

STAHLMAN BEEKEEPING

NOTES FOR 2025



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Swarming Season is here - Strong hives need to be checked for queen cells.

I love old bee books and one special book in my collection is Scribner's Monthly Magazine Vol XVII (May 1879 to Oct., 1879). The May issue has an article called "The Pastoral Bees." The article begins "The honey-bee goes forth from the hive in spring like the dove from Noah's ark, and it is not till after many days that she brings back the olive leaf, which in this case is a pellet of golden pollen upon each hip usually obtained from the alder or swamp willow." A page or two later in the article is the often-quoted poem which is referred to as a homely old stanza current among bee-folk.

"A swarm of bees in May
Is worth a load of hay;
A swarm of bees in June
Is worth a silver spoon;
But a swarm in July
Is not worth a fly."

The beekeeper photo of a man climbing a ladder is an early reminder that swarm season is heading our way. I am going to keep this photo in my header for the swarming season.

They also say a picture is worth a thousand words. Spring is the time for a colony of bees to swarm and with this issue I would like to share some pictures of queen cells – Supersedure cells and swarm cells.

A beekeeper should be able to distinguish between the three types of queen cells one may see in a bee hive. The three types all look something like peanuts but the location of the cells can reveal a lot about the conditions within a colony that produces them.

- 1) **Emergency Queen Cell Response:** Any time a colony becomes queen-less – the queen pheromone is lost; honeybees react by finding several young larvae to feed to become queens. The cells the bees select are standard worker cell – remember there are 5 worker cells to an inch. Queen cells are much larger and the base of a worker cell is enlarged to hold the developing new queen. Remember that the base of the queen cell is a worker cell – not a special queen cell cup built especially for a queen. The bees select young larvae; thus, cells will be located where open brood is present on a frame. As days pass the older brood is capped over and the queen cell will usually be surrounded by capped worker brood cells. Beekeepers often use this as a method to raise queens (Called the Miller Method).



All these cells are emergency response queen cells

This is a popular way to raise queens. No grafting is required.

Grafting by the way is usually accomplished by removing a young larva from its cell with something called a grafting needle. The larva is then transferred into an artificial queen cell cup and placed in a queen-less hive called a cell builder.

Anytime a queen is removed from a colony of bees with brood, the bees by nature try to replace the queen.

These are not swarm cells.

Should a beekeeper decide to cut them down in the mistaken idea to keep the hive from swarming – the result is the colony has only capped brood – no young larvae to use to try to produce another queen. Without the introduction of a new queen, this colony is in a big hurt! By removing any chance for the colony to survive, the beekeeper has created a death sentence for the colony.



This is another example of emergency queen cells. Bees selected the youngest larvae laid by the queen to replace her. The lack of larvae and eggs in this hive indicate the queen has been missing for at least 9 days.

(2) Swarm Cells



Swarm cells are different in that the bees build the cell in open spaces rather than on comb. This is observed most often near the bottom of a frame allowing the growth of the cell to face down into the space between the upper frame and a top bar of the box below. The queen actually lays an egg in the prepared cell cup and the bees set about feeding the larvae immediately after it hatches from an egg. Maybe upwards to 20 of these cells are built in a colony about to swarm

Some background on queen

development:

This picture shows clearly the royal jelly and a young larva in the early stages of development prior becoming a queen bee. This larvae will go thru a rapid period of growth until it is sealed and capped over by worker bees.



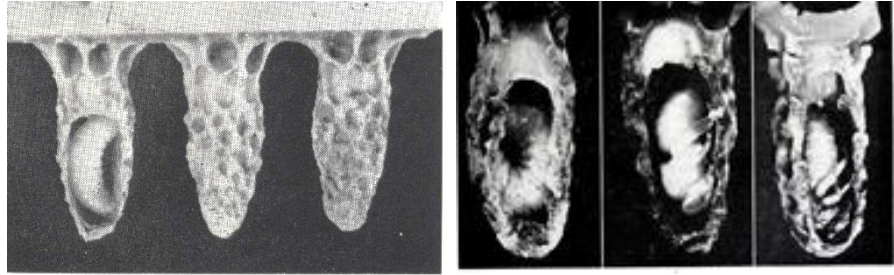


Queen cells are often bunched together and knowing the biology of developing queen cells is important in the management practices to prevent a colony from swarming.

These pictures were taken from Queen Rearing by Laidlaw and Eckert's book published in 1962.

The cells illustrated indicate the development of a queen over the last

6 days – a period from the time the cell is capped called the pre-pupa stage to the pupal state and the time she is about to emerge as an adult virgin queen.



In fact, swarm usually occur before the cells begin to produce emerged virgin queens.

If you see capped queen cells, one can cut into a cell to determine the age of the pupa. Note how the queen develops from a larva (worm like) state to a pupa with three identifiable body parts. One can determine the age of a pupa by checking eye color, development of legs and mouth parts and last of all the wings which are the last to develop. On day 16 or in the case of the photos I have used queens will emerge in 6 days or less. The first queen to emerge from her queen cell will begin to eliminate all the others or fight for her own survival.



Some queens never make it out of their cell.



Queen cells are cut down within a few days after queens have emerged. This dead queen will be removed by worker bees and all you will see is the base of the cell indicating that the hive has swarmed.

What needs to be done if one observes queen cells? Take action -- develop a plan – either to make splits, cut down cells, use a swarm control method such as the Demarre System, or something else. Cutting down cells is not the best method to prevent swarming. Once bees have started building queen cells, they are determined to swarm. However, there are techniques beekeepers can use to try to prevent them from swarming. One suggestion: If this colony about to swarm has a queen doing a very good job producing bees, collecting honey, shows disease resistance, and is gentle, I would remove her from the hive and start a new hive with her. Many beekeepers would clip her wings so she could not fly away with a swarm. I would also suggest using swarm cells to raise new queens.

See more in next weeks issue -- supersedure and other things going on right now.