

# Stahlman beekeeping notes for 2021

**Issue # 39 Sizing up a weak hive, its queen and choices the beekeeper faces in managing that hive for winter survival.**

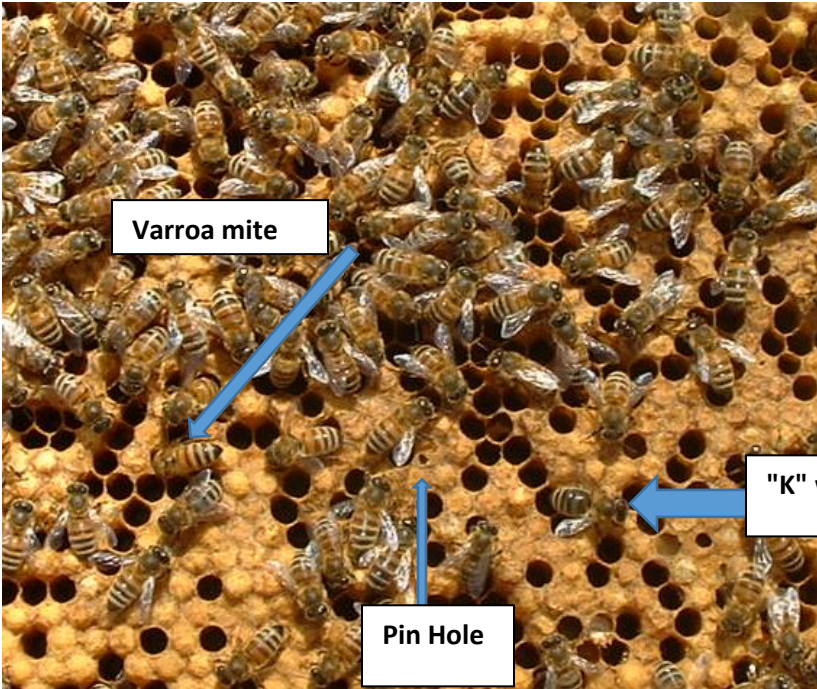
**Last week I mentioned frequent examination of brood is necessary to determine the health and condition of a hive of bees.**

**This frame may look good to the average eye. But there are problems here.**

**What am I looking at?**



1. The comb has been drawn and the frame has a fair amount of brood in it.
2. The bees still have some comb to build on the frame.
3. The brood is spotty – Many frames of brood may have some open cells but not in these numbers.
4. The queen has not returned to lay eggs in these open cells.
5. There is no surplus honey or pollen stored on the frame.
6. There are cells just outside the capped brood area which contain older developing larva.
7. Several cells have pin holes in the cappings.



A Varroa mite can be observed on one bee. Several bees have "K" wings.

**Conclusion:**

**This hive is in trouble.**

**The question at this time of year is: can this hive be saved?**

**To have a chance to survive some action needs to take place immediately.**

**Most obvious to me is the mite issue! It is already quite advanced and this hive needs intensive treatment.**

1. This hive needs a chemical bomb to kill the mites now! A fumigant such as Oxalic acid and/or Mite-Away Quick Strip. **I would recommend any treatment that would kill mites incubating under cappings.**
2. The queen should be replaced after the mite treatment!
3. I do not recommend combining it with another stronger hive!
4. **After the mite treatment**, a beekeeper could increase the forage bee population considerably by just switching its location with a strong hive. I mentioned the life cycle of bees last week. A newly introduced queen is going to cause a brood break and her first eggs will not become adult bees for 21 days. The bee population in the hive currently is weakened by Varroosis which most likely includes some virus problems as well. This is not a good situation for the colony.
5. The new foraging bees will add bee population to the hive exactly when the hive will need warmth in the brood chamber for the brood produced by the new queen.
6. Feeding this hive will be required if it is to have any chance to survive.

**The Next example:**

**I am sure most beekeepers do not like to give up on a hive of bees, but the example below is clearly what a beekeeper should do. An attempt to overwinter any hive**

should start with a hive that has 4 or 5 frames of worker brood in mid- September. If that amount of brood is present, then feeding can replace a lack of stores for winter.

The bees in this hive built comb on only three frames. The hive has drone cells but no worker cells. The background to this hive is it was also started from a package of bees. The beekeeper has been feeding the hive occasionally. The worker bee population has grown smaller as the year progressed. I might mention that only four frames out of 8 in the hive have some drawn comb. The bee population is concentrated around this frame and one other.



This hive is not going to live much longer – maybe several weeks.

