Stahlman Beekeeping Notes For 2022

Making Splits

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I know beekeepers are anxious to get this bee year started. The weather determines almost everything dealing with keeping bees. Hive inspections are important! One cannot do much planning without knowing exactly how the honeybees in hives have overwintered!

I have talked with a few beekeepers each with over 30 years of beekeeping experience. I have asked them their thoughts on making splits and comments on swarming. Here is what I got from them:

- **Too many beekeepers try to make early splits from weak colonies. When the bee population in a hive is split, one is left with two weak hives. Splitting hives is going to reduce the honey crop. Rather than split a hive, use a frame or two to help weak hives. Making splits to increase hive numbers should not be made in early spring if one wants to get a honey crop.**
    - **More likely the bees cannot keep the brood warm resulting in chilled brood.**
    - **The effort to increase hive numbers will usually result in failure if the hives being split face extreme shift in weather conditions. Possible snow, rain and cold spells add stress to a hive of bees.**
    - **Virgin queens run the risk of being not mated or poorly mated.**
    - **Splitting a new package of bees to make up two hives is a big mistake. Bee population will be compromised considerably with smaller clusters to keep the brood warm. It takes considerable effort for enough bees in a hive to be able to care for all the eggs a queen might be able to lay.**

Strong hives give the beekeeper options: add supers and manage the hive for swarm control. It is a well-known fact that a good strong hive (60,000 bees) will produce more honey than two hives with the same number of bees (30,000 and 30,000).

The word I use to describe what is needed to make splits is: RESOURCES

First: The rapid shift of bees going from winter mode to spring build-up

A queen can lay 1500 or more eggs in a 24 hour period. I would assume that a queen can lay somewhere near 45,000 + eggs in a month. Let's also assume that this egg laying begins in late December (earlier in the south).

We know that it takes 21 days for an egg to develop into an adult worker bee. So why are some colonies so weak in the spring if they have an egg laying queen? It could be because the hive lacks food sources. What happens to a hive with plenty of food but is still weak? Answer: It could be the queen. It could be disease. The result is: the lack of a worker bee population prevents a rapid build-up. It takes a lot of worker bees to keep the nest warm and a lot of young worker bees to feed larva. This is the reason a large nest of honeybees can develop much faster than a small nest.

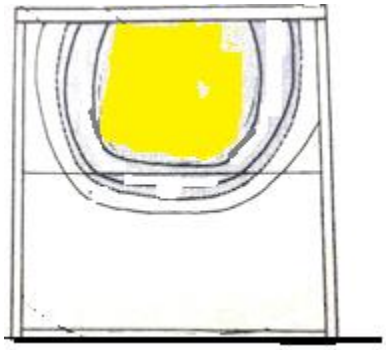
Another aspect of beekeeping is the removal of frames of brood from a hive to make up splits. This results in bees returning to the original hive rather than staying with the split. It is recommended that splits be moved several miles away to prevent this loss in bees to cover the brood in the split.

There are many ways to make up splits.

I have adapted to make increases in such a way that a strong hive is not weakened. (Miller's concept!) Miller had resources. He could take 9 hives and increase them to 56 hives. Each of the 56 hives were strong enough to gather a late honey flow. This is more for the sideline beekeeper or commercial beekeeper because it takes a lot of equipment to carry his plan out!

A simple hive split – called a Vertical Split!

Resources: A single double deep hive with a strong population of bees. A double screen board. A queen excluder and a honey super. Later a bottom board and cover will be needed.



Another word I would like to introduce is FOOTPRINT. Each hive occupies space. I call that a footprint. Each new hive requires a certain amount of space.

Many of us find all the bees at this time of the year in the top box of the brood chamber. The bottom box is empty of bees and honey stores.

Vertical splits allow making increases without immediately requiring more room to find space. It is ideal for a beekeeper without a lot of room.

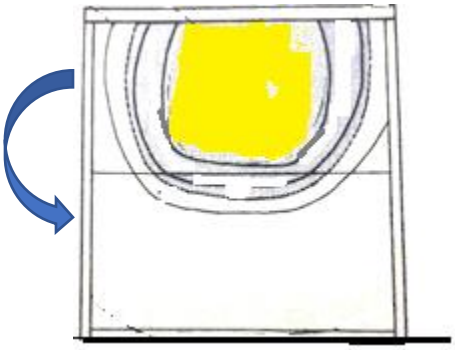
It will also allow one to add supers above the brood chamber of the strong hive for the honey flow which hopefully will arrive before the new split has raised a queen. The steps are as follows:

The idea of a vertical split has many uses. If one has a double screen board or a Cloake board, a single hive can be used to make splits as well as creating queen cells. For this article the beekeeper making splits will need one special piece of equipment: a Double screen board and later equipment to house the new split.

Double screen boards can be purchased at local bee supply dealers or from leading bee supply catalogs. If one has the time, they can also be built by the beekeeper.

This is my double screen board. This one is called a Snelgrove Screen board. Others may follow the same design but only have one upper entrance. They all work on the same principle: the upper part of a hive benefits from the heat created by the bees in the lower portion of the hive.

One might consider this a bee excluder. It prevents bees from the bottom brood chamber moving into the boxes above it.



One biological fact must be pointed out! The honeybee is reluctant to build queen cells if a strong queen pheromone is present in the hive.

The first step is to reverse the boxes in this hive. This is called reversing. It is a good practice for all beekeepers to clean bottom boards as the spring season begins and reverse the boxes.

Not all hives will look like this example. Some for example will have honey stores in upper boxes and the bees do not move up.

