Stahlman beekeeping notes for 2021

Issue # 15 Making hive increases 4-10-21

One way to make hive increases is to catch swarms. With the number of beekeepers living in the Raleigh area, putting up a swarm box is a good investment. There is a good chance that scout bees will be looking for a new home for the bees about to swarm from a good strong hive. The problem with catching swarms is the uncertainty of getting a swarm.

I must ask anyone thinking of making bee hive increases to ask themselves several questions:

How many hives of bees do I want?

What resources are available for making up new hives?

First, I generally make up only enough splits in a year that I have equipment for! Bee equipment sitting around in storage has little value to me. If I have stored drawn wax comb in storage, I need to think wax moth control. To me the best protection from wax moth is to have the equipment either on top of good strong hives to gather surplus honey, or put bees into the equipment.

As for making splits, I will share the way I have managed bees. I definitely like to control swarming and splitting hives wisely gives me some control. Now is a critical time to decide what I want from my bees. I do not want weak hives that gather little or no honey!

Making split so I have a lot of weak hives at this time of year makes little sense to me. For example, if I have one hive and split the hive equally so I have two hives (each weakened considerably) all I have done is have one more hive than I had before. I will collect far less surplus honey or none at all from these two hives.

I could and would consider a different approach if I wanted a surplus honey crop from my hive.

I would keep one hive strong (to make some honey) and one a nuc which could raise its own queen. I am finding hives full of brood now and something needs to be done to reduce the congestion in the brood nest of the strongest hives.

Another option would be to use a Snelgrove division board screen to make a single hive increase.

If I had a number of hives, I could keep them all strong and still make new productive hives as long as I wanted using the Miller method.

I will describe two methods that I have used on a regular basis:

A hive split using a strong hive and a nuc.

Advantage: One with limited resources (few hives of bees and bee equipment) can with little additional cost increase the number of hives slowly and still collect some honey for person use.

What is needed:

A hive with a good laying queen and a lot of bees is a requirement for justifying making a hive split.

Extra equipment needed: a five frame nuc box and frames.

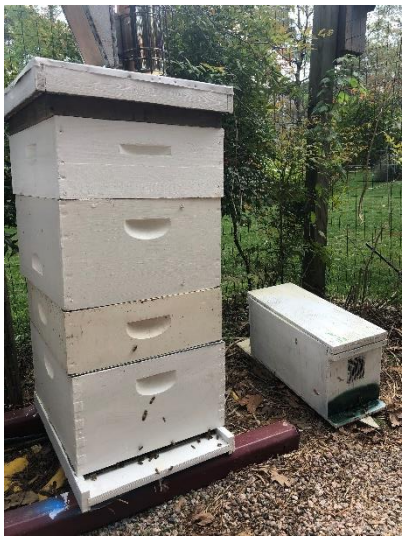
Action to be taken: try to locate the queen. It helps if queens are marked. Move the hive from its location to a spot several feet away. In its place locate the nuc box.

What happens and why this is done! The nuc box will collect the foraging bee population. Make sure the nuc box has a frame of drawn comb with some honey and pollen, a frame with eggs and larva and maybe some capped brood and new frames of foundation.

The frame with eggs and larva will provide the bees the opportunity to build emergency queen cells. The additional food will help the new colony survive. The field bees will provide bees to keep the brood nest warm in case of cooler weather and provide the resources the nuc will require such as pollen, nectar and water. This will also help the bees draw wax for drawing comb on the foundation. It is also a good time to treat the nuc for Varroa mites.

The moved original hive: It will lose its foraging bee population but these bees will quickly be replaced by younger bees. The brood nest is not stressed and the old queen will continue laying eggs which will increase the hive population so that in two weeks it will be like nothing happened.

Action to be taken to the moved hive (original hive): Checkerboard the brood nest if it is congested. (This management is needed to avoid swarming). The deep frames filled with honey should be moved above the honey supers. I take deep frames full of nectar and uncapped honey from the brood nest and place them in a deep box located above the honey supers I added to this hive. The hive remains strong and with the tulip poplar flow to begin in several weeks, I expect this increase to produce a honey crop and a new queen that will as time passes build into a thriving additional hive for winter survival.



Later when I transfer the frames from the nuc hive to a standard sized hive and the honey flow is over, I will take more frames from the strong hive to add to the new hive.

You may not notice that I placed a queen excluder over the bottom deep box and the shallow honey super. This keeps the queen out of my honey supers and the honey in the hive bodies above will draw worker bees up into those honey supers.

I am now waiting for that honey flow! Potentially the bees can fill the shallow super (the deep super already has a lot of uncapped honey) and the bees just might fill that medium box on top. And hopefully this hive will not swarm!

An adaptation to the Miller increase method for making increases

This method requires the beekeeper to have a number of hives available to make increases. I call these hives resources because they will provide the ability to make up a new hive every week without diminishing a hives ability to gather a honey crop or making it weaker.

Miller describes his method in "Fifty Years Among the Bees". He started with 9 hives and ended up making 56 hives by the end of the season. I have made some adaptions to his method, but the principle still applies.

The principle: Bees return to the nest site without fail once they begin to forage. Keep in mind that a honey bee generally begin to take foraging trips at about the age of 20 days. Young bees generally stay with brood.

If I have 10 strong hives (Miller started with nine), I could take one frame from each of those 10 hives and place those frames in an empty 10 frame deep super with its own bottom board and top cover. I could immediately put supers on the hive and expect the hive to make a honey crop or be put on pollination for extra income.

