

Stahlman beekeeping notes for 2021

Issue # 30 A short primer on queen rearing and a local bee problem that might affect any beekeeper.

There are many methods used by beekeepers to raise queens. What is important to understand about the process is the bees know how to do it and why it is necessary to raise a new queen!

Honey bees have survived because they have the ability to replace a failing queen, propagate naturally by swarming, or in the worst-case scenario feed a young worker bee larvae to become a queen. We as beekeepers can take advantage of these survival impulses of the honey bee to raise queen bees.

It is natural for honey bees to raise queens during swarming season. Taking a supersedure cell from a hive is not advised. However, the beekeeper can take young larva from a hive to create a queen-less condition resulting in the bees trying to raise a queen.

The easiest method by far is to make a hive queen-less. The queen substance or pheromone (a chemical produced by the queen) is not picked up by the worker bees as they groom and clean the queen. The result -- the bees in the colony respond by first acting somewhat confused and rush about the hive. Within hours one can hear a definite buzz within the hive. Within two or three days the beekeeper will find queen cells built over worker cells containing young larva. **Of course, eggs and young larva must be present for the bees to feed a larva to become a new queen.**

I would like to point out the importance of picking a good queen producing eggs and larva to raise a queen. Characteristics of a queen are displayed by her worker bees. Worker bee generations that survive from year to year indicate that there are some genetics at work making that possible. Some call the hive a survivor hive. I have seen some survivor hives I would not want to make new queens from! A hive that displays aggressiveness has a queen that will pass that aggressiveness on to the next generation of queens raised from her brood nest. I look for a hive with a queen that has the best qualities in the hives I have. Every beekeeper with several hives will have a favorite. If one wants selected stock, possibly they can get a loan of a frame of brood from a neighboring beekeeper.

Anyone trying to raise queens must be aware that drones must be available to mate with the virgin queen they create. Some worry about how far drone hives must be from the mating

nuc! If bee hives are present in the area, drones from those hives will find the virgin queen in flight. The beekeeper often has no control over which drones the virgin queens will mate with. Some large queen operations have specific drone yards where mating nucs are located to increase the breeding results they desire.

It takes at least three weeks for a queen to be mated and begin to lay eggs. If one is selling queens, it would be important to see that the eggs she lays provides some idea of the laying pattern she will produce.

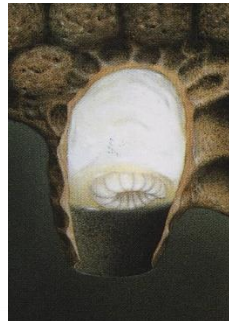
Basic Queen Biology:

Egg laid



Day One
to day three

Larva



Day four to
nine. Cell
sealed on
approx-
imately day
eight

Pupa



Day nine
to 15

Adult



Day 16

Adult virgin
queen
emerges
from cell

A queen is capable of producing a hive with 60,000 to 80,000 inhabitants in a hive.

She may live up to five years but often is replaced by the bees after several years.

The honey bees she produces will have a number of characteristics:

- Italian or Carniolan features
- Gentle to aggressive behavior
- Hygienic or non-hygienic characteristics
- Honey gathering, pollen collection characteristics
- Disease resistance in varying degrees and others.

If you want to read more about raising queen bees, I would suggest buying a book with photos and illustrations providing several different methods. It takes time to learn grafting (removing a young larva from a worker cell and transfer that larva to a queen cell cup on a grafting bar).

If you are looking for something I have written, I would suggest you visit the Ohio State Beekeepers web site. [Queen_Manual.pdf \(ohiostatebeekeepers.org\)](http://ohiostatebeekeepers.org/Queen_Manual.pdf)

This is the time of the year when beekeeper's get complaints about their bees creating a problem in the neighborhood.

Some homeowners are prevented from using the outdoor areas of their property due to the fear or sting of honey bees. It is easy to blame all stinging incidents on honey bees! However, the cause could be yellow jackets or hornets.

