

STAHLMAN BEEKEEPING

NOTES FOR 2023

Issue # 22 June 10 , June Health Check-up

■ Queen laying patterns --

It is not too early to begin checking queens that may fail later in the summer. Queens are available now that are well bred and would give a hive with a failing queen a chance to avoid the problems often encountered later. I hope you remember those beekeepers posting messages on local bee sites about a hive they checked only a week ago gone! They may wonder why? Some will blame Varroa mites.

Queens are not born equal. You can not evaluate a queen by looking at her. She is beautiful – it is delightful to see her wandering about the hive. Looks don't count for much! Her "brood pattern" tell us a lot about her ability to produce worker bees. How those workerbees behave tells us a bit about the agressiveness of the hive. The honey gathering ability of a hive, and the hygienic characteristics of a hive tell us more. If one has more than one hive, it will become apparent that hives differ. Some queens are better than others and this shows up in bee populations, honey produced and their behavior.

■ Queen problems are popping up now! I have mentored a number of new beekeepers since I moved to Raleigh eight years ago. I stay in contact with a number of them. I have received a few requests to visit hives because hives swarmed and beekeepers are finding large populations of bees in hives but they see no evidence of a laying queen.

The question is "Should I buy a queen because it looks like the bees did not raise a new queen after the hive swarmed?"

This is a common problem. As a commercial beekeeper, I sold only marked queens. Some would complain that the marked queen when the hive was inspected had lost its mark. One indicated I should check my marking pens. Hives had queens but not the marked queen.

Was the marking pen the problem? Or could it be the hive had a queen and killed the marked queen?

The issue of swarming is pretty much over in the Raleigh area but hives that did swarm should have laying queens by now. I ask, "when did the hive

IMPORTANT POINTS

The four things I worry about at this time of the Year!

- How are my queens doing? I do this by checking brood patterns in the brood chamber.
- Do I have too many bees in my hives? Over-crowding is indicated by bees hanging on the front of hives and indicate a ventilation issue.
- Do my bees need food?
- What disease or pest problem do I need to check for?



Another solution for summer heat is an upper entrance for the hive.



swarm?" Many don't know but when I inspect a hive, the first thing I look for is existing queens cells. If I see old queen cells and any capped brood in a hive I can estimate just about when a hive swarmed and when a new queen should be laying eggs.

This is where it is important to understand the reproduction biology of honeybees. The process is very natural to any hive of bees in early spring if the conditions within the hive are right for it to happen. It is caused because the queen has no place to lay eggs. Cells are either full of brood or pollen or nectar/honey.

New queen cells are built by worker bees and in short order the old queen and a large population of worker bees and some drones leave the hive. This event happens before the swarm cells produce a new crop of virgin queens.

For a hive to survive a swarm, one of the new virgin queens must mate and begin to lay eggs. Generally a hive has a brood break during this time.

I have often recommended the text book "The Beekeeper's Handbook" written by Diana Sammataro and Alphonse Aviabile. In my opinion, it is the best beekeeping book and it should be in every beekeepers library. The book uses a term "Reproductive Swarming." The focus is on preventing a hive from swarming. However, once a hive does swarm, a period of waiting begins -- to see if the hive has replaced the old queen. Knowing and understanding what has happened within a hive that swarmed is important. That is the value of having good reference material to study.

The absolute worst thing that could happen is for the hive to fail to successfully replace the old queen. In this case a colony without a laying queen for a period of 21 days or so will begin a process of developing "laying workers" that can lay unfertilized eggs. This is usually a point of "no return" for a colony of bees. All eggs laid will produce drones. In time as the worker bee population begins to die, only drones will occupy the hive.

Frequent hive inspections are important for this reason! At some point after the swarm, a virgin queen will mate and return to the hive. And then the question becomes is the colony queenright? That is the question facing many of these beekeepers! The next issue of these notes will share a time line and pictures of what I am seeing to help a beekeeper make a decision:

- wait to see if the colony has eggs
- Or needs to introduce a new queen to the hive
- Or introduce a frame of brood with young larvae into the hive to see if the bees begin to build emergency queen cells – if the bees begin to build emergency queen cells they are queenless.



These hives are over crowded and something needs to be done fast!

Bees need room to expand the brood nest. The inside of a hive gets hot on warm days. To open passages for air circulation, bees move outside the hive. It is obvious that something is causing all these bees to be outside the hive.

What can a beekeeper do?

- **Buying summer screen inner covers may help.**
- **Adding a slatted rack above the bottom board will provide room for bees to cluster.**
- **Add a super to allow for more room. Don't count on the bees drawing new foundation in added supers unless a honey flow is on or one is feeding the bees.**
- **A small nail placed under the inner cover may help.**
- **Or make hive increases.**

As the honey flows end, queens slow down egg laying and hives reach peak population growth. Bee beards do not indicate the hive is about to swarm in hot weather. But it does indicate the hive needs ventilation and water sources to keep the hive cooler.

Problems with the end of the honey flow

As I write this, I am reminded that I no longer live in Ohio. A friend's email reminded me that their honey flow is on – really on this year. Black Locust is winding down, catalpa and basswood are just starting to bloom. Yellow sweet clover, soybeans and a lot more to look forward to.

My bees on the other hand have just started robbing. That is a sure sign my bees are not finding much to forage. I haven't seen bearding to any extent.

I have noticed that the bees are a bit ouchy! Rather than collecting honey supers, I need to worry what to do with those supers after the honey is extracted. I usually put wet extracted frames back on my hives for the bees to clean up. Some set them out – which actually encourages robbing.

Wax moth are now showing up with the warmer temperatures. Brood comb is a magnet for wax moths and small hive beetles. I am seeing evidence of wax moth tunnels and small hive beetle larvae present in weak hives and stored frames.

Cold storage is the best solution – but most of us do not have that option – at least if we have many combs to store. The worst case is putting them in a plastic bag in a dark location – both small hive beetles and wax moth thrive under those conditions. See past issues or check on the topic in upcoming issues.

Putting extracted supers back on strong hives is a good solution because the bees can keep the moth and small hive beetle somewhat contained – it also provides space for bees to move within the hive and if another honey flow would happen – the bees have a place to store honey.

Some things to consider:

- **Large bee populations provide the opportunity to make hive increases.**
- **Feeding bees may be required. Check hives for surplus honey – remember bees still need food for survival if you don't leave anything for the bees to eat when you harvest their honey.**
- **Take action with mite control – do not put it off.**