

# Stahlman beekeeping notes for 2021

## Issue # 22 May issues –hive problems

**This issue deals with problems often encountered as the honey flow slows or ends. It is also the beginning of the hottest part of the late spring season.**

It generally takes eight to ten weeks for a package of bees to develop a population of 60,000 bees. A healthy queen can lay nearly 2000 eggs a day or more. Thus, the new bee population will be replacing bees that die. How long a worker honey bee lives varies on a number of factors. The one we are most familiar with is the vast difference between mid-summer and mid-winter bee populations. [The most populated and the least populated periods].

It is a reality that a good queen can lay something like 140,000 eggs over a 10-week period. [A three-pound package usually holds 10,000 to 12,000 worker bees]. Just remember that the life span during the summer of a worker honey bees life is by most accounts about 40 days.

If anything goes wrong in the normal hive population development during summer, the most noticed problems is the observation that the bee population has declined considerably.



This is a healthy hive. Note that after 8 weeks, the bees in this hive have a population covering all 10 frames in this new hive. I call a hive like this wall-to-wall bees. The comb even in the outside frames are drawn.

Another box was added a week earlier and some bees are up in it beginning to draw comb. The queen is doing a great job. All stages of worker bee development can be found on brood frames.



Later, the upper box had all frames drawn and looked like this.

Flight into and out of the hive was very active. Bees were

returning with pollen and storing it as can be seen in this frame. Some of the sugar syrup/nectar was being stored and capped. This development did not happen overnight. New comb is white and this comb shows travel stain and the bees have filled most of the open cells with pollen. The bee population in this hive already needs an additional supper added.

### **Robbing has started here in Raleigh!**

Strong hives can defend themselves against adventurous bees looking for a free meal. However, when one of these adventurous bees finds a hive that allows entry, that bee can return to its own hive and spread the word. (Bees can communicate information to other bees!)

Weak hives are facing a number of problems.

1. Poor queens
2. Robbing bees
3. Wax moths
4. Small Hive Beetles
5. Mites
6. A strong hive early in the season may swarm itself into weakness.

It is important for the keeper of the bees to discover problems well before a hive gets to the point of no return.



**This frame is from a hive near that no-return point.**

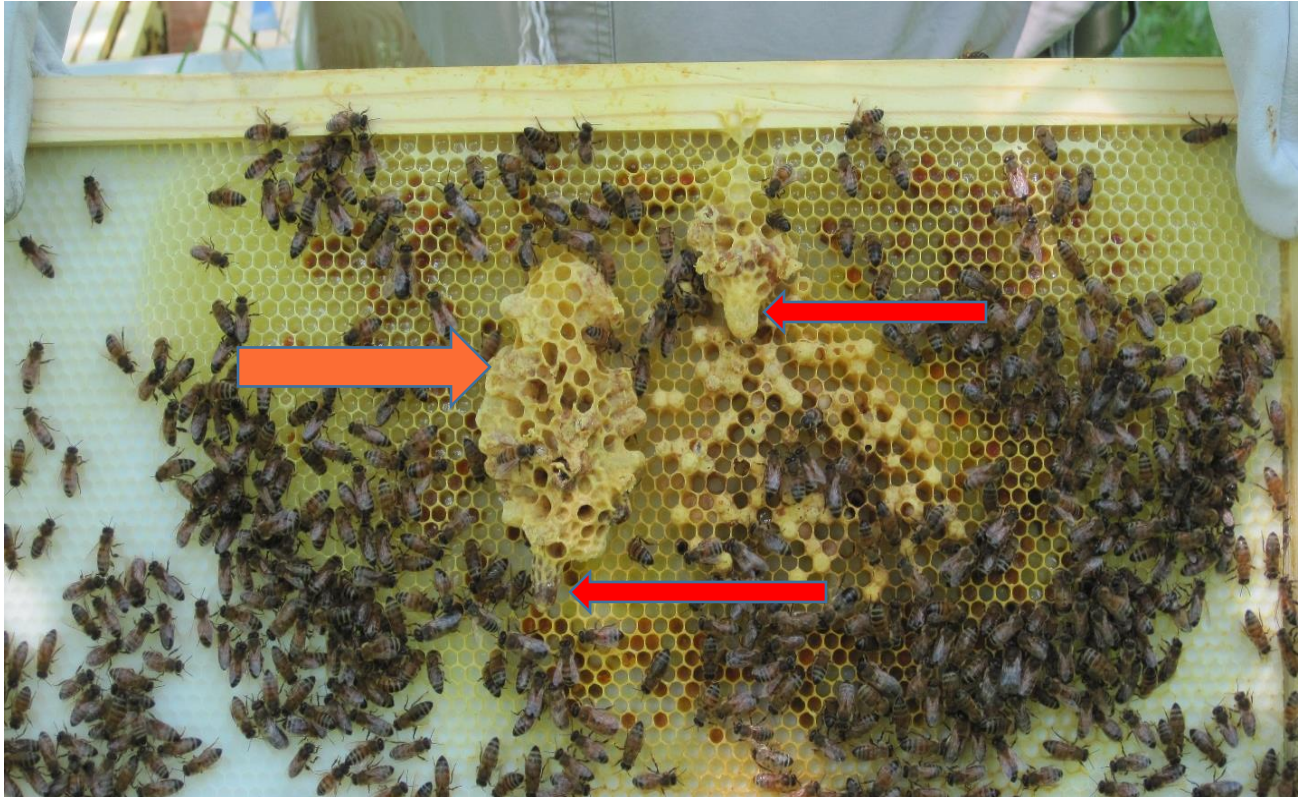
This hive is queen-less. It has made an attempt to raise a new queen. Lets take a closer look!

