



# Taranaki Beekeeping Club



## WHAT'S ON IN TARANAKI

Greetings!

With our first frost at the start of the week, we can now say that we are in Winter mode. Still warm sunny days will still produce a handful of bees at the entrance anxious not to miss any opportunity to gather any pollen or nectar that is in the vicinity. Brood rearing will now be at its lowest and if you don't see any eggs or larvae in your brood boxes you probably still have a queen but she will be smaller, since she is no longer producing eggs on a daily basis, so may be difficult to spot on the comb.

As the Winter progresses keep a very watchful eye on the stores in the hive, especially as we have had such a poor nectar flow this Autumn. You should keep at least three full combs of honey in the hive at all times, just in case we have a very wet, windy spell and the bees can't get out to find any available nectar. Even in Winter there are nectar sources out there if you know where to look and the bees will find and make use of them if conditions are right.

Our next meeting will be the Annual General Meeting and it will be held at Mr & Mrs Blacks Extraction Plant on the **Uruti Road, number 685, at 2pm. on the 1<sup>st</sup> of July.**

The Extraction Plant has many interesting machines that have been developed to take a lot of the monotony out of the extraction process of getting the honey from the comb into a holding container, whether it be a jar or a drum. The Plant is fully registered and compliant with the Food Safety Standards so anyone thinking of upgrading to a commercial status will see what is required of them. It may be a long way to travel but I am sure you will find it very interesting.

The venue is quite easy to find. You take the main road out of town to Waitara and Uruti. Go through Onaero and Uranui, drop off the terrace and after crossing the bridge at the base of the hills, continue along the near flat road to Uruti where you will see Uruti Road go off to your right BEFORE you cross the bridge. If you miss this turning, you will find the road becomes much straighter - you have gone too far! Proceed up Uruti Road for about ten km. and you will find No. 695 on the left-hand side of the road shortly after the right hand side of the valley squeezes up to the river and road. If you come to a tunnel through the mountain-side - you have gone too far! Good Luck!

I would expect our inspection and demonstration of the plant to take about an hour and a half and anticipate the AGM will finish about four thirty.

Please have a think about the Club's members for positions on the Executive and what you want from the Club next year.  
Adrian.



## Next club meeting ANNUAL GENERAL MEETING

**1st JULY 2012**

**At # 685 Uruti Road**

## What happens to bees in winter?

The survival of the bee through the cold months of winter is largely dependent upon the particular kind of over 1,000 species to which it belongs. Generally speaking, the social bees do not summer in the South during the winter, as do migratory birds, but, instead, live or die in their natural environs.

The young queen bumblebee, who earns her title by being the one egg-laying female, or queen mother, in the colony of social bees, does survive the winter. She does so by burrowing out a hold in a well-drained sandbank, or simply by taking the easy way out by moving into a pre-owned home, such as a deserted mouse nest. Once settled into her nest, she plays happy homemaker and makes beebread from the nectar and the pollen she collected all summer, dumps the load of bread, lays eggs on it, covers it with wax, and relaxes atop it.

Approximately 250,000 eggs later, her Highness washes her hands of the whole thing, and leaves the work to her offspring. As soon as the workers, or fertilized, but non-egg producing females sprout wings, they set to work, and only later get assistance in the form of drones, or unfertilized males. The workers bees and drones, who toiled for the queen all summer, are rewarded for their efforts by a certain death in winter. No bother...they are easily replaced by cheap labour, when the queen lays more eggs in the spring, and puts her new brood to work.



Her counterpart, the young queen honeybee, earns her title by being the first of the special queen cells to emerge, The colony she rules is the epitome of efficiency, as it adapts to endure a full range of adverse climates. This species of honey-producing bee, ergo the honeybee, winters in a temperature-controlled hive.  
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The worker bee thermostatically controls his hive with great precision, ensuring that the temperature in the hive's nursery, where baby bees are developing, is maintained at 33.8 degrees Celsius, and that the temperature in the remainder of the hive does not drop below 7.2 degrees Celsius. The worker bees accomplish this winter task by fueling up on the honey that they have stored, and by releasing heat as they feast.

The honeybee wisely keeps a stash of honey for themselves, after the beekeeper has had his take, thus benefiting from his labor in the warmer months. The social bees utilize these months in a productive manner, by buzzing from flower to flower, sucking up the flowers' nectar as they bumble along. The nectar the bees extract from the flower flows to their honey sacs, which are enlargements of their digestive tracts, and are located in front of the belly of the bees.

Here, the sugars from the sweet nectar of the flower, chemically transform, and are reduced through the honeybee's built-in mechanism to evaporate large quantities of water contained in the nectar. The honeybee stores the end product, honey, both internally, and externally. Winnie the Pooh-like "honeypot" cells store the thinner version of honey, honey with a short "shelf-life," and honeycombs, the more concentrated version, honey with the "shelf-life" of canned goods in wartime. In a sense, the honeybee is preparing to combat, and to survive, the bitter winter months that lie ahead.

