

## ABOUT THE APIARY

# THE ART OF BEEKEEPING

*Ricki Leahy*

At this critical time of year, many beekeepers who are new to the art will suddenly find themselves confronted by situations in their beehives that will stretch their realms of understanding in the manner of bees.



*A nice looking queen.*

It is fantastic that so many of us in New Zealand have become interested in beekeeping, either as a hobby or by making beekeeping a career through employment, perhaps with ambitions of creating a future livelihood within the industry. No matter who, where or what, we all have to learn how to walk—that is, understanding the basics of beekeeping—before we can run.

## Decisions, decisions

October is the month when decisions we make tend to dictate how our hives will fare during the production season. It's the month when, if they haven't already, bees are most likely to swarm, which is a perfectly natural occurrence. The bees, as a means to their species survival, have a very strong instinct to swarm when the conditions are right. The swarming bees that leave home will set up somewhere else, while at the same time leaving enough bees behind to look after the brood and nurture a new virgin queen. What we as beekeepers need to figure out is how to alleviate the pressures within the hive that instigate any swarming impulses, or perhaps learn how we could manipulate the hive to somehow convince the bees that they have already swarmed.

I have learnt from my experiences that a certain number of hives always seem to



*Good solid frame of capped brood.*

swarm no matter what you do, or think you have done. It's always rather alarming to watch one of your hives swarming, and even more so when you turn around and see another doing the same. The more hives you have, the less time you have to run around reactively catching swarms.

## So, what are some of the simple basics that may lower the chance of swarming?

Having a young queen is a very good start, and to evaluate the condition of the queen we should first inspect the brood pattern. The telltale sign of a strong young queen is a good solid brood pattern with healthy, well-fed brood of similar ages laid out in rings across the frames. The bees will know that they have a strong, young and viable queen because she will be laying well and therefore keeping the hive busy; but importantly, she will have a strong queen pheromone that will spread throughout and 'bond' the hive.

Needless to say, an old queen getting close to her 'use-by date' will be lacking in these attributes. Nowadays, when beekeeping with varroa, it's considered a good idea to try and requeen your hives each year. Sometimes it's difficult to requeen to a strict schedule due to the availability of mated queens, whether your own or purchased. The hives that missed requeening in the spring can be caught up

with in the autumn, so some lucky queens will get to live a little longer.

But really, if your beehive management includes a requeening programme and if you target those hives needing requeening the most by using what queens are available, then this is surely better than not being aware of the advantages or need of requeening. To some it may seem rather barbaric dispatching queens, but really the bees show no mercy either when accomplishing the same task. I actually think the queen's instinct tells them that their life and sacrifice is all about the hive, not themselves.

The hive may have naturally superseded their queen recently or any of a myriad factors may be playing out in the hive. This is when beekeepers discover that the challenge of beekeeping can be fun. There is always something new to learn, something to discuss with fellow beekeepers. Perhaps the essence of swarming is what makes beekeeping such a lifetime challenge and probably why most of us enjoy our beekeeping so much.

## Give them some space

However, requeening is only one aspect of swarm prevention. You must also ensure the queen has plenty of available space to lay her eggs as the brood nest grows. Lift

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honey-clogged frames out of the brood nest and replace, preferably with nice drawn-out combs. Foundation will suffice if need be. It may only be a frame or two being swapped out but that will make a big difference. The bees would naturally eat out these honey-clogged frames and in effect convert that energy into brood. But in terms of swarm prevention, we must work proactively to reduce that natural swarm impulse.

It's good practice throughout the season when working the brood nest to gradually work the worst of any damaged frames to the side, including the old dark frames and those with excessive drone comb. These frames are then ready to remove from the brood nest at this time of the season, and actually it's good practise to cull them right out of your beekeeping systems. I suggest that any frames with a useful amount of honey could be kept temporarily in the hive, perhaps 'upstairs' in a super above a holey board. This allows the bees to feed on their own honey

and then at some other time, you can melt down the then 'cleaned out' frames and retrieve the wax. (See the July 2020 'About the Apiary' where I mention the use of holey boards.)

Of equal importance is providing ample honey and nectar storage space for the growing hive by adding an extra honey super well before the hive may need it. A spell of warm weather and a sudden spring nectar flow can quite easily catch any of us by surprise. If that nectar comes pouring into the hive, it doesn't matter how much space we have provided in the brood nest: the bees in their enthusiasm will want to offload and quickly go foraging for another load. Guess what, the fresh nectar will most likely get stashed in the brood nest, restricting the queen's laying pattern, which in itself will immediately instigate a swarm impulse. From then on, it becomes a real task for the beekeeper to wade through the hive every nine days or so looking for and breaking

down any queen cells. It actually does no harm for the bees to have that extra space as the weather warms and the days grow longer.

Also, make sure that the hive has good ventilation. This depends, to a certain extent, on the strength of the hive. A hive that is building up well, able to defend itself, with an abundance of bees, should have its entrance fully open so the bees can easily ventilate their hive, evaporating excess moisture from the fresh honey, nectar and hive.

The simple basics to reduce the swarming impulse are having young queens as opposed to old grandmas, space for her to lay, ample supers on the hive for incoming nectar and ample ventilation.

#### **Develop a system when manipulating frames**

As well as all this, it's important to disrupt the hive as little as possible, particularly when manipulating frames during any inspection of the brood nest. When shuffling old or rejected

*Definitely work a frame like this out of the brood nest.*

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Marginal frames like this with patches of drone brood should be worked to the side.

brood frames to the sides (as described above), or when searching for a queen, queen cells or any other such action, it's always helpful to develop a system so the frames you handle are generally replaced in the same order so that the hive is disrupted as little as possible. Especially, frames should not be rotated and returned to the hive another way around. This can easily happen, for instance when looking for the queen; it doesn't take much to get muddled with frames leaning up against your hive all this way and that. If you are new to bees, it could be a good idea to draw a chalk line across the top bars, perhaps on a bit of an angle, so the frames only match one way.

Of course we need to manipulate the frames, so please don't let me discourage you removing or adding the odd frame because we can and should, but just not excessively. Being sloppy or not realising or even caring that the brood nest is being shuffled like a pack of cards is very disruptive to the queen's laying pattern. It can quite easily cause her to simply stop laying while she waits for the brood to hatch out. She is only happy to restart her systematic and highly organised pattern of laying when a large enough patch of cells has eventually hatched and been polished by the bees. You can notice this break in the brood in hives that have suffered this disruption. What was thought as a good queen suddenly looks as if she is failing but actually, she is suffering the consequences of poor beekeeping. Compounding on this



When cracking apart the supers, keep an eye open for signs of varroa. All photos: Sam Doran.

situation, the bees think the queen is failing and needs superseding, so by the time the hive has settled back to normal the summer has sailed past and, that's right ... not much honey.

Monitoring for varroa is another task for October. It's prudent to check that your treatments have been effective. You never know how other neighbouring beekeepers have fared regarding the success with their treatments. Your bees may be suffering

## THINGS TO DO THIS MONTH

- Slow down swarming; give extra space in the honey super and brood nest.
- Check for swarming; break down swarm cells.
- Always remember to check for AFB before removing anything from the hive.
- Check for stores.
- Monitor for varroa, checking that treatments are effective.
- Participate in the NZ Colony Loss Survey.

reinfections with either varroa-infested bees absconding into your hives, or your own bees robbing out vulnerable, varroa-ridden, weak and defenceless hives.

This also leads to why we should always be looking for signs of disease. AFB should always be front of mind. Being aware of what healthy brood looks like and making decisions as to how we manage our hives all becomes easier and more understandable with experience.

Happy beekeeping.