



STAHLMAN

BEEKEEPING NOTES

FOR 2025

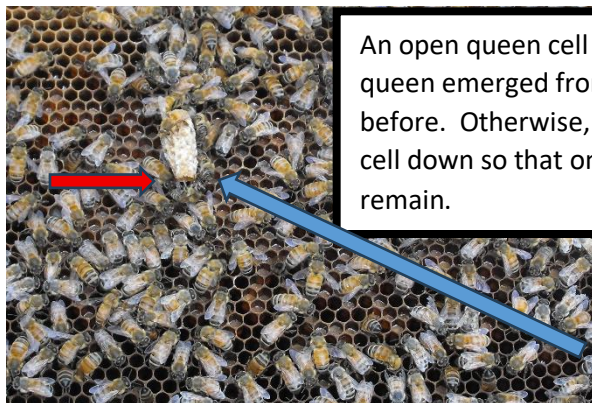
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Replacing queens late summer

A quote from Keith Delaplane's book, *Honey Bee Social Evolution* **“Why has evolution produced organisms that fall apart even if they manage to avoid predators, life-threatening competition or meteors?”** Aging is a natural process and the queen in a colony is the sole producer of fertile eggs. As she ages, egg production declines even for those queens well mated. I often read that queens live for 5 years! I am not sure if I have ever seen a “5-year-old queen”. Most of my queens are marked so I can tell how old they are and it makes them easier to find. Unmarked queens are question marks! There is no way to even guess – maybe the amount of body hair – but normally queens replaced by bees will be very similar in looks to the mother.

A fact: An introduced queen must be accepted by the bees in the colony where she is placed. A period of time must pass before a new queen's pheromone will be accepted. The period of time is usually considered 3 days – this gives the bees an opportunity to recognize that they are queen-less and a new queen is available. In less than 6 hours, queen-less bees will begin the process of trying to replace the old queen. If too much time passes, the bees will build emergency queen cells. If emergency queen cells are present when a new queen is introduced to the colony, the new queen may be killed immediately when she is released from her protective queen cage.



An open queen cell is an indication that a queen emerged from this cell a short time before. Otherwise, the bees would cut the cell down so that only a cell cup would remain.

Before getting into this topic, I might mention that one may find two queens in a colony with an aging or poor queen. When examining frames in preparing to replace a queen, one should also be looking for supersedure cells on the face of comb. Replacing a queen with a new queen is not

going to go well for the replacement queen if the colony already has a queen. If open cells like shown above are present, one might consider placing a frame of open brood in the hive and check to see if the bees are building queen cells. Queen-less bees will build emergency queen cells very quickly – a check two days later will certainly indicate the hive has a queen if no cells are started. If queen cells are observed being built, they all must be cut down before installing the new queen.



Fall or late summer requeening is more challenging than spring requeening because the beekeeper must deal with a larger population of bees.

This is a photo of a skep filled with bees. One of the great advantages of keeping bees in hives with frames is frames can be removed for inspection. Even then finding the queen can be a challenge.

Spring requeening has some advantages over fall requeening and one of the greatest advantages that I can point to is

one has time to correct any issue if the requeening effort fails. Fall is not the time to allow the bees to replace a queen by raising one of their own. First of all, drones are needed to mate with virgin queens and drones are usually not available in numbers associated with good mating results. Second is the time needed to build a good strong population of winter bees for the colonies survival.

Several challenges for late summer requeening:

- As I have often mentioned, bees after honey flows are over get somewhat more defensive.
- Queens are laying fewer eggs and are often moving about the hive. Normally, queens are found on frames with eggs and larvae. At this time of year when a hive is opened and exposed to light – queens can begin to run and move on frames being examined. This makes finding her more difficult especially if she is not marked.
- Other bees in an apiary may begin to rob if a colony is exposed for any period of time while the queen is being sought.
- And if a queen is not accepted, there is almost no time for a colony to be managed to recover from the population loss (brood break) that occurs during the requeening process.

The case for fall requeening:

- A colony has a new young queen producing a strong population of bees.
- The colony in spring will have a queen capable of laying more eggs which results in more honey as honey flows begin.
- And important – a brood break during the requeening process in fall – does not come at a time when it is important to have a colony at full strength and it has the advantage of reducing mite reproduction in the hive.