## 7 (Yes, 7) Causes of Colony Collapse Disorder

**Research into the honey bee malady has taught us a lot about bees. We might not know exactly what causes colony collapse disorder, but we now understand seven key maladies that may be contributing.**

**Read more:** <http://www.thedailygreen.com/environmental-news/blogs/bees/colony-collapse-disorder-causes-0118#ixzz1xfGGJxD1>

After four years of intense study, research, sampling, and just plain guessing, scientists have made more discoveries in the last year than all the honey bee research in the last 25 years put together. Still, Colony Collapse Disorder is still mostly a mystery. What they have found, though, is helping honey

bees and beekeepers. Here's a look:

### Poor nutrition.

Honey bees forced to dine on only a single source of pollen have problems. Imagine living for a month on only Twinkies. The first one is great, the second good... the 123rd is disgusting, and, you are slowly starving to death. When researchers looked closely at the diet for our honey bees, they saw the problem and today - after four years - there are almost a

dozen healthy food choices on the market we can feed our bees (including Megabee and Nozeivit, sold by Dadant; Ultra-Bee, sold by Mann Lake; and Feed Bee, sold by Ellingsons's Inc.) That's progress. (But look at your grocery store and see how many kinds of dog food there are... wouldn't you think hard working honey bees should have the same choices?).

### Old pests revisited.

A common problem with honey bees now is that old pest called *Nosema*. Simply put, this one-celled parasite damages the stomach of a bee, shortening its lifespan, and the damage allows some of these other pests entry into the bee itself. It's like having a bad cut, then having it get infected. It's a no-win for the bees.

### New pests.

Several new viruses (including an insect iridescent virus we nicknamed Ivy) and a couple of diseases were found. By themselves, though, none seem to be causing terrible problems. But now, after four years, we have identified these nasties and know what to look for... and maybe even what they do when combined with other problems.

### The worst pest.

But after 25 years we still haven't found a good way to control *Varroa* mites. Scientists have discovered that these mites are even worse than we thought. When bees are attacked by these mites their immune systems shut down and the bees can't handle other pests and diseases. So the mite does its own damage and then makes it easier for other pests to do even more damage.

### Systemic pesticides.

Incredibly small amounts of new pesticides - notably, Bayer's clothianidan, one of its neonicotinoid pesticides - are showing up in honey bee food fed to young bees. These sublethal amounts seem to be much more lethal for young bees than old bees, but it was the old bees that these chemicals were tested on. When only old bees are tested and they seem unaffected the pesticide is claimed to be safe to use. Maybe not.

### Fungicides.

Until now considered safe to use around bees, these agrochemicals have been used for years without apparent problems. When honey bees are exposed to new formulations, many with the active ingredient prochloraz, however, it tends to harm the digestive flora bees (and us) use to help digest food. No digestion, and bees starve. That's a problem.

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### All Together. Now.

By themselves, none of these issues is fatal to honey bees or their young. But more and more evidence is piling up that when bees are exposed to three or four of these at the same time, an individual bee is essentially overwhelmed. But rather than all die at once, they simply live shorter lives. Shorten the life of a typical honey bee by 5 or 6 days (out of a possible 45 or so in the summer), and you destroy the complex society of the colony, and soon, there are no bees to carry on the work.

Colony Collapse Disorder is, it seems, simply a symptom of too much of all of these in some combination. The researchers haven't found the complete answer yet... which virus, disease, chemical and immune system assault is the most lethal, but they are closer to the answer, and more importantly, have better advice for beekeepers on how to avoid these problems.

### How Beekeepers Can Help

Make sure bees have a diverse and varied diet. Many floral sources are needed for a healthy, wholesome, season-long diet. And make sure those flowers have not been sprayed with the new insecticides and fungicides that are so detrimental to the young. And feeding bees is a good idea. Use one of the newer substitute diets available from the supply companies and feed whenever there's a food shortage or lack of variety. It will only help.

Make sure you control Varroa mites in your hives, keeping the populations as low as possible all year long. Use bees resistant to mites as much as possible. Trap mites using drone brood and screened bottom boards, and if treatment is necessary, use the safe organic acids or essential oils.

To keep stresses as low as possible in your hives, keep your colonies in full sun, all day long. This reduces mite populations and even small hive beetle infestations a great deal. And, winter your bees with more than enough stored food, with good wind and cold protection to help them through this tough time.

Read more: <http://www.thedailygreen.com/environmental-news/blogs/bees/colony-collapse-disorder-causes-0118#ixzz1xfG605Rq>

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## What is honey? How do honey bees make honey?

Honey is a sweet, thick sugary solution made by bees. The composition of honey consists of varying proportions of fructose, glucose, water, oil and special enzymes produced by bees. (Glucose and fructose are types of sugar)

The first step in making honey begins when field bees fly from flower to flower collecting the sweet juices or nectar that a flower provides. With their tongues, the field bees suck out the nectar and store it in sacs within their bodies. After filling their sacs with these sweet juices, the field bees fly back to their bee hive and regurgitate the stored nectar into the mouths of house bees.

These house bees are assigned the job of adding enzymes from their bodies to the nectar. The enzymes cause the water in the nectar to evaporate-thereby turning the nectar into honey. Lastly, the nectar is stored in a cell of a honeycomb. Overtime, the nectar ripens and becomes honey.



### The buzz on honey...

- Honey is one of the easiest foods to digest.
- Honey is used in many cough syrups because its smooth, thick texture soothes throats.
- As a result of honey's unique ability to readily absorb air, it is often used as a moistening agent in baking.
- Honey comes in all types of colors and flavors. The color and flavor of honey depends on the how old the honey is and the kind of flower that

### Club contacts

**Adrian King** 753 4681 President

**Stephen Black** 752 6860 Secretary

**Sue Billing** 751 4337 Treasurer

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