

Stahlman Beekeeping Notes for 2022

**A check sheet for fall
inspection!**



Issue 41 – October 8, 2022

The main goal of fall hive management is to prepare your colonies for winter.



This is a photo taken by Cary Orange a friend into his second year of beekeeping.

He sent me this picture with this caption: "I think the worker bees are corralling the drones in one place on the landing board and not letting them back in to the hive."

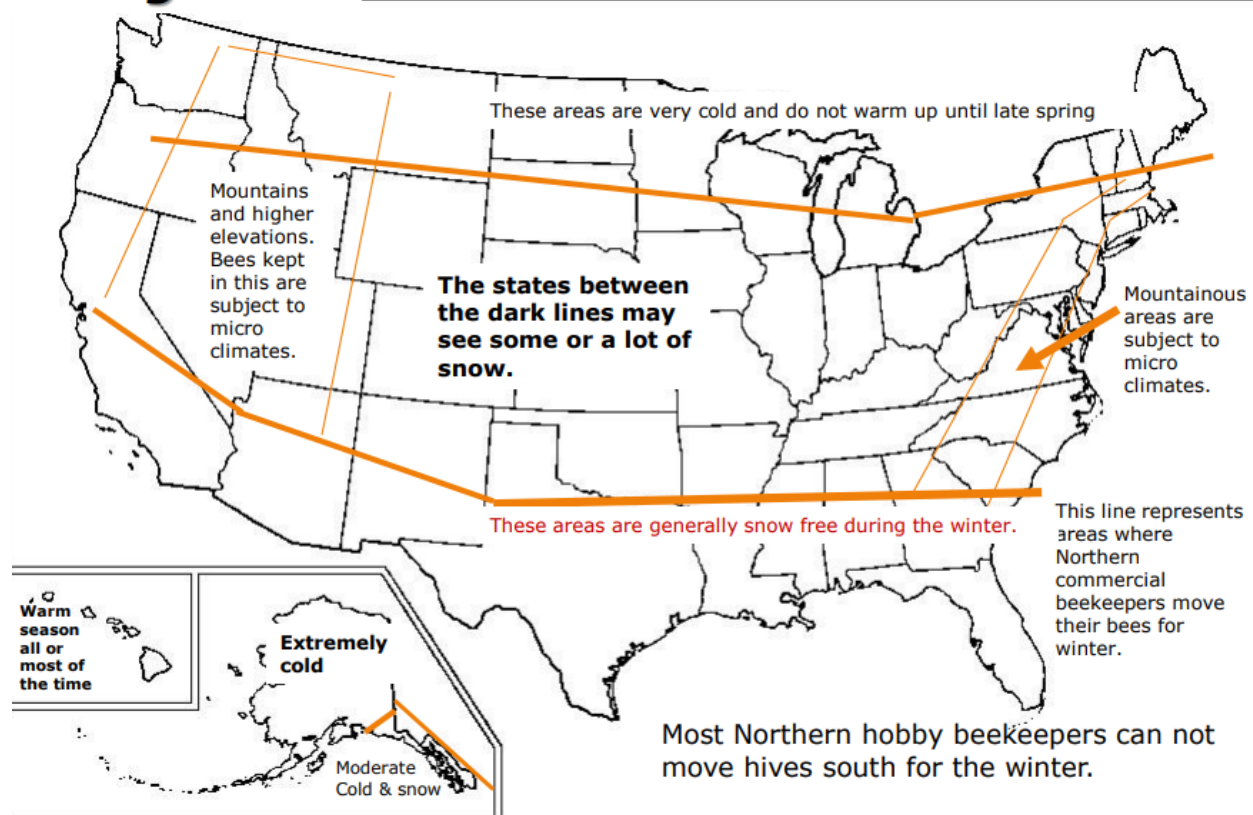
Honey bees do a number of things to prepare for the

winter season. As soon as the bees sense shortening days and the end of the honey harvest, their instinct is to protect their accumulated food stores. This photo illustrates very well the drone bees being kicked out of the hive prior to winter. This point in a colonies life is just one of many things going on within a hive of bees preparing for the winter season.

This is natural and important for a hives survival. An older bee book that I read indicated that drones don't amount for much! (Well they do a lot during the early breeding season when they are needed for reproduction but they eat -- it has been said that a drone consumes several times more food than one of his sister bees.) In areas with late honey flows, one can observe the continued effort to raise brood but as soon as it is over, the bees will adapt quickly into winter survival mode.

FALL Management

Management practices will vary widely from North to South.



Timing for fall management will depend upon the location of bee colonies! Beekeepers need to know weather patterns for their local beekeeping region.

During this early fall season, honey bees take greater care of the queen by using food stored in the center of the bee nest and opening cells so the queen can lay eggs and raise brood where the bees can cluster and conserve heat. Open any hive on a cold day and the cluster area will be easy to spot. It is very unwise to pull frames for a hive examination from the area the bees have selected to cluster on a cold day. Clusters begin to break up when temperatures in the hive are in the high 40 to low 50 degree range. Thus, hive inspections should be done when the bees are flying and not clustered – usually a 60 degree day or so.

Bees entering this fall season have adapted survival means that include: using propolis to reduce entrances to the hive; being more aggressive at the hive entrance; guard bees

collecting at the entrance to the hive to protect against robbing, and in some cases, abandon the hive altogether when food sources are not available.

At this time of the season, the bee nest can be regarded as normal if the colony is somewhat crowded with bees. Capped honey is usually found to the outside of the brood and above the brood. There will be no drone brood once cold weather sets in! It is normal at this time of year to see a number of empty cells in the area the bees use for clustering.

