



Photo: Amegilla (*Asaropoda*) aka Teddy Bear Bee by Phil Warburton

NATIVE BEES

Australia has an estimated 2,500 native bee species. Over 1,600 have been identified and named, with scientists believing an extra 1,000 exist.

KEY FACTS

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Largest Native Bee:

Great Carpenter Bee -
Xylocopa (Koptortosoma)
(24mm)

Smallest Native Bee:

Quasihema Bee (2mm)
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Native bees come in a wide range of shapes and sizes with the largest native bee being the Great Carpenter Bee - *Xylocopa (Koptortosoma)* (24mm), and the smallest being the *Quasihema* bee (2mm).

Unlike the European honey bee, Australian native bees come in an incredible variety of colours; black, red, yellow, green, and blue. Some are smooth and almost hairless like the masked bee, while others are covered in fur such as the teddy bear bee.

As a keystone species for pollinating native plants, native bees are vital for the protection of biodiversity in Australia.



Leafcutter Bees (*Megachile*)

SOLITARY BEES

When we think of bees we usually think of busy hives with thousands of bees buzzing around, when actually the vast majority of Australian native bees are solitary and lay their eggs (brood) in burrows in the ground or hollows in twigs and branches. The bee fills each brood cell with pollen and a tiny amount of nectar (known as 'bee bread'). She then lays her eggs on top of this 'bee bread' to provide food for her offspring as soon as they emerge. The mother has usually died before the fully developed offspring emerges from the brood cell.

They are also important contributors to the Australian agriculture industry through crop pollination. One of the most important things about solitary bees is the fact that most of them carry dry pollen on their bodies. This enables them to pollinate flowers more effectively.



Social Stingless Bee (*Tetragonula*)



Blue Banded Bee (*Banded Amegilla*)

SOCIAL STINGLESS BEES

Australia is home to approximately 11 species of stingless social bees. A hive of native social bees will produce approximately one kilogram of honey in a year with the honey having a tangy flavour. While they may not be prolific honey producers, their importance lies in their ability to pollinate native plants and wildflowers.

Stingless bees like to stay much closer to their hive than native solitary bees which has shown benefits to some crop pollination such as those in greenhouses.

BUZZ POLLINATION

When we think about pollination, we often think about it as a passive process in which the plant releases pollen either carried by wind, bees or other pollinators. Some plants however require buzz pollination where the flower needs to be shaken to release the pollen.

Some native bees are capable of performing buzz pollination, one of these is the banded *Amegilla* (shown above). Interesting research is being conducted around the use of some species of native bees in the pollination of tomatoes which require buzz pollination to produce fruit.



Centre
For Bee
Education

Centre for Bee Education is a collaboration between When Bee Foundation and Bee School by Beechworth Honey and provides a wealth of learning resources and tools on the important role bees and other pollinators play in the environment and food production systems.

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