

HELEN YOUNG

## The buzz on native bees



Ku-ring-gai Council has 450 hives of the native stingless bee *Tetragonula carbonaria*.

Did you know that Australia has more than 1800 species of native bees? They range from 2mm long up to 24mm, some furry, some shiny, and some with beautiful metallic green or blue markings. Many species are solitary, some ground dwelling, while others live in complex social groups. Not all make honey and some have no sting.

European honeybees were brought to Australia in the 1820s, but before them native bees pollinated our native flora, some of them specialised to particular plant species. They are still significant contributors to crop pollination, but loss of habitat, indiscriminate use of pesticides and the introduced hive beetle all threaten their survival.

Ku-ring-gai Council, in Sydney's bushland-studded north, is raising awareness of native bees. Under its WildThings program, the council has placed 450 hives of the native stingless bee *Tetragonula carbonaria*.

"They are no work at all", says program co-ordinator Peter Clarke. "Being stingless, you can have them on a balcony or just outside your window. Watching them fly in and out, seeing them arrive with little baskets full of pollen on their legs, is hypnotic, like watching an aquarium."

After vandals attacked the first hives placed in bushland, the program now places hives with residents. "It's a much better way to go," Clarke says. "People connect strongly with the bees; they become thoroughly educated about them and they love to share the story. That promotes widespread interest in bees of all types, and encourages people to limit their pesticide use."

*Tetragonula* bees produce honey in clusters of small wax and resin pots, although it can't be collected in the same way as regular honey, and the quantity is much smaller. A hive contains 6000-10,000 bees, foraging up



**FLORA** Our native bees are tiny but beautiful insects that easily go unnoticed. Illustrator Gina Cranson is helping to change that, producing exquisite



watercolour paintings that are simultaneously artworks and identification guides.

Her A2-size poster of native bees of NSW features 21 species plus the European honeybee and African carder bee, a bargain at \$20. Sets of miniature prints of individual species feature embossed borders and detail, printed in Australia on Australian-made art paper. Although many of the bees on the poster occur in other parts of Australia as well, Cranson plans to continue her work to cover species in other states. Entomologist Michael Batley at the Australian Museum provided technical guidance on the illustrations. [ginacranson.com](http://ginacranson.com).



to half a kilometre from the nest. In the wild they nest in tree trunks in coastal areas from far north Queensland south to Bega on the NSW south coast.

Being a tropical and subtropical bee, *tetragonula* likes warm weather. "They're a poor man's thermometer," Clarke says, laughing. "They hate rain and temperatures less than 18C, when they just stay in the hive, but they like anything up to 40C." Above 44C the hives can die from heat stress.

*Tetragonula* bees forage on a wide range of flowers, both native and exotic. Their preference is for open flowers with lots of stamens, such as native eucalypts, bottlebrush, melaleucas and turpentines. They also love single-bloom camellias, crepe myrtles, salvias and, surprisingly, palm tree flowers. While *tetragonula* are suited to urban hives, other native bee species are seen in our gardens. The pretty blue-banded bees (*Amegilla* species) get noticed because they're relatively large (15mm), noisy and have a distinctive dart-and-hover flight action between flowers. Leaf-cutter bees saw neat circular holes in rose leaves for their nests.

[wildthings.org.au](http://wildthings.org.au)

Visit [beesbusiness.com.au](http://beesbusiness.com.au) and [aussiebee.com.au](http://aussiebee.com.au) for intriguing photographs, advice for encouraging native bees into your garden, videos, and instructions on building nests. Aussiebee also provides details of sellers across Australia.

A native *Tetragonula carbonaria* bee, far left, its legs loaded with pollen baskets, the *tetragonula* hive's left, is a horizontal, spiral brood comb of cells in a hexagonal pattern, surrounded by insulating material to control the hive temperature