

Stahlman Beekeeping Notes for 2022

Swarming & Dumping



Issue # 16 April 16, 2022

Y'all I am sad 😞

It seems my bees have swarmed. I was out of town over the weekend and came home to my son telling me he saw a bunch of bees flying through the yard and off through the field. I opened up my hive today and it does look a lot lower on bees than when I put my 5 nuc frames in. I also noticed a few queen/swarm cells. The wind picked up and bees were getting pissed so I didn't spend as much time as I would've liked to further investigate.

Any advice on when I should go back in? What do I need to focus on when I do go in? TIA

The internet post in the box is a common problem for beekeepers.

Swarming has been in full swing here in North Carolina for some time.

I see it all the time. Information that new queens will not swarm. **Do not believe that information.** Thus those new to beekeeping assume that when a new nuc or package is installed into a hive everything will be okay.

As this individual points out queen cells were seen at the time frames were switched from the nuc to a new hive.

Beekeeping is a learning process and sometimes costly. See Dumping at the end of these notes!

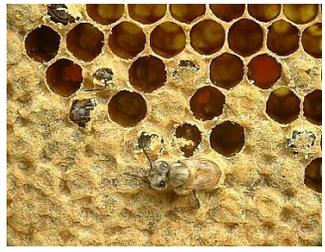
In this situation the best thing to do is let things develop normally. This hive will face quite a setback of one cycle of brood lost. This might be a time to mention that brood interruption might help with Varroa mite control. I am assuming the hive now has a virgin queen.

Here is a time line to help understand the time it takes for the new virgin queen to start laying eggs and regenerate the bee population in the hive.

As one looks at this time line, realize the loss of bees and the laying queen, will delay the hive's development. I was taught that the cost of a swarm is measured in a loss equal to a super of honey. In the case of a nuc, it will result in more. The nuc will miss the honey flow

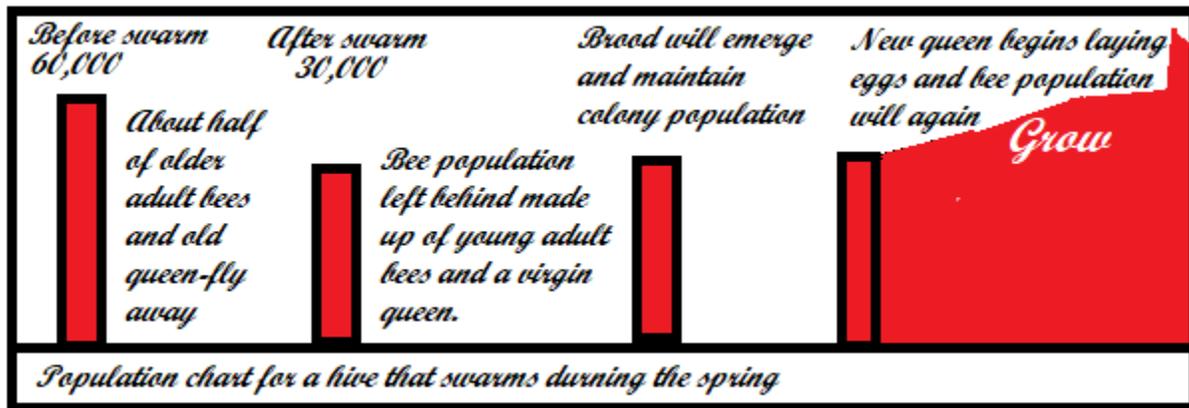
almost entirely. All the bee population lost with the swarm would have speeded up comb building and bee population growth. **Both critical needs of a developing new hive.**

