# *Heteronychus arator* (Fabricius, 1775)

### Taxonomy

Sub family: Dynastinae / Tribe: Pentodontini / Genus: Heteronychus

## **Distinguishing Features**

Small ovate beetles, body length 12-15mm. Body colour black to dark reddish brown. Head lacking carina and tubercles. Clypeus truncated with distinct lateral margins, and dentate with a median denticle. Mandibles visible dorsally with 2-3 teeth present on the outer edge. Antennae 10 segmented, with a 3 segmented club. Mentum with a rounded apex. Ocular canthus glabrous. Pronotum smooth, convex, lacking punctures. Elytra with rows of shallow striae. Apex of metatibia truncate. Propygidium with a pair of stridulatory bands. Tarsal claws simple.

#### Related and Similar Species

*Heteronychus arator* is a member of the tribe Pentodontini which share the following characteristics:

Sexual dimorphism usually not well pronounced. Mentum not broad, and not covering basal joint of palpi. Legs shorter and stouter than those of Cyclocephalini. Anterior tibia of males not longer than females. Apex of metatibia truncated, straight, with bristles present. Elytra more or less convex, usually with double rows. Propygidium with or without stridulatory area.

An updated key to the Australian genera of Pentodontini is provided by Weir et.al. (2019). The shape of the clypeus (truncate, dentate), smooth pronotum and the presence of stridulatory bands on the propygidium readily separate it from other Pentodontines in the key.

#### **Biological Data**

The African black beetle is a widespread and common pest. Adult beetles are economically important through feeding on a wide range of plants including:

- pasture, particularly newly-sown ryegrass and perennial grasses such as couch and kikuyu
- barley, triticale and wheat, but not oats
- irrigated and dryland summer forage such as millet and maize
- turf
- many vegetable crops, most importantly potatoes
- grapevines, olives and trees in truffle orchards
- ornamental plants and newly-planted trees such as blue gums.

Larvae are less economically important but can damage turf and underground crops, notably potato tubers.

Detailed lifecycle and seasonal patterns can be found here: https://www.agric.wa.gov.au/olives/african-black-beetle-horticulture?nopaging=1

#### Distribution

*Heteronychus arator* is native to South Africa. It has become widespread in Africa, Australia, New Zealand, Central and South America. In Australia it is more prevalent in coastal or wetter areas.

#### Useful Links

USDA H. arator screening aid:

http://idtools.org/screeningaids/2017/Heteronychus\_arator.pdf CPHST Pest Datasheet for *Heteronychus arator*: http://download.ceris.purdue.edu/file/3069

References



<u>Heteronychus arator dorsal view</u> <u>Photographer:</u> <u>Pia Scanlon</u>



<u>Heteronychus arator lateral view</u> <u>Photographer:</u> <u>Pia Scanlon</u>



<u>Heteronychus arator ventral view</u> <u>Photographer:</u>

Pia Scanlon



<u>Heteronychus arator head front</u> <u>Photographer:</u> Pia Scanlon



<u>Heteronychus arator clypeus</u> <u>Photographer:</u> <u>Pia Scanlon</u>



Heteronychus arator head and clypeus line drawing. By Desmond W. Helmore -Manaaki Whenua – Landcare Research, CC BY 4.0,

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<u>Heteronychus arator posterior view</u> <u>Photographer:</u>

Matthews, E.G. 1984 A Guide to the Genera of Beetles of South Australia. Part 3 Polyphaga: <u>Pia Scanlon</u> Eucinetoidea, Dascilloidea and Scarabaeoidea. Special Educational Bulletin Series (No. 6) South Australian Museum, Adelaide. 60pp. Weir, T.A., Lawrence, J. F., Lemann, C., Gunter N.L. 2019. 33. Scarabaeidae: Dynastinae Macleay, 1919. 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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