There are some other problems with this frame:

**The blue arrow is pointing to a drone emerging from a cell.** All the capped and partly capped cells are drone cells built over worker cells. No worker capped cells are present but there is a fair amount of worker bees attending to storing nectar and



feeding the drone larva present. The fact that a drone is emerging from a cell indicates that this situation has existed for at least 24 days or longer.



Future use of this frame of comb will always have these miss-shaped cells that are currently being used as drone brood cells. There is also an issue of some comb built over the surface of the foundation (**see the Orange arrow**). Plastic foundation can be repaired by scraping both the drone cells and the extended burr comb from the surface and then putting the frame back in a strong hive of bees to repair.

These worker bees are still attempting to raise a new queen. Note the queen cells on this frame. (**see the Red arrows**)

These queen cells are most likely not viable cells that will produce new virgin queens. As we all know, worker bees can take a fertilized egg - feed it a rich diet of royal jelly – that will produce a female virgin queen that can mate and eventually begin laying fertilized eggs. The problem is how long will it take for a virgin queen to produce a viable bee population to save this hive?



This is a questionable queen cell. Note the body of the cell is dark and the cap is light colored.

Some beekeepers may think that this is okay. Let the queen emerge and all will be okay.

From experience, I have usually found a cell like this with a dead larvae in it.

I am going to share an interesting way to find out if the larvae is alive or dead!

Vic Thompson, a long time Ohio State assistant to Dr. Walther Rothenbuhler, showed me how to make an incision into the base of a queen cell with a sharp knife and open the cell at the base. If the larvae or pupa is alive, the incision could be gently smoothed to close it and the bees would finish sealing the cell. No harm done to the larvae or pupa inside.

**The hive from which this frame was taken is in real trouble.**

**Introducing a queen to it will result in the bees not accepting the new queen!**

**A person could wait a few days to see if the queen cell produces a new queen!**

**The honey bee population will continue to decline – with no viable fertilized eggs, all future bees will be drones.**

**This hive will become a perfect host for pests!**

- 1. There is still some honey and nectar in the cells of comb. A perfect situation for robbing bees.**
- 2. Yellow jackets will also find the nectar/honey – Often leading a beekeeper to think the yellow jackets killed their hive.**

### **3. Wax moth and Small hive beetles will finish the job.**

Even though a hive like this looks like it has bees – in fact a good number of older bees – it is pretty much destined to die out.

If it were my hive, I would place it above a strong hive. The bees in the strong hive would protect the frame/comb from pest as well as make it possible to make a later split – thus save the hive.

**What happens if I don't have another hive to put it on and just let mother nature take care of it?**



**This is the result! The issues causing this are happening right now.**

**Weak hives can be saved but beekeepers must be aware that bee population in a hive is important. It might be possible to buy frames of brood and bees to place in this hive and add a new queen to save it. This is why we often recommend having**

**two hives rather than one!**

**The upcoming articles for June will cover the pests of a bee hive and how to prevent them from destroying a hive.**

**It seems like it is a long time before we get to winter, but your bees may need your help now!**