



FACT SHEET:

Australian Native Bees

Are you buzzing about Bees?

Did you know that commercial honey bees are not native to Australia? Imported into Australia in the 1820's, the European Honey Bee is used commonly for honey production and crop pollination. However, these exotic bees pose a threat to native ecosystems and their hives are increasingly at risk of attack from predatory mites and beetles.

Native Australian Bees are a great alternative, and in some crops have proven to be better pollinators. These small black, stingless bees are vital to the health and biodiversity of native vegetation.

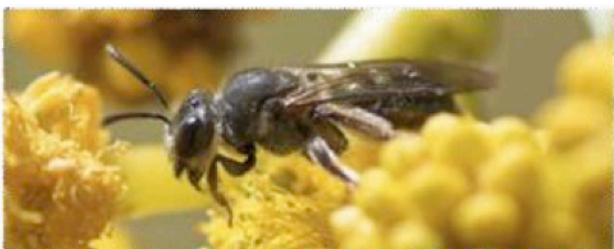
Bee Biology

There are approximately 1500 species of native bees identified within Australia. Less than 16 species are social bees that live in colonies similar to European Honey Bees (*Apis mellifera*). The majority are solitary bees.

There are two genera of social native bees being *Tetragonula* and *Austroplebeia*. The three main social species of Bees currently used in Agriculture in Australia are *Austroplebeia australis*, *Tetragonula carbonaria* and *Tetragonula hockingsi*.

Tetragonula carbonaria's use in macadamias has shown increases in total yield, weight of nut in shell and kernel recovery. Other crops have shown significant improvements from their use also.

A typical hive of *Tetragonula carbonaria* contains 1000-10,000 bees.



Uses of Native Bees:

- **Crop pollination:** very successful with macadamias, tomatoes, avocados
- **Ecosystem services:** pollination of native plant species and garden plants
- **Products:** production of very small quantity of 'Sugarbag' honey



Why Keep Stingless Bees?

There are many advantages to keeping stingless bees in your yard or using stingless bees on your farm.

For instance:

- The bees are fascinating to watch as they fly around and forage on the various flowers available to them.
- *Tetragonula carbonaria* are proven pollinators of Macadamias, Lychees, Avocados and various other fruits and vegetables.
- Bees can help improve the rate of pollination in your vegetable garden.
- By having stingless bees in your area you are helping to improve biodiversity through cross-pollination of plants.
- Native stingless bees produce small quantities of unique honey.
- ***These bees can't cause anaphylaxis because they are STINGLESS.***





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Tetragonula carbonaria hives

These are the most commonly kept social species of bees and can be found along the East coast as far south as Bega.

Within a hive there are four types of bees; A single mature queen, virgin queens, drones (males) and workers (female).

Components of a Native Bee Hive

Brood Cells

These are the hive's internal cells in which eggs are laid by the mature queen. The egg hatches inside the cell, eats the food within the cell, forms a cocoon and pupates to become an adult bee.



Brood cells in a hive

Involucrum

The involucrum consists of thin sheets of wax which envelope the brood cells. It is used for protection and insulation.



Involucrum surrounding brood cells

Cerumen Structure

The bees use a type of scaffolding in the hive to support brood cells, honey pots and pollen pots. The bees make these structures out of cerumen, which is a mixture of tree resin and wax that the bees produce.



Cerumen structure within the hive

Need Bees?

For further information about renting a hive for the back yard or for hiring hives for crop pollination please contact Steve at:

Email: stevesnativebees@hotmail.com

Phone: 0404831659

Website: www.stevesnativebees.com.au

STEVE'S
NATIVE BEES

0404 831 659

stevesnativebees.com.au



Catchment Management
Authority
Northern Rivers

www.richmondlandcare.org

02 6619 1582

cso@richmondlandcare.org

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