A Time line for a virgin queen to regenerate a hive with new bees

<p>New virgin queen</p>  <p>Queen emerges</p>	<p>4-6 days later</p> <p>Queen mates</p> <p>Usually 4 day later but must mate within a 20 day period!</p>  <p>Or she can become a laying worker! That would not be good for the hives survival</p>	<p>10 -14 days later</p> <p>Begins laying eggs</p>  <p>A sign the hive has a new laying queen. Usually eggs can be observed within two weeks following the swarm date.</p>	<p>21 days later – No eggs observed</p> <p>If all cells are open – no capped worker brood from the previous queen or eggs are not present – order a new queen ASP.</p> <p>This will further delay the development of the hive but it can still be saved!</p> 	<p>35 days later measured from date the swarm left the hive.</p> <p>First new adult bees will begin to emerge and rebuild the colony bee population.</p> 
--	---	---	---	--

The hive that lost the swarm will still have bees. Not as numerous as before but these bees will protect current brood in the hive. They will continue finding food for the hive, will nurse the brood of the new queen, and for a while continue adding to the adult bee population.

These bees make it possible for the young queen to replenish the hive with her brood.



Some comments about a hive that swarms:

- Swarms are normal bee behavior when conditions are right. They normally occur during a period of colony build up -- intense brood build up in the spring when food sources are readily available. But colonies do swarm later in the year.

- Those swarms are faced with obstacles such as lack of time to build up for winter survival and other environmental conditions.
- The reasons for a hive to swarm are well recognized by beekeepers. The signs of the possibility of a swarm start well before a colony begins to build queen cells.
- Once a colony starts building queen cells, it is very difficult to stop them from swarming. There are techniques used by beekeepers to keep hives from swarming but even these can fail.
- **It is critical that the hive raise a new queen!!!**

Several techniques:

- 1) Wait a week following the swarm. It will be a waste of time trying to find a virgin queen. Replace a frame [this should be a frame without brood] with a frame that contains eggs and young larva from another hive. A check of that frame three days later can help the beekeeper determine if the hive has a queen. If no emergency queen cells are found on that frame, the beekeeper can assume: **“A QUEEN IS IN THE HIVE!”**
- 2) Sometimes a virgin queen flying from the hive does not return. Things get a bit tricky at this point. It is difficult to make any decision because new virgin queens should begin laying eggs about this time. Do not be in a hurry to rush out and buy a queen – not yet! Wait several days and do another inspection –eggs or larva indicate the queen is in the hive – no need to see her. If no eggs or larva are seen after all previous brood has emerged -- it is time to buy a queen and introduce her. I consider the new queen as insurance. If the hive has a queen, the new queen will surely be killed by the bees. Without a queen the colony is lost to laying worker bees.

Reasons for honeybees to swarm:

1. **Congested brood nest; this is the # 1 reason!**
2. The swarming nature of the honeybee involves external factors, hereditary and physiological make up of its members. (from *The Hive and the Honey Bee* published by Dadant & Sons)

I spoke to the Chattham County beekeepers on Tuesday and they had a number of questions. One of the things I do when I talk in person is ask if there are any questions and on many occasions members are hesitant to ask. I pass out 3 x 5 cards to write questions they may have and generally draw from those cards a gift of some beekeeping thing to reward one of them with something worthwhile for providing me with questions.

So many were handed in that I am going to be answering them with my newsletter. They may be asking about something you may be looking for! They also provide me with ideas for future beekeeping topics.

I have used words in my talks that new beekeepers in the audience don't understand. I feel much the same way when a College Professor or a student doing research starts talking. Thus, I am going to review a few question that during my talk left some in the dark!

I used the term "Vertical split." A vertical split is a way to make hive increases. I have found it to be a very successful method in the spring of the year. Essentially, it uses the principal of heat rising from the mother colony to a new split placed above a double wire screen on the mother hive. This prevents chilled brood from occurring during cold periods.

I covered this topic in my notes: Issue 10 March 5, 2022.

I also used the word "swarm trap." It is a way to capture a swarm. Many designs exist but the question was in context of a way to get free bees. I mentioned that swarm traps work if they are placed where bees are located. They are also good for trying to get your own swarms. Again, Issue 6 of 2022 notes cover this.