Each frame I select to take from each of those hives should contain capped brood. Remember that each frame of brood could each add 4000 to 6000 bees when they emerge to a hives bee population. It would take each of those new bees about three weeks to develop into foraging bees. In the mean time the bees in the new increase (a 10-frame deep hive) would try to raise a new queen. So, some young brood must be on at least one of the frames added to the new hive.

Special note: If one has queens on hand to introduce to the hive, the lag of time between the time the hive is started until it has a queen to lay eggs is reduced. A hive without a queen will go thru a period without capped brood – thus, this period is called a brood break. A brood break is one method to control Varroa mite reproduction within a hive.

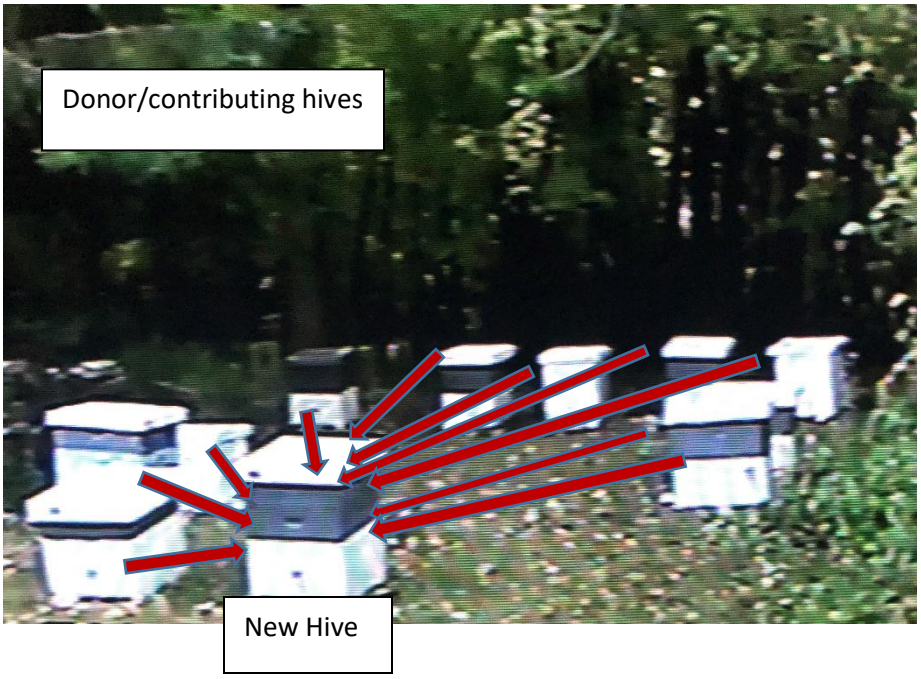
A hive made up in this fashion will be ready to get a honey crop. For a period of 21- 25 days the bees will not have larva to feed. The bees will about 75% of the time raise a new queen successfully and gather a honey crop equal to the hives from which frames are taken. Unsuccessful hives can then be reunited after the honey flow.

This is especially good for those areas that get mid-summer to early fall honey crops such as (buckwheat, almost any of the mints, various thistle, golden-rod, and aster. Areas of the county producing seeds for sunflower, clover Various varieties, and cotton would be beneficial to make splits to harvest nectar from the plants). I am thinking ideally the finger lake region of New York State. Since I have lived in Raleigh, almost no honey flow happens after mid-summer in pine tree country.

Applying the principle:

The key to building strong hives is to take advantage of bees returning from the field as well as relief to a hive by removing capped brood frames – one at a time – to control swarming. A beekeeper must schedule a rotation period -- seven to nine days-- giving the donor hives a chance to recuperate.

The first cycle may look like this:



Once the new hive is established it will remain in this location until the second cycle is begun. Seven to nine days later, this hive is moved to another bee yard or to another location in this bee yard.

Start of second cycle -- [Every frame removed from a hive was replaced with either a frame of foundation or one of drawn comb – this requires that building equipment or acquiring more equipment is necessary to keep making splits]

A new bottom board is placed exactly where all new hives are placed. An empty deep super is placed on the bottom board where the new hive will be created. Again, frames from the ten contributing hives will be placed in this deep box and a super added to the new hive. Note that the returning bees from the last hive to occupy this location will be returning to strengthen this hive. Always use frames that include a lot of brood and at least one of these frames must contain eggs and young larvae. Some times I used 9 brood frames to a hive rather than 10!

<u>One can continue these cycles thru-out the bee season.</u>

This is what a bee yard will look like by the end of the season. Other groups of ten hives each can be established to make increases in hives from the earlier increases made!

This same pattern of increases can be applied to making up nucs or queen mating nucs. By the end of the bee season, a beekeeper will have created a number of very strong hives or nucs that can result in great honey crops and income opportunities.

This is the way I began building hives to start my beekeeping business before I retired as a school administrator in 1993. These pictures were taken in 1993. By the fall of 1993 I had about 600 colonies of bees which I moved to Georgia each fall, and in the spring sold package bees from these hives and raised my own queens to go into the packages. My commercial business continued to 2015 when I sold my farm and bee business and moved to North Carolina.

600 hives is more than one person can manage. A friend at one time described me as "the walking dead ". Work is required 7 days a week from morning to dark, swarms fly overhead as I wished them luck, thinking I had only 10 minutes per hive to get my work done. I also had a family that wanted some of my time!

I doubt if I could make increases like this in the year 2021. First, it takes a lot of resources to do something like this! Bee yard locations are essential! A bee yard must be located in an area to support 50 hives or more. Bee yards were located near farm milking operations with many fields of clover and alfalfa. Pasture land supported cows rather than feeding lots. There were no GMO crops and soybeans did produce honey crops.

When I visit that area today, it like nothing is the same. The farms have all disappeared!