Stahlman Beekeeping Notes For 2022

Beekeeping in August

Absconding bees

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Some natural behavior seen in a hive of bees may be daunting to a new beekeeper. I just happened to see one of my colonies with a mass of bees flying in front of the hive yesterday.

This is a condition that lasted for up to 15 minutes or so and then the bees settled down and went into the hive. No bees were flying away or high into the air or rushing out of the hive entrance (all signs of a hive in the process of swarming).

It was not a robbing situation in which the attack will last as long as robber bees are getting (robbing) the honey stores in the hive.

It was not a situation in which a swarm had just decided to take over the hive.

Of the four conditions that might be observed by a beekeeper, this one did not rise to the level that would cause me to be overly concerned.

Brood sizes are still rather large. It is not unusual to find six or seven frames of brood in a hive. Large populations of worker bees are still present. Colonies with nectar resources or that are being fed are continuing to produce brood.

What I observed happens often with colonies raising brood. When a young bee emerges from a cell, the early tasks within the hive involve cleaning cells, feeding larvae, ripening and storing nectar, care of the queen, secreting beeswax, capping the honey, building comb, and guarding the hive entrance.

These activities are age dependent as the new adult bee continues to develop. The last stage of being a young worker bee is to become a forager.

Since a queen may lay 1500 to 2500 eggs a day, I would assume that 1500 to 2500 bees reach the point of joining the foraging population of the hive every day.

These new worker bees joining the working force of 10,000 plus bees must learn how to find the hive upon their return. Thus, almost every day at some point, I see a large number of bees hovering in front of the hive.

It is interesting to me that among all the things a new foraging bee must learn is how to read the returning forage bee's dances and then respond by flying to the nectar/pollen sources.

It is all in the life of a foraging bee. Some books refer to this as social foraging. Foraging is a group effort. The bees in a hive are quick to adjust from one honey (nectar) source to another.

I often compare bees with human activity. How often do we hear of kids on the internet finding a party going on in their community?

A working forage bee's goal is the formidable challenge of finding food for its hive.

If hive resources are low the foraging bees become desperate. Often in the spring a beekeeper can set outside a wet super (one from which honey was extracted) and bees will fly over and past it. But on days like late summer, a feeding frenzy will take place.

Nectar, pollen, water and resin are needed by bees. Most research on honey bee resources indicate that there is little for bees to gather from September to April. In order to survive this dearth of food, bees need to store surplus food – some say 60 pounds going into winter.

I need to remind my readers that there are exceptions to this general information.

Those of you living in areas of cold winters will need nearly 60 pounds of surplus food in a hive. Those of you living in the south may have foragers flying all winter often expending a lot of energy looking for food and finding little. Expecting honeybees to find food the year around is miss-guided. Even hives in the south need food to supplement cold weather.

One beekeeping task is to know the food requirements where your bees are located.

We have a lot of crape myrtle in bloom but my bees are getting almost nothing from it. I have heard from some local beekeepers that white crape myrtle makes some honey. I just haven't seen it. My trees and neighbors trees are in full bloom. I see a little pollen coming in and will report on it in a later article.

To test the robbing possibilities I put a small pan (old pie pan) out with some sugar water. If the bees seem to go crazy after it, I pick it up and put it away. I don't want to get robbing fever started. I feed my bees after the sun begins to go down.

However I have used open feeding as an option when I had a lot of bees. I saw open feeding used quite often by commercial beekeepers in Georgia and other places. Generally they used 50 gal. drums filled with broken candy canes and floor sweepings as the sugar source. The drums had sticks to serve as floats, and the bees had a field day. The problem of feeding this way is the beekeeper using this method is feeding all the bees in the area.

I can understand open feeding to reduce the cost and labor of using division board feeders or top feeders. My choice is top feeders.

This is a wading pool covered with a cloth and filled with water/sugar mixed 1 part sugar to 2 parts water. Note the number of bees along the edge of the pool. I was told the bees that get into the water get out without drowning.