I also used the term "brood interruption" when talking about the period of time it takes a new virgin queen to mate until that queen begins to lay eggs. Really the period of time in the colony that brood is not being generated.

There were some questions that require more detail to explain. Those questions will make for some topics in future notes.

Several questions were asked about queens. Things like finding them, marking and even how to raise a few. This is a broad topic and I will cover quite a bit on queens in articles to be published in May.

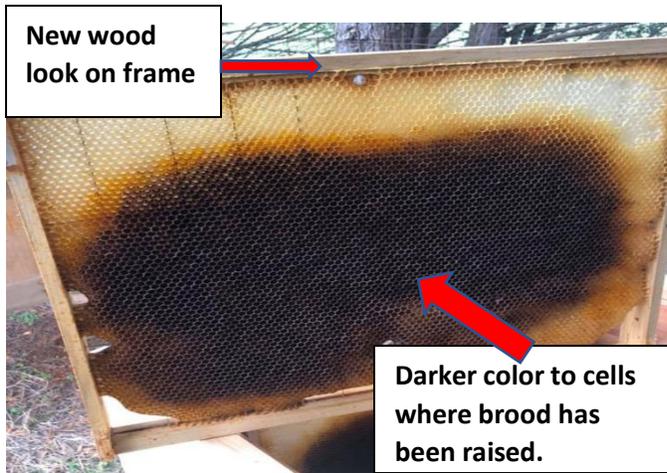
How do you get comb drawn on frames? I will write about checker boarding and comb management yet this month. As colonies grow, management techniques to get comb drawn must be shared early – like later this month.

Inspections of beehives – when and how! Hive management using queen excluders and when to remove entrance reducers or add robbing screens.

A serious Problem in beekeeping **Dumping**

I have observed that several new beekeepers in the Raleigh area have bought nucs with old brood frame comb. There is something in beekeeping called dumping! It is not illegal to sell old brood frames in new nucs. However, old frames are easy to identify and because old comb can carry all kinds of contamination from our environment and disease, it is a shame to see this practice being used.

Dumping can be best described as a beekeeper selling old dark comb and replacing comb with new or better comb in their own hives. Thus, buyers are stuck with some very old black comb in frames.



This frame is ideal for showing comb that has been introduced and worked on by honeybees. This frame contains year old foundation that has some very dark comb at its center.

New wax is almost white before bees begin to draw it out. Newly drawn comb will be yellow. If eggs are laid in new cells, the development of the young larvae to pupa leaves behind a cocoon when the young bee emerges from the

cell. These cocoons darken the comb from brown to black. After several cycles of brood the cell walls are stiffened by these cocoons as anyone who has tried to remove honey cappings from such comb quickly learns.

I like this picture because the wood holding the comb is still unstained and appears like new. Those using new frames and foundation will find their frames looking like this after the first season.



The new cells are still light in color. The queen has started egg laying and the bees are feeding new larva.

This frame has not taken on the look of older frames. It will darken before the bee season ends. The wood color is a good indication of the age of a frame.

This frame is two years old. It is well drawn – all cells are worker brood cells.



A frame like this is very valuable. It contains honey stores near the top bar and it has a solid brood pattern. There are no drone cells or irregular signs of queen cell cups.

Also note the color of the wood. It is getting darker. Almost all of the comb is darker in color.



A new frame is used in this example to show the difference between old frames and new. These frames are 10 to 20 years old. The wood of the top bars is black or almost black as are end bars and bottom bars.

Old comb will also have queen cell cups, often patches of drone comb, and irregular cells. All reducing the available cells a queen can lay eggs and thus, will promote swarming.

New beekeepers and older beekeepers should not be putting frames like this into their hives.



I do find some good uses for frames like this. Let all the brood emerge and put them in a solar wax melter to recycle the beeswax, use them to raise wax moth, or use as lures in swarm traps.

Dumping old frames on new or unsuspecting beekeepers is a shame on the beekeeping industry.

It might be compared to buying a new car with old tires that will need to be replaced soon.