The process: Fall requeening requires planning:

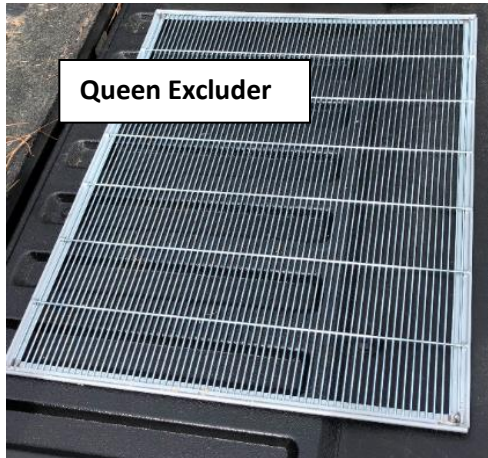
If one has a colony occupying two or three supers, the queen could be located in any one of the supers. Looking for her will take a lot of time. Finding her may be almost impossible. (It helps if she is marked!)

Queens must be ordered or raised before any attempt to requeen a colony is made.

The method is quite simple: Place a queen excluder between each box containing bees and queen. Normally, this is done after the honey crop has been removed and the brood chamber is made up of two or three boxes.

It is much easier to find a queen if she is confined to a single brood box. This is a technique that requires more than 3 days to carry out. Keep in mind that eggs take 3 days before becoming larvae. Thus, any super (box) in the brood chamber that has eggs will also contain the queen.

A queen excluder has several valuable uses:



- It prevents a queen from laying brood in honey supers during a honey flow.
- It can be used to confine a queen to a restricted area in a hive.

This method makes finding the queen easier, quicker, and reduces robbing.

If the colony is kept in a hive of three boxes, two queen excluders must be used.

Identify the box with eggs and the queen is in that box. The queen may still be hard to find, but one knows she is in that box. If not found immediately,

that box can be placed on a bottom board with a lid and set aside. The colony without a queen can then be requeened and when the queen is located in the set-aside box, it can be returned to the colony.

If you have never requeened a colony, the additional information may be helpful.

I like the text book The Beekeeper's Handbook by Diana Sammataro and Alphonse Avitabile. This quote applies to all of us requeening a colony.

“Although many methods, including some ingenious ones, have been devised for introducing queens into colonies for the purpose of requeening, **none can guarantee absolute success.**” Thus, don't kill the old queen until you are sure the new queen has been accepted by the bees. The best way to do this, is to take a frame with the queen and some bees to put into a nuc box. This nuc box with the old queen can be set aside in the bee yard. Just make sure the nuc box has enough bees to support the queen and has some honey so the bees can survive. Later, after the new queen is accepted and laying eggs, the old queen can be used to show what a queen looks like. She will die in short order if placed in a queen cage without attendant bees.

What do you do with queens that are considered unsuitable to keep?

For new and many other beekeepers, trying to save a queen bee's life is high on the list of things to do. However, when I combine a weak colony with a stronger colony, I must do something with the queen. In some cases, I have given queens away but never sold poor queens to someone else. I can look back to many years ago when I was teaching a COBA queen rearing class in the bee yard at the Ohio State University and pinched the head of a poor queen. We put her on a picnic table and her pheromones attracted a number of worker bees that gathered around her. Even a dead queen's pheromones are attractive to some bees. Some students were aghast at such treatment for a queen – but leaving a poor queen in a colony of bees is cruel as well – they are sure to die – either the bees will supersede her or winter cold will end her life. By the way, I have seen small clusters of bees die and they continue supporting the queen until the cold finally gets them all.

Our amazing neighbors gave Colt a queen bee to take care of from one of his hives. He named her Honey. 🍯



Not yet in kindergarten, this is my young neighbor interested in queens. His father is very supportive and allowed this little guy to accept a queen from me.

I explained that the queen would not live very long in this cage. With that understanding clearly made, Colt is adding this queen to his insect collection. His father has bought him a microscope to study insects – wings, legs, heads, and other body parts.

This is right out of the movie “home alone.” Who knows what this queen will do for his life, but I am hoping this small gift will someday result in a future beekeeper or entomologist.