I live within the flying range of hives owned by 8 neighbors within 2 miles of my hives. This pool is feeding 14 hives and a few nucs. The cost of buying top feeders or division board feeders would be reason to consider a set up like this if there are no neighboring hives. Thanks to my friend Ray for giving me permission to use his picture.

In hot weather, bees need both water and food. Just be careful not to spill a syrup mixture near your hives.

Absconding Bees

It is not unusual to hear about bees leaving hives. It is unusual for hives to swarm this late in the season but it does happen. However, a hive that swarms leaves behind bees and brood, plus the possibility of a new queen and bees to replace the bees that left.

Absconding bees is simply a case of a hive that had bees and now has none. When bees are starving they will cannibalize brood as a last resort to dying. They will also abandon the hive most likely seeking a new location if food further away can be found.

The reasons usually listed are:

- **Genetics In their native habitat of Africa, *Apis mellifera scutellata*: are more likely to migrate as part of a seasonal response to a lower food supply. It is possible for some of our bees to have some genetic genes from breeding to Apis Mellifera scutellata better known as Africanized bees!**
- **Apis mellifera are European cousins – they are less likely to swarm as much or abscond as much but they do both.**

Honey Bees most likely abscond because they are under stress:

These are stressors

 # 1 – Starvation and lack of brood (See the report on supercedure at the end of this article)

#2 – Poor Ventilation

#3 – Poor drainage

#4– Some kind of disturbance – animals, lights, vibrations & others

#5- Pest and disease (often this is given as the reason but often bees and brood will be found in the hive – at least a few)

#6- The conditions of hive equipment – odors of the paint or other things that are used in the construction of hive equipment. Maybe too little room in the hive. I have raised queens in mini nucs and absconding is common with small hive units.

#7- Hives subject to excessive heat. This is related to ventilation.
It is common to place hives in full sun to combat small hive beetles and Varroa mites. Honeybees begin to die at temperatures over 110°F. inside a hive and failure to be able to create enough ventilation would cause them to die.

#8- An often heard complaint from beekeepers is "my bees left the queen and my hive after a package of bees was installed." Bees almost never leave open brood to abscond! I would suggest that when installing a package of bees into a new hive, if you have a frame of brood available it, it will help prevent bees from absconding and increase the time needed to build the package bees into a strong colony. See the note with supersedure research at the end of this article.

A few weeks ago I attended the Tuesday meeting of Five County beekeepers. They had a very good speaker invited to talk about the research he did on queen supersedure.

Eric Talley had to complete a research project in order to qualify for the North Carolina Master Craftsman Title. He mentioned that he was aware that many package bees sold with queens often replace the queen after successful introduction. He read going back to 1910 literature that indicated the reason was a lack of queen pheromone. He decided to develop a study using 45 test hives to determine if other factors were involved.

His very interesting talk gave new insight into what happened with his research.

Check out this link to read about the research and how it was conducted. Influence of brood pheromone on honey bee colony ... **This is a link to a free published article in pdf format.**

Eric hit on a great topic and I took the time to print out the entire pdf file (10 pages) for future reference into what I now know of the supersedure of a queen.

I would have given the time honored answer that diminished queen pheromone was the reason for queen replacement. Now we have some scientific results that indicate there is more to it than the amount of pheromone released by the queen. The knock on poor queens coming in package bees has been cleared up somewhat! The study will have to undergo more research in order to confirm the findings, but I now have some information to base mentioning it is not necessarily the queen that is the reason for supersedure.

The most important point I took away from the talk was: The volatile brood pheromones released by young and older larvae have a lot to do with new queen acceptance. The study indicated that "the signals of both young and old larvae may be necessary to suppress the supersedure response in newly installed packages."

The article concludes with this statement: "Establishing new packages into hives with at least one frame of open brood clearly helps to hedge against colonies wanting to reject the queen immediately after installation."