June Beekeeping

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The start of June is always a good time to reassess your colony and at this stage you will have a fair idea if you have the potential to get a crop of honey from the main crop which will be starting within the next three weeks.

To date May has certainly lived up to its reputation "a wet and windy May". Several beekeepers are worried about the weather but remember without this rain, June could be a very barren month for nectar secretion. There are reports of swarming, but all of these are related to bad beekeeping practices. Let's recap on swarm prevention. Queen phenomes or "the lack of" within the hive is one of the main drivers behind the colony's decision to swarm. The older the queen the less she has to distribute. That doesn't explain why most colonies attempt to swarm regardless of the age of the queen. For a beginner swarm prevention should focus on providing the bees with room. Firstly, as the colony expand to 6 frames of brood put on the first super so that as the young bees hatch, they have room in the hive, also if there is a spring flow they will require room to store the honey so it's better not to be taking up valuable space in the brood chamber which the queen requires for laying. The basic requirement for a beginner is to think "room". When it comes to the brood chamber a young prolific queen will need room especially when she reaches her egg laying peak sometime in May/early June. When you are finished your examination, the major questions you need to answer are:

Figure 1 You must be able to see eggs if you are to succeed.

1) Have the bees enough super room until you return in 7/14 days?

2) Has the queen enough room until my next visit?

If the answer to either, especially the second is "no", then the colony will probably swarm. Simple math's will demonstrate the issue in the brood chamber. If the colony has 1 frame of brood the chances of them swarming is 0%, 5 frames of brood 30% chance and 7 frames a 60%, but when the colony has 9 + frames of brood the chances of them attempting to swarm really climb, especially a young queen because of her egg laying ability. If you look at it in reverse, at 9 frames of brood and with 11 frames in total, this means the queen probably has only one more frame to expand (last frame is usually honey and pollen) and that is not enough, she will run out of egg laying space and

that triggers the swarming impulse. It's a natural progression in the bees' yearly cycle. In January the queen starts to lay, by March her egg laying is increasing, by April the first of the drones are on the way, by early May, you see play cells, late May/early June the first eggs and then hatched larvae in the play cells. The nest is fully layed up, drones are hatched and then sealed swarm cells, the swarm is out, and nature has provided another colony. It's all about preservation and propagation of the honeybee. The solitary bees follow the same cycle but in a smaller, less dramatic fashion. Best way to provide room for the queen is replace combs in the brood chamber every year, 6 frames would be a good target. That provides the queen with fresh comb and all cells are available. Old comb can have a larger percentage, up to 20% redundant cells not suitable for the queen, this dramatically reduces the space available to her, a better option is to replace the full brood box by a "Bailey frame change". Check out our fact sheet for details.

Figure 2 Larvae 4 - 5 days old, soon to be capped

When you have a situation where the brood box is full of combs of brood, doing nothing is not an option as the colony will attempt to swarm. There are several options (1) remove some frames of brood and replace with empty comb or foundation. If you remove combs of brood, you can distribute to colonies that are not as advanced, if they have the bees to look after them. Another option is to place the frames of sealed brood into another broad box and place it over the supers. You can fill the empty space with dummy boards. Just be careful that the bees don't draw out a queen cell in the top box as the bees are away from the queen, now your pheromone theory comes into play.

2. Another option would be to add a super of Hoffman frames over the brood box but below the queen excluder, commonly known as broad and a half.