The idea of a vertical split is to raise a queen in the top box on the hive. I like deep frame brood chambers. When supers are of different sizes, the manipulations can be difficult.

The inspection:

One can determine a number of things as a hive is broken down to clean the bottom board. What is the size of the bee population? How many frames have brood in them? Is the queen laying eggs? Is there a problem with Varroa mites (A good time to get a mite count) or Small hive beetles? Both of these problems need to be taken care of early in the bee season.

Do you see adult drones? A hive with a large population of bees and an adult drone population can expect a hive to swarm during the spring season. The sight of queen cells is confirmation that the hive of bees IS GOING TO SWARM!

A vertical split accomplishes three things:

1) **It allows the beekeeper a chance to manage the hive to reduce swarming.**
2) **It allows the beekeeper to make a new hive. (A split)**
3) **It keeps a hive strong so it can have additional supers added to the hive for a honey flow.**

The system is fairly easy if the beekeeper has a strong hive!

First: After the hive has been examined, the queen and some of the brood is placed in a box on the bottom board.

This is a hive with a strong population of bees. Finding the queen can be a challenge but in order to be successful, she must be placed in the bottom box.

I am looking for two frames of young brood (Eggs & Larva). I also like to find a frame of pollen and a frame with honey to move to the box which will be placed above the double screen.

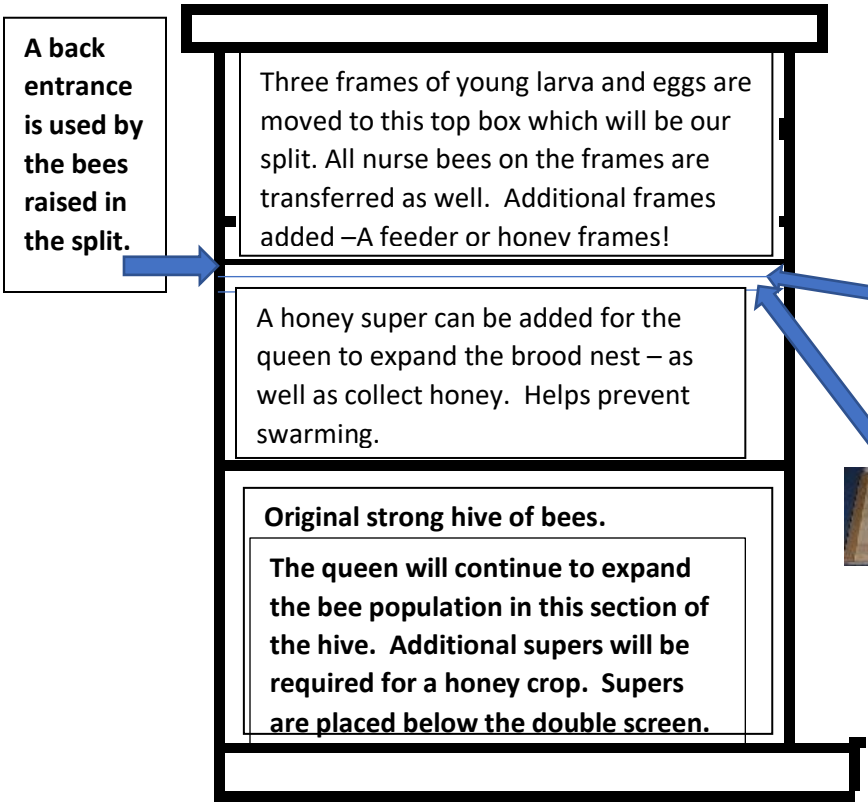
The frames I select from the brood chamber of the strong hive are exchanged with the frames in the box seen in the right corner of this photo.

The queen in the box on the bottom board must be given room to lay eggs to prevent a congested brood nest which could result in the hive swarming. This in nothing more than frame management. If this is carried out during the spring season, one can use new foundation. I still prefer to use drawn comb in all boxes. I would also advise anyone using this method to keep all brood frames together and added frames should be placed outside the bee cluster area. The bottom brood box will require checking for queen cells every 7 to 10 days.

This can be avoided if one adds medium supers above the brood nest to give bees a place to store honey. A simple drawing showing how a hive is built to raise a queen and create a new hive above the double screen board.

Three frames of young brood and bees are moved from the original strong hive to the top box which is where the new split will be housed.

How about that: 1 hive + 1 split = 2 hives later + a honey crop!



The method of increase is quite simple.

The double screen is placed in this location.

For the first three or four days I like to add an inner cover below the double screen board. Then I remove it. This helps reduce the queen pheromone that might cause bees not to raise a new queen.

This takes advantage of the heat created by the bees in the lower brood nest to warm the bees above the double screen board.

Advantages:

- **Bees remain in the same location. Forager bees return to the landing board.**
- **Heat from the cluster below rises thru the honey super and double screen to warm the bees and brood in the deep super on top of the hive.**
- **The queen in the bottom box will continue laying eggs and add to the bee population.**
- **The brood chamber is no longer congested. (Reducing the likelihood of swarming.)**
- **A honey super is placed above the brood boxes. Bees can move up to draw foundation and fill drawn comb with honey.**
- **The double screen has an entrance from which bees can fly. And if they raise a new queen, she will have an opening to leave the hive to mate.**
- **It would not be hard to convert this hive into a two queen hive – the object to have more bees in the hive collecting honey.**

And if the intention is to make more colonies, this works while at the same time keeping the hive strong and making honey.

This is not a perfect system but it works. It will require taking the top box off the hive each time the bottom hive must be inspected and when honey supers are added.