, 1–150.
- Kalshoven, L., Edmund, G., van der Laan, P.A. 1981. Pests of crops in Indonesia. Jakarta: Ichtar Baru. 701pp.
- Miller, L. & Allsopp, P. 2000. Identification of Australian Canegrubs (Coleoptera: Scarabaeidae: Melolonthini). Invertebrate Taxonomy Vol 14: 377-409.
- Weir T.A., Lawrence J.F., Lemann C., Gunter N.L. 2019. 31. Scarabaeidae: Melolonthinae Leach, 1819. In: Australian Beetles. Volume 2. Archostemata, Myxophaga, Adephaga, Polyphaga (part) (eds A Ślipiński & JF Lawrence) pp. 516–530. CSIRO, Clayton, Australia.

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Lepidiota stigma dorsal view. Col: Changi, Singapore, 1915.

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Lepidiota stigma lateral view. Col: Changi, Singapore, 1915.

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Lepidiota stigma ventral view. Col: Changi, Singapore, 1915. [Siti Maimon Binte Hussin, Lee Kong Chian Natural History Museum \(2019\). These images are considered property of the Lee Kong Chian Natural History Museum, National University of Singapore.](#)

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Lepidiota stigma head front view. Col: Changi, Singapore, 1915. [Siti Maimon Binte Hussin, Lee Kong Chian Natural History Museum \(2019\). These images are considered property of the Lee Kong Chian Natural History Museum, National University of Singapore.](#)

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Lepidiota squamulata lateral view

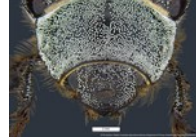
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Lepidiota squamulata ventral view

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Lepidiota squamulata clypeus

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Lepidiota squamulata dorsal view

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