

THE QUICK FACTS ON NATIVE BEES

In Australia 2,000 species of native bees have been identified. On the North Coast we have about 12 species which include both the social and solitary bees which include both the social and solitary bees. Of these, there are three genera of social native bees - *Tetragonula carbonaria*, *Austroplebia australis* and *Tetragonula hockingsii*. These native bees are very hard to tell apart by any observer. The only easy way to identify them is through their differing nest architecture as shown in the photos below.

All three species produce honey, however there are some significant differences in their nesting and foraging behaviour. A hive of *Tetragonula carbonaria* can contain between 1,000 to 10,000 native bees and these can be readily observed flying about.

Austroplebia nests are much more fragile and they spread unevenly in loose piles. Unlike the intact tight spiral formation of the *Tetragonula carbonaria* hive. *Austroplebia australis* are also known to have relatively small hives of around 50 to 100 bees. These bees are probably the most vulnerable as their nests are usually located in dead trees and situated at a high level where they are not readily observed.

Tetragonula hockingsii are most commonly found throughout the east coast of Queensland to the border of NSW where the climatic conditions are more suitable to their breeding. This species is not discussed in much detail here.



(Left to Right) : Hive structures - *Tetragonula carbonaria*, *Austroplebia Australis* and *Tetragonula hockingsii*

(Photos : John Klumpp)

CLARENCE NATIVE BEES – CARE FACT 1

Native social stingless bees are honey producers and in most cases, one hive can produce a small amount of honey each year (sometimes up to 1kg). Dependent upon food resources the bees have been foraging on, the honey will have a range of flavours. The honey is also reported to be of medicinal benefit. In addition to honey, the bees also make a wax, which they use in their hives. This product can be harvested and used to make ointments and balms.

“So what is inside a native stingless bee hive?” There are three main components that form the architecture of the hive. These include:

The involucrum - the main structure that holds the brood cells together.

The brood cells - the internal cells where the queen bee lays her eggs and where the worker bees regurgitate their food for the larvae to feed off during the development phase. As the eggs develop into larvae inside the cell (6-14 days), they eat the food then form a cocoon and pupate (30 days) into adult bees, this entire process takes about 50 days. The bees will live as adults for 100 days.

The cerumen structure - the main support mechanism (scaffolding) that supports the brood cells, honey pots and pollen pots. This well constructed scaffolding is built from collected resin and wax that the bees produce. Honey pots and sugarbags are where the native bees store their honey. They are usually yellow, roundly formed, enclosed, and meshed between the hive structure.



A look inside the hive (Left to Right) The hive brood with the cerumen structure surrounding it; the hive brood with pollen pots and batumen; and a stingless bee doing some housekeeping. (Photos : Rosalie Franklin & Laura Noble)