1. During robbing season, a hive like this is a target for yellow jackets, wasp and other honey bees.
2. There is no chance for survival because the only brood in the hive is drone brood.
3. It is too late in the season to make an attempt to requeen it.

Normally at this time of the year, a beekeeper would check a hive like this only to find it empty – all honey stores removed and no sign of live honey bees. It would have been robbed!

In the Raleigh area, this has been a serious problem for beekeepers

The bees in the hive from which this frame was taken are doomed and in my opinion will not accept a new queen. If it would, there is still a greater problem. It will take another 21 days for the first egg laid by the queen to emerge from a cell. And then it will take another 20 days for the bee to begin foraging. Unless the young developing larvae are fed with ample food, the new bees will lack body fat to survive the winter season. The current bee population in the hive can not keep the brood nest warm or feed the hatching larva with ample food. Nature does not waste time or effort in helping this hive. A beekeeper can try but the cards are stacked against its survival. This reasoning also applies to late swarms and absconding bees.

**Fall techniques to save failing hives:**

Many years ago, L.L. Langstroth wrote: "The grand essentials for successful wintering bees in the open air in cold climates may be condensed into a very few words: Plenty of bees; plenty of food; easy communication among the comb; upward ventilation for the escape of dampness; and the hive entrance well sheltered from piercing winds."

To quote Richard Taylor, a leading beekeeper writing for Bee Culture Magazine for many years, "The only clear formula for overwintering honey bees is to have strong colonies- Have them strong the whole year round – fall, winter, spring and summer!" The principle "Make sure a hive is full of honey before going into winter." Taking honey from a hive to be replaced with sugar syrup for winter stores is a major problem with beekeepers. Sugar syrup is not the equal of honey!

Over wintered hives require two things [1, a strong population of young healthy worker bees, and 2. Ample stores of food.] Using mite treatment is considered as a way to produce healthy bees with good body fat. But treatments should be during late summer and early fall.

The reality of beekeeping is that some of us have trouble keeping our hives strong all year round!

**General Management for fall:**

Tasks of getting bees ready for the winter season include the following:

- Check the bee population – if a hive is weak, think about combining it with a stronger hive.
- Check the brood and if the queen is not laying a good brood pattern consider replacing her.
- Check for pest and disease! This should have been with each hive inspection since spring.
- Hive management includes:
  - Level the bee hive/hive stand
  - Secure hive covers with weights
  - Insert mouse guards in entrances
  - Provide additional food stores
  - Provide an upper entrance for ventilation.
  - Provide a wind break.

But it is time to repeat some of the robbing points that I discussed in Issue # 23 back in June.

### **How does one know that a hive of bees was robbed out?**

Comments are made such as: I just checked my bees last week and when I checked on the hive today, there were no bees in the hive. They were all gone. The bees just left!

Hives are often robbed when the beekeeper is not around to see the bee activity near the hive. Robbing last only as long as a hive provides the robber bees with food such as honey or sugar water being fed to the hive. Once a hive is wiped out (all honey or sugar syrup removed) the robbing bee activity usually ends quickly.

Robbing is a problem when nectar is not coming into hives. A bee hive will send out scouts to seek food sources. When a bee returns with the reward of finding honey or some sweetener, it will communicate the location where it was found with colony members. Huge numbers of bees are involved in an active robbing situation – even other bees from other hives.

The result is a hive abandoned by its own bees. This could be a strong hive but is more likely a weak hive. Often robbing is stimulated by poor feeding practices of beekeepers. Sloppy feeding methods – syrup spilled on the ground, feeders filled to the rim from which syrup over flows running out of the hive, cracks and various openings that allow bees to bypass the hive entrance, or feeding in the early day rather than waiting until evening, etc.

**Any hive being fed is a target for hungry bees.** It reminds me of the guards protecting the capitol building. If the robbing population is larger than the bees protecting the hive – the attacked hive is in trouble.

### **Signs of robbing:**

1. Dead bees on the ground in front of the bottom board.
2. Battleground remnants on the bottom board – chips of wax and debris.
3. Comb cappings will have jagged edges.
4. No honey stores left in the hive
5. No live bees remaining in the hive.
6. Some frames with capped brood may exist but no live bees.
7. Pollen is not taken from frames.

If a hive is robbed out, the equipment can be reused if cleaned and stored using care to avoid wax moth. If the hive is left outside exposed to the weather other creatures will find it a good home. Mice especially going into the winter season are looking for a good dry home. Roaches, ants and spiders welcome the space. And worst of all, while it is still warm – wax moth will finish the job by destroying the comb in the hive.