If you find honey bees robbing, it most likely will include yellow jackets as well. I sat out an empty honey bucket with just a bit of honey still left in it the other day. Before you could count to 10 - yellow jackets had found it as well as a few honey bees. This is a good reason not to let the bees clean up wet honey supers set out in the open. The beekeeper is not only recycling the wet honey in those supers for bees but any flying or crawling insect that can get to the honey.

Open feeding stimulates robbing! Feeding weak hives will often result in the hive being robbed. Thus, robbing screens are necessary in those situations.

A situation came up this week in my own neighborhood regarding bee stings at the HOA swimming pool. Swimmers were evidently getting stung by honey bees. A picture of one of the insects accused of stinging someone was definitely a honey bee.

There are over 300 homes in this HOA which has its own swimming pool. I was informed by another beekeeper in the HOA that a meeting has been called by the association to discuss this very serious problem. I know of three beekeepers living in the HOA (keeping bees is allowed). But there are at least two other beekeepers just outside the HOA and a few others within the two-mile flying distance to the pool!

As far as I am aware, all of us keeping bees are responsible beekeepers! We follow good neighbor practices. I might also mention that the HOA also has an upper lake and a lower lake and some water ways to provide the bees with good opportunities to gather water locally. Yet, honey bees are visiting the swimming pool!

Swimming pools treat water to prevent bacterial diseases – most use some form of chlorine. Other products are used to prevent scum and plant growth. This will include stabilizers, pool shock treatment and acid to bring down the pH of the pool.

For some reason bees seem to prefer this water to the water coming into our homes. As a beekeeper, what can be done to avoid bees for a hive from visiting the swimming pool?

Provide a suitable water supply for honey bees

In urban settings, beekeepers often are faced with neighbors who are annoyed by honey bees. This may affect such things in neighbor's yard such as swimming pools, hot tubs, ornamental ponds, bird feeders, etc.

Bees require water when there are no nectar flows (spring, summer or fall). Water should be one consideration when establishing an apiary. One easy way - to train bees to gather water - is to place a boardman jar feeder in the entrance to a hive. Fill it with water sweetened with some sugar and pinch of salt.

A general principle taught in bee school is "Bees need water!"

- Water should be close to the hives in an apiary.
- It should provide some mineral content to attract honey bees – small amounts of salt added to the water is attractive to honey bees.
- Bees collect warm water quicker than they would collect cold water.
- Once a water supply is located by honey bees, it is hard to redirect them to another location.
- A water supply should prevent bees from drowning.

The problem for a beekeeper is having hives of bees in close proximity to areas with high human traffic. I can think of other situations – one that affected me directly. It had nothing to do with high human traffic areas.

The story: I was asked by a farmer to place some hives on his property. He had some apple trees the bees could pollinate. A few days after I had put about 20 hives on his property, he called! The bees had to be moved! I was at a loss to understand why.

He explained that his neighbor was complaining about bees showing up in his feeding lot. It seems his neighbor was raising hogs and feeding them grain and molasses. My bees found the molasses and the neighbor's pigs would not eat.

To keep peace with the neighbor the bees had to be moved!

I am not going to go into the few situations I have been aware of in which beekeepers had trouble with neighbors – only share that hiring an attorney can be very expensive. I am not an attorney and therefore can not give anyone any legal opinion.

I understand that in North Carolina we have laws on the books allowing individuals to keep up to 5 hives on their property. That may be well and good!

However, one can not prevent a homeowner from enjoying their own property! If bees are creating a nuisance, inconvenience or annoyance, the homeowner may seek to address the bee problem thru the legal process afforded to them.

I noted a blog on a local bee club web site advising the beekeeper to move out of a HOA. That is not the answer. **Work at being a better neighbor by managing bees in a responsible way.** I also see advice on the internet about "It's not my bees or it could be yellow jackets." That is not good advice. DNA from a stinger can be ID'd (it could be expensive but it can be done). Bees visiting a location can be marked to trace them back to their hive.