Remember queens will continue to lay eggs when food reserves are present and slow down and eventually stop by late November and December. Feeding a hive stimulates brood production at this time of the year. Even if a hive has honey reserves, feeding provides the hive with the stimulus to raise brood. Some colonies will continue to raise brood through-out the fall season in the south.

One should also observe that the large declining summer populations of bees and reduced brood frames are normal cycles in the life of a colony of honey bees.

Some signs that a colony of bees is at the risk of dying:



I have heard beekeepers say “The yellow jackets killed my hive!”

The fact is they just finished off a hive that was in trouble well before the yellow jackets discovered the bees could not defend the hive against them.

Yellow jackets and robber bees are opportunists. A hive being robbed is a sure sign that something is wrong within the hive.



Small hive beetle larva

Seeing an adult small hive beetle in a colony of bees is common. A few beetles can be controlled by the honey bees. However if one observes small hive beetle larvae in mass as indicated in this photo the hive is a lost cause.

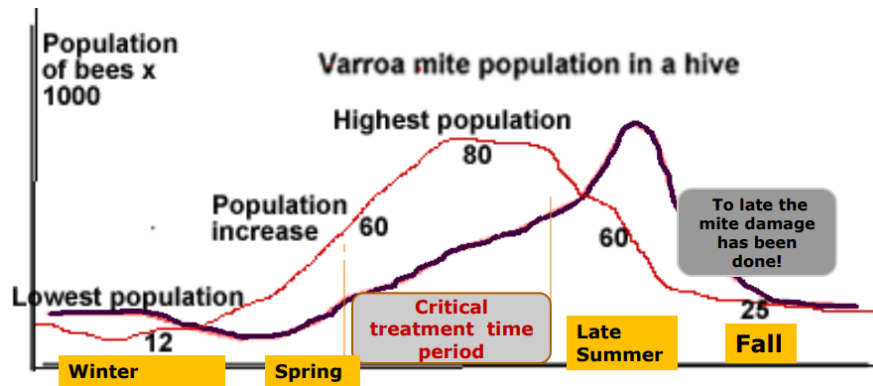
Usually a large number of adult hive beetles running in and out of cells without opposition by honey bees will result in this.



High Varroa mite populations: The number #1 killer of honey bees!

We hear it all the time – treat for Varroa mites or face the loss of a colony of bees. The chart below shows why the Varroa mite does a considerable amount of damage to a colony of bees in the fall season.

The thin red line is the bee population growth cycle for a calendar year. The dark line is the growth cycle for the Varroa mite. Note as the bee population declines, the mite population reaches its peak level.



If the beekeeper observes honey bees with deformed wings, bees at the entrance of the hive acting somewhat drunk, or bees below the entrance on the ground crawling around, the colony is in serious trouble for winter survival.

A check of bee population within a colony of bees. Two extreme cases:



I would like to share a few pictures of hives that have honey bee populations. Honey bee populations make winter survival possible.

This colony of bees on a cool day is clustered on six of 10 frames in the hive. No activity in the outer 4 frames. The cluster is at least as large as a basketball. It has a laying queen but is short of food reserves.

With adequate food supplies, this hive is a good candidate for winter survival.



The bee population in this hive is questionable. This picture was taken on a warm day and the bees were not clustered. Note how the bees do not cover the top bars of what appears to be the brood nest.

When the temperatures drop to around 57°F, these bees will cluster. Their cluster may be the size of a pineapple. Certainly not enough bees to make it thru winter.



When a frame was pulled from this hive, this is what was found!

This was the center frame where most of the bees were located.

No brood, eggs, or honey stores. This hive does not have young bees or a queen.

The question is: "Can it be saved at this time of the year?" One could buy a queen and introduce her to this hive, but my feeling is that will not give the hive time to raise new bees to carry it thru the winter. Another questions is: How does a hive like this get this far into trouble? This is why bee management in August is extremely important. This hive could have been saved if a new queen could have been raised by the bees, or if a purchased queen was introduced and given sugar syrup. As it is, this colony is doomed – no queen and no honey stores.

The positive comment is, the bees built comb which has not been destroyed by small hive beetle or wax moth. Thus, the equipment has value and can be used to start a new hive in the spring with a package of bees or a nuc.

A mid-October hive inspection: Important things to check

- 1) Eggs and brood – proof that the hive has a queen. One may spot the queen - that is good but not required if young brood is present.
- 2) A good population of bees and capped brood – see above pictures.
- 3) Honey stores! A hive of bees needs food to survive – PERIOD! Most authorities will say 60 pounds of stored reserves is required to get the bees into the spring season. Honey bees can die during a long cold spell if food is not close to the winter cluster.
- 4) If you did a mite treatment, check mite levels now! The treatment might not have been effective!

Hive Management:

- 1) Time to install entrance reducers if not already done. Mice can be a problem if they get into a hive to spend the winter.
- 2) Time to feed if hive is light on food.
- 3) Check the hive stand for stability. Time to make sure the bottom board does not allow water to run into the hive. Level the hive and tilt the hive slightly forward.
- 4) Check on an upper entrance for moisture to escape. Moisture is a serious problem for bees during cold weather.
- 5) High winds can blow off top covers. Secure the top covers with rocks or ratchet straps.
- 6) Check hive locations: Make sure the hive is protected from flooding and strong gusts of wind.
- 7) Do a hive walk around several times a week - if possible !!!!!