

## **“Is it an ant, is it a termite, no! IT’S A “SUGARBAG” BEE. Stingless bees and water meter boxes**

Bob Luttrell

There is something about watermeter boxes that seems to attract the stingless bees. Could it be the infrequent disturbance? Could it be the temperature stabilization of a box buried in the soil? It is a relatively common occurrence here in south-east Queensland, and it presents a relatively easy chance to acquire colonies for those fortunate enough to know of the colonies.

Unfortunately there is a down side to this location, and that is that many people who live in the houses supplied by the water meter boxes do not know that the little creature filling their box with a brown sticky yucky material is in fact a genuine Aussie stingless bee. Unfortunately this can lead to them reaching for the insect spray before they reach for the phone, or do a search on the internet. Plumbers called to do work in the houses sometimes do not have time for niceties, and if the tap needs to be turned off, it has to be done, regardless of whether this means the destruction of the brood structure and involucre in doing it. Either of these event is not good news for the bees, they might recover from the second, but with today’s chemicals, the insect spray means almost certain death for the colony in such an enclosed space.

What can be done about this? Well I hope that more and more people will come to realize just what the little black insects that they see coming from the watermeter box at their front door really are, not termites, not ants, not flies, but real Aussie stingless bees, the source of the famous ‘sugarbag’ honey our indigenous predecessors on this great land have known and valued highly for thousands of years. That will only happen if more and more meliponists and other native bee enthusiasts spread the word by all means possible.

Most important is to recognize these as bees, they will not harm the house, they can be no more than annoyance to passer’s-by as they cannot sting, and there is no urgency to remove them, unless the meter dial is covered and the water meter reader is due, but even then Brisbane City Council staff have an

arrangement to get them removed. There remain instances of destruction unfortunately.



**Trigona hockingsi colony in a watemeter box, after spraying. A forlorn sight.**

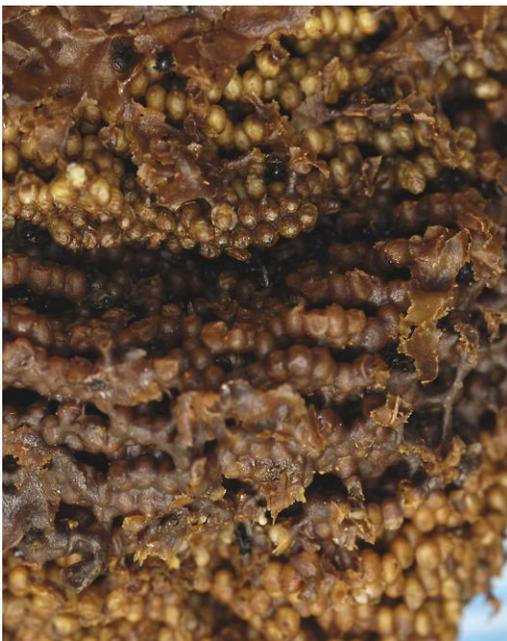
The illustration above shows a Trigona hockingsi colony unfortunately after it had been sprayed so it was doomed. All that could be done was to remove as much nest material as possible for disposal so that any other bees attracted to the destroyed nest were not in turn poisoned. In this case the lid had to be levered off with some effort by the resident to get access for spraying. Trigona first seal all the joins and seams to prevent ants etc getting in, then they build a screen of a delightful fabric thin cerumen sheet which draps from the lid to totally enclose part of the cavity. Comfortably enclosed they go to work, ferrying material and workers from the nearby parent hive to start the clean up of the space, the ‘varnishing’ of the internal surfaces, then the first honey and pollen pots appear. Gradually more bees stay over, more cells are built and stocked, and a virgin queen from the parent colony will make the trip to the new site, apparently directed by a pheremone scent trail and workers showing the path. From that new site she will undergo a mating flight, and the resultant drone swarm is often the most obvious first sigh of the arrival of the bees. A swirling swarm of these little bees mills around above the box blown by the breeze, which means people may well have to walk through it. That is the first encounter that risks the introduction of the fly spray. If the bees are recognized as harmless bees, then this colony has a chance of progressing with only minimal disturbance to the bees and people.

Once the new queen starts laying, the brood structure starts developing, in the case of Trigona carbonaria which is the most common stingless bee here in SEQ, the most elegant of structures- an ascending spiral- slowly develops. Once seen, the amazing structure is never forgotten. This colony was Trigona hockingsi, and while the concept

is the same, an ascending rough spiral, the smooth even layers are replaced by a much less elegant profusion of small interlocked plates of brood cells



**The brood structure of *Trigona hockingsi*. For this photo I have removed the multi layered involucrum that surrounds the developing brood to control temperature and humidity. Close examination of the involucrum structure showed a refined structure designed to maximize thermal ventilation by the stack effect funneling and concentrating warm air towards the top of the structure. In one colony I have witnessed, *T hockingsi* continued this structure straight through a tunnel linked to a second upper entrance.**



**This close up of the youngest brood reveals the cerumen covered cells of developing larvae, even a few open cells ready for provisioning and an egg that can never come. Below these are the intermediate stages where the larvae have consumed the available food and spun a cocoon to line the cell for the next stage of development, pupation. Once the cocoon has been spun the nursery care bee workforce remove the cerumen cell coating for re-use in the next generation of cells. This is happening in the bottom group of cells which then proceed through pupation, before getting to the hatching phase, in the top section of photos here, with pupal cases barely held together by a minimal amount of cerumen. If you look closely you can see the dark eyes of the soon-to-emerge bees, callows as they are called.**

The colony happily lives in this space, those that I have seen have had some shelter by nearby shrubs but conditions are certainly to the liking of the bees.

Telstra communication pits also used in the same way, but to remove the colony involves the challenge of extracting the structure from the mass of wires normally present. I do not know the policy of the telecommunications industry but the need to remove them for service work must occur.



**The Trigona carbonaria colony entrance in a Telstra communications pit**



**Close up of entrance of colony, guards up and ready to meet an intruder**

**The layout of the Trigona carbonaria colony in the Telstra pit. The top of the delightful rising spiral brood structure is just visible through a break in the involucrum at the left end. A profusion of golden pollen pots are visible on the right, all mixed with the cables for which the pit is intended.**



The colonies in both these situations can be saved, removed from the obstruction and nuisance that they are causing, if only those people who find them take to time to check just what they are if in doubt before spraying, and contact someone who can remove them safely for relocation

Bob the Beeman