Figure 3 Swarm returning, queen clipped and on the ground

Sometimes despite all your best efforts you will be told that your colony has swarmed, some returning because the queen was clipped, but for others the news that your swarm flew away is so disappointing. When this happens, action need to be taken. Assuming the queen was clipped and marked, have a look on the ground in front of the hive, you may find her, usually with a small cluster of bees. You could save her by getting two frames of bees from the hive and place them in a nuc. Remove to another apiary and feed. Then go through the hive and select two well-nourished open queen cells and mark their position. Do not shake the frames they are on, brush all the bees and examine them for other cells which you will break down. On the remainder of the combs just shake all the bees off and break down the queen cells, open, sealed and play cells, they must be all removed, this is one job you take your time at, examining both side and bottom of each frame, watch for any holes in the combs, that's where they often build the cells, especially at the timber of the side bars. Close up the hive and leave for 7 days, then you

reexamine it. Firstly, look at the two cells you left, now you must select the one to lead the colony and remove the other. Again, you need to look at all frames and break down any new q. cell that the bees have started. Remember to take your time, it's more important that all bees are removed as the bees may have started emergency queen cells and these will be buried among the worker brood. If you miss one the colony could swarm again, or the colony could be taken over by an inferior queen.

If you already lost the swarm you need to go back and check the colony for queen cells following the procedure as above, leave two open queen cells, examine 7 days later and leave one to lead the colony, if you do not the colony could swarm 2 – 4 times more and usually you end up with a very weak colony at best or disaster, a queen less brood less colony. Sometimes when you examine after the swarm all the cells are sealed so you have no choice but leave one and hope for the best.

Figure 4 Runt queen cells usually drawn after breaking down cells for the 2nd time, very easy to miss.

Some beekeepers remove their first crop after the spring flow especially if in a OSR area as the honey will quickly granulate. If you did remove the supers and extract, make sure you replace them quickly for room, also you just remove all their stores so you may need to feed the colony as the first 3 weeks in June is known as the "June Gap" and this is a period when there is no flow, therefore a large colony may starve if not looked after.

Figure 6 Bees on the poppy

Figure 5 Consider queen rearing, nice well-formed cell.

Remember the colony is just about to reach its peak strength with the maximum number of foragers and larvae, all needing to be fed. As the month progresses you need to check for swarm preparation, check for room, brood box and supers. Check for food and of course be always watchful for disease. When you go to examine a hive lift off the roof and then the crown board see how many frames the bees are occupying in the top super, if all but the two outside ones are covered with bees, add another super. Remember the bees only get a few hours for a few days to collect that crop and if they do not have the space, they cannot store it. Bees can fill a super in a day so be aware of the conditions outside the hive, the flora and the weather.

For the more experienced beekeeper the option of raising a few queens and/or making up nucs could be considered this month. If you have a colony and the queen is determined to swarm it's a good idea to take out the queen especially if she is a good strain, and place her in a nuc box, add in two frames of brood with bees and shake in another. Fill up the nuc with foundation or drawn comb. Best option is to remove it to another apiary and feed. The queen will continue to lay and by the end of the season should be ready to overwinter. Treat the main colony as explained above for hives that

did swarm. The fact that you kept the old queen means that if the new queen fails you can always reunite the colony or have a test frame if needed.

June is a great month for the bees and beekeeper. It's also a month of frustration if you lose a swarm, it's almost like your horse falling at the last fence in the race.

A recap for the beginner and this is where ye all keep making a mistake.

When you find queen cells in your hive:

1. Examine all the frames before you decide what to do
   - Did I see the queen?
   - Did I see eggs?
2. If you can answer yes to either of the above that means if you break down all the queen cells the bees CAN rear a new queen from the eggs or very young larvae.
3. If you cannot find the queen and there is NO EGGS in the frames that means the queen is gone for more than 3 days, possibly longer.
4. You must now leave a cell preferably an open cell so that the bees can continue to raise a new queen
5. Examine this cell after 7 days, it should be sealed, and break down all others
6. If you keep breaking down cells without considering the presence of the queen or what stage the larvae is in the hive, you will eventually end up with a queenless hive which will result in laying workers and that's the end of the bees.
7. Recap of the recap. If the answers to either of the two questions above is **NO** then you Happy cannot continue to break down the queen cells, otherwise the colony will be destroyed.

Don't forget to wear your reading glasses while beekeeping, after all that's what you are doing when you open the hive, you are reading the combs, every letter, every cell. beekeeping to ye all.