

1. PaDIL Species Factsheet



Scientific Name:

Mastotermes darwiniensis Froggatt

(Isoptera: Mastotermitidae)

Common Name

giant northern termite

Live link: <http://www.padil.gov.au/pests-and-diseases/Pest/Main/136483>

Image Library

Australian Biosecurity

Live link: <http://www.padil.gov.au/pests-and-diseases/>

Partners for Australian Biosecurity image library



Australian Government
Department of Agriculture,
Water and the Environment

Department of Agriculture, Water and the Environment

<https://www.awe.gov.au/>



Department of
Primary Industries and
Regional Development

Department of Primary Industries and Regional Development,

Western Australia

<https://dpir.wa.gov.au/>



Plant Health Australia

<https://www.planthealthaustralia.com.au/>



Museums Victoria

<https://museumsvictoria.com.au/>

2. Species Information

2.1. Details

Specimen Contact: Museum Victoria - discoverycentre@museum.vic.gov.au

Author: Walker, K.

Citation: Walker, K. (2006) giant northern termite (*Mastotermes darwiniensis*) Updated on 8/2/2012 Available online: PaDIL - <http://www.padil.gov.au>

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2.2. URL

Live link: <http://www.padil.gov.au/pests-and-diseases/Pest/Main/136483>

2.3. Facets

Status: Native Australian Pest Species

Group: Termites

Commodity Overview: Horticulture, Forestry

Commodity Type: Timber, Grasses, Sugarcane

Distribution: Australasian - Oceanian

Cerci - Soldier: Long - 4 to 5 segmented

Dry- or Damp-wood termite: Wings with cross veins, Across the grain damage, Marginal teeth absent on mandibles of soldiers, Marginal teeth present on mandibles of soldiers, Pronotum equal to or greater than width of head, Six-sided frass pellets

Fontanelle - Soldier: Absent

Head ocelli - Imago: Present

Mandibles - Imago or Worker: Left: 3 teeth; Right: 3 teeth

Pronotum - Soldier: Anterior lobe present

Tarsi - Imago or Soldier: Tarsi 5 segmented

Wings - Imago: Forewing reticulate

2.4. Other Names

Subterranean termite

2.5. Diagnostic Notes

****Description****

Tarsi five-segmented in all castes.

Imago: large eyes and ocelli; reticulate wing venation; unique among termites in having an anal lobe on each hind wing. Imago/worker mandibles as depicted in.

Soldier: large, may be 13mm or more in length; broad, rounded heads that range in colour from yellow to reddish-brown; short, black mandibles, each with a single tooth on the interior margin; antennae of 20-26 segments.

M. darwiniensis occurs across Australia north of the Tropic of Capricorn. Within its range however, its

distribution is irregular e.g. it does not occur in areas of cracking-clay soils or in rain forests. *M. darwiniensis* is native to Australia but now is also established in parts of New Guinea.

This termite doesn't build mounds. Subterranean galleries are usually from 15-30cm below the surface but have been detected at depths of up to four meters. Some galleries exceed 100 meters in length. Nest sizes range from several thousands (extra-mural) to several millions in built-up areas. It is occasionally found in the nests of other species of subterranean termites.

This termite is by far the most destructive termite in Australia. Fortunately, its powers to demonstrate this ability are limited because it is restricted to an area of relatively sparse settlement: nevertheless, *M. darwiniensis* has caused more economic loss than any other insect in the northern half of the continent. They are known to feed on/destroy all kinds of timber structures, fences, poles, wharves, railway sleepers, plastics, lead sheathing around electric cables and lead water-pipes, bitumen, concrete, paper, bone, ivory, horn, leather, hides, ebonite, asbestos, jute, cotton and other vegetable fibre, silk, woollen fabrics, stored grass hay, sugar, bagged pickling salt and flour. Accumulations of human excreta and the dung of herbivorous animals are also invaded by these termites. They eat, destroy or damage a range of trees - native (including *Eucalyptus* spp. and *Acacia* spp.) and introduced - in forests, plantations, orchards or gardens. In addition, these termites damage citrus, soursop, pineapple, vines, cassava, banana, paw-paw, melons, pumpkin, carrot, potato, tomato, sugarcane and many kinds of shade and ornamental plants. *M. darwiniensis* do not appear to attack *Ficus* spp., *Melaleuca* spp., *Callitris* spp, *Alstonia verticallosa*, *Brachychiton* spp, *Erythrina verspetilio* and the introduced Brazilian rubber and tamarind.

2.6. Web Links

Australian Insect Common Names: http://www.ento.csiro.au/aicn/system/c_2294.htm

CSIRO Terc: <http://www.terc.csiro.au/termitebook.asp>

3. Diagnostic Images



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Dorsal view - soldier: Simon Hinkley & Ken Walker Museums Victoria



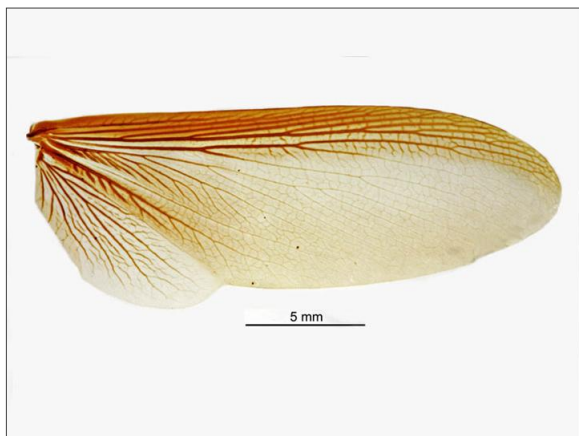
Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Head above soldier: Simon Hinkley & Ken Walker Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Head front - soldier: Simon Hinkley & Ken Walker Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Head side - soldier: Simon Hinkley & Ken Walker Museums Victoria



NT. Darwin, 21 Nov 1913, G.F. Hill
Hind wing showing anal lobe: Sarah McCaffrey Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Lateral view - soldier: Simon Hinkley & Ken Walker Museums Victoria



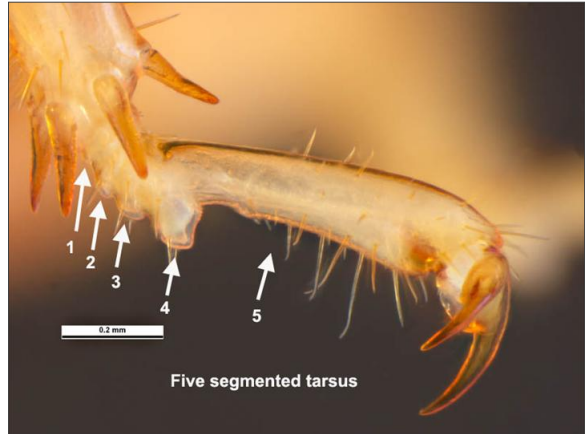
Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Lateral view - worker: Ken Walker Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Mandibles - worker: Ken Walker Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Pronotum - soldier: Simon Hinkley & Ken Walker Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Tarsi - soldier: Simon Hinkley & Ken Walker Museums Victoria

4. Other Images



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Alate dorsal view: Simon Hinkley & Ken Walker Museums Victoria



Australia: Queensland, Townsville, 20 Nov 1923. det. G.F. Hill
Alate lateral view: Simon Hinkley & Ken Walker Museums Victoria

Results Generated:

Monday, April 12, 2021
