



# *STAHLMAN*

## *BEEKEEPING NOTES*

### *FOR 2025*

**2025 Vol. 7 issue # 37**  
**Mid November**

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**Published free as a public service to anyone interested in honeybees. Email me to be added to my mailing list.**  
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### **The Life Cycle of the Honey Bee**

The new beekeeping cycle actually begins in late summer as bees store surplus honey. The honey bee cycle is related to seasonal changes. Honey bees survive because they have adapted survival techniques to face weather conditions.

The great advantage of having bees after the end of the fall season is they have completed a cycle building comb, storing food, and developing bee populations for the winter season. That is really the end of the first cycle in the beekeeping year.

Spring is a good time to buy bees to start or restart a colony. Those just beginning to keep bees usually take a bee school that helps one to manage a bee colony through the first season.

A beekeeper should understand that changes take place within a colony as cold weather approaches. The signs are:

- Shorter daylight hours.
- The lack of plants to forage for food.
- Cold weather disrupting flight opportunities.
- Long periods of confinement.

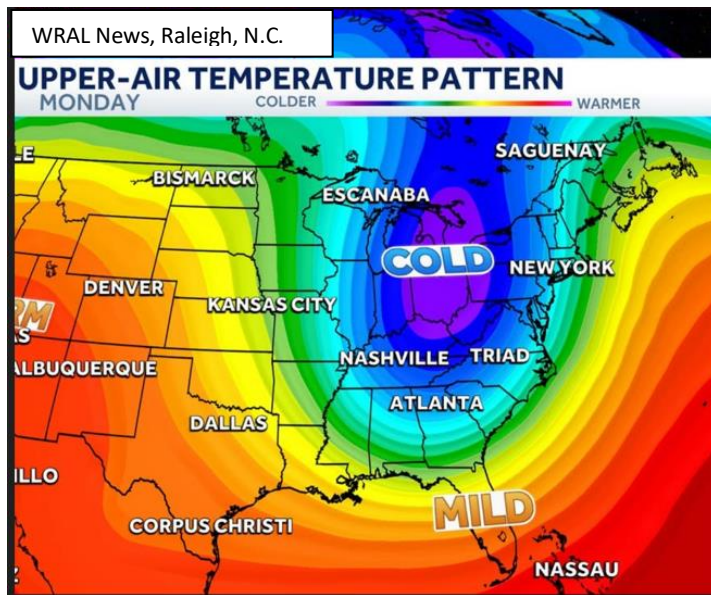
Honey bees are found in all parts of the world except the extreme polar regions. Bees are kept in cold – extreme cold regions such as Canada's Northwest Territory. Beekeeping in those areas with short summers and long winters require different techniques and management tools. But the bees manage to survive.

We all learn that honey bees do not hibernate. We know they are social insects. If one is keeping honey bees, knowledge of the winter cycle is very important. You will find all kinds of information on what one should do to manage bees up to the period of time when they cluster to protect themselves from cold.

Entrance reducers on hives are important to keep mice out of the hive which adds stress to the bees clustered to keep warm. They may reduce drafts of cold air from entering the hive but they

do not make the hive warmer. The inside of a bee hive during winter is cold around the entrance and warm near where the cluster is found.

I went out to my bees this week – a very cold week I might add – to check on them. The top cover of a hive can be removed for short periods even in very cold weather. Emergency sugar can be placed around an inner cover hole if one wants to provide some dry food for the bees.



This is a picture of the cold weather we had this week on Monday. The temperatures remained cold for a few days.

Since I live in North Carolina, we avoided the snow but water froze in pans I leave out for the bees.

Before the freezing temperatures, I saw this with my bees. A few bees outside the hive warming in the sun. Maybe a bit chilled but able to fly back into the hive.



A few bees were active outside the hive. As shown here – just a few flying around the noon hour. A few bees were returning with pollen on their legs. I am guessing it is from nearby fall blooming camellia.



When the top cover and inner cover were removed, the bees were not clustered. In fact, they covered the top bars of all the frames in the upper hive body. Some of the bees are not shown because they went down between the frames when I smoked them. The interior of the hive was warm and bees were moving around.

Unlike a real warm day, they did not take flight when the inner cover was removed – the outside air was in the upper 40's.

Bees at this point could move about the hive interior and I would guess have access to any stored food. It should also be pointed out that the queen had stopped laying eggs and very little capped brood was found when I examined the hive a week earlier.

I always judge the colony at this time of year by the bee population. A lot of bees is a good sign.





A few days later during a cold day, I opened several hives the morning of the freeze shown in the weather map on page 2. The bees were in the winter cluster. There was little movement – the bees looked up at me and several had wings vibrating. I took the pictures and then closed the hives.

This is what bees do to stay warm. They cluster to conserve heat. As it gets colder -- the tighter and smaller the cluster becomes.

**Thus: Beekeepers can stress bees by opening hives in cold weather conditions.**

- The reason to open a colony of bees during the fall and winter season are:
  - To feed bees – It is important to check this before cold weather. While weather conditions are mild – any time – make sure bees have food. Later articles will share photos of colonies (clusters of bees) that died because food was just inches too far away from the cluster.
  - Apply mite treatment – I note that many club sites are recommending vapor and the drip method. This works best when the bees are not in cluster so picking a warmer day is advised.
  - Check on high moisture levels in the hive – cold moisture is not good for bee health and living conditions within the hive. In fact, good ventilation is important.
  - Maybe one can move honey frames from the outside wall of a hive to a position next to the winter cluster – but avoid excessive noise and rough handling of frames.
- There is no reason to check for brood. There is a normal break in the brood cycle and it may even be hard to locate the queen. Sizing up the bee population should indicate that the bees had a queen by the time winter season set in. It is best to let it go at that!
- The real management during the winter season is to make sure top covers are not blown off the hives, some protection from the cold wind is provided, and keep an eye constantly on the weather so one can be prepared to react to unforeseen events.
- Beekeepers can best use the winter season to build equipment and plan for the coming season.

If you are a beekeeper or know a beekeeper a great Christmas gift might be a subscription to one of the major bee journals. ABJ (American Bee Journal) or Bee Culture Magazine. I get both and if you want to stay abreast of all that is going on especially since science is now playing such an important role in trying to find a way to deal with imported pests. We have entered a new era of beekeeping – things are constantly changing.