

# Overview of Australian bees

Australia is home to about 1630 described bee species (Australian Faunal Directory, 2018), although the true number is higher, as new species are regularly being discovered and numerous recent discoveries remain undescribed. Like bees in many parts of the world, Australia's bees remain understudied. Even for many widespread, common species, little is known about nesting biology, floral diet, responses to landscape change or contributions to agricultural pollination.

Of the seven global bee families, Australia has five, including the endemic Stenotritidae. Within these families, 63 bee genera\* occur in Australia (Australian Faunal Directory, 2018). Not only is Australia unique in that we have an endemic bee family, but we are also distinct from the rest of the world in that we have an unusually high proportion of species in the family Colletidae (over half of Australia's described bees are in this family), including an endemic subfamily, the Euryglossinae. Australia's greatest bee diversity areas are found in Mediterranean-like climate regions, while regions like our tropical rainforest areas are relatively less diverse. All broad levels of bee sociality can be found in Australia, from truly solitary species, to communal species, semi-social species, and highly eusocial species. We also have a great diversity of nesting strategies within our species.

Terry Houston's recently published book (2018), *A Guide to Native Bees of Australia*, provides a detailed description of the Australian bee genera, including many subgenera, and is certainly one of the go-to resources for Australian bees. Other existing works covering Australian bee diversity include Michener 1965; 2007, and Batley and Hogendoorn 2009.



*Lipotriches*

Photo: Tobias Smith

\* There is one record of another genus in Australia, *Pseudoapis*, but that record has been identified as a mislabelled specimen, and is believed to have been collected elsewhere (Michener, 2007).

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Bee families, subfamilies, and genera found in Australia

## Apidae

### Apinae

- *Amegilla*
- *Apis* (I)
- *Austroplebeia*
- *Bombus* (I)
- *Ctenoplectra*
- *Tetragonula*
- *Thyreus*

### Nomadinae

- *Nomada*

### Xylocopinae

- *Braunsapis*
- *Ceratina*
- *Exoneura*
- *Exoneurella*
- *Xylocopa*

## Megachilidae

### Lithurginae

- *Austrothurgus*
- *Lithurgus*

### Megachilinae

- *Pseudoanthidium* (I)
- *Anthidiellum*
- *Coelioxys*
- *Megachile*

## Halictidae

### Halictinae

- *Homalictus*
- *Lasioglossum*
- *Patellapis*
- *Seladonia* (I)
- *Sphecodes*

### Nomiinae

- *Lipotriches*
- *Mellitidia*
- *Nomia*
- *Reepenia*

### Nomioidinae

- *Ceylalictus*

## Colletidae

### Colletinae

- *Callomelitta*
- *Chrysocolletes*
- *Glossurocolletes*
- *Goniocolletes*
- *Hesperocolletes*
- *Leioproctus*
- *Neopasiphae*
- *Paracolletes*
- *Phenacolletes*
- *Trichocolletes*

### Euryglossinae

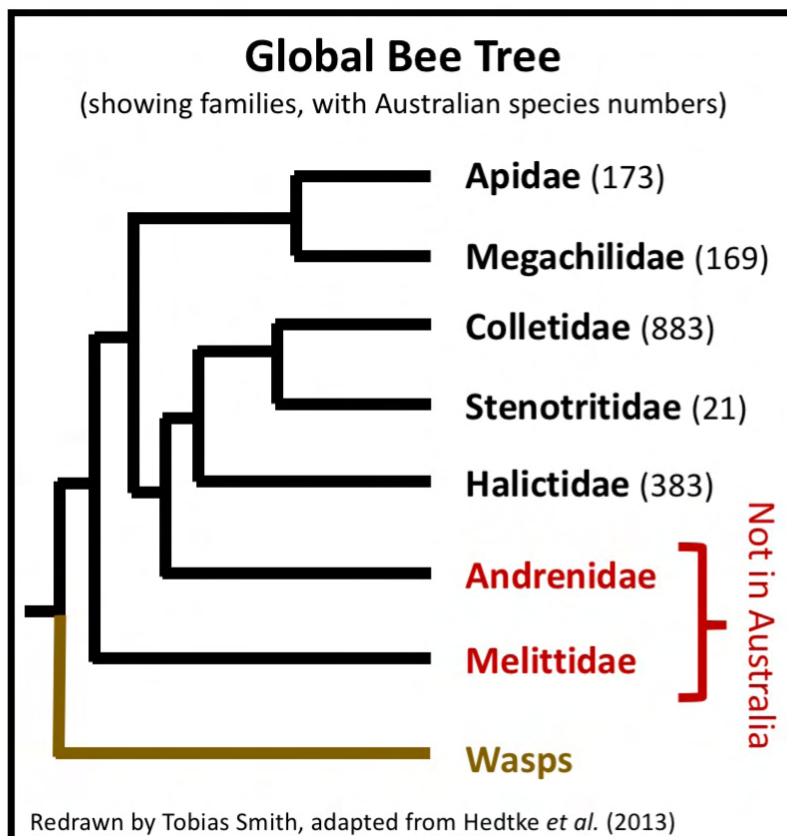
- *Brachyhesma*
- *Callohesma*
- *Dasyhesma*
- *Euhesma*
- *Euryglossa*
- *Euryglossina*
- *Euryglossula*
- *Heterohesma*
- *Hyphesma*
- *Melittosmithia*
- *Pachyprosopis*
- *Sericogaster*
- *Stenohesma*
- *Tumidihesma*
- *Xanthesma*

### Hylaeinae

- *Amphylaeus*
- *Hemirhiza*
- *Hylaeus*
- *Hyleoides*
- *Meroglossa*
- *Palaeorhiza*
- *Pharohylaeus*

## Stenotritidae

- *Ctenocolletes*
- *Stenotritus*



(I) = Introduced