



The Nuts and Bolts of Splits and Nucs

Cliff Notes From The Corresponding Video

Document Abstract

Included in this document

- This document outlines two procedures for splitting one hive into two.

Split Definition: Separation of one hive into two colonies. A queen is provided for the queenless portion or they are left to build a queen on their own devices.

A Simple Split Procedure

A simple split is simply splitting a two deep hive configuration into two separate hives. The top box is move off onto another bottom board and an inner cover and outer cover are added to it and the bees will make two hives.

- The box without the queen will require eggs and brood in order to raise a new queen.
- This should be done in a time of season where drones are present and can fertilize a queen.

Why does it work?

- Nurse bees are not particularly loyal to the queen.
- Nurse bees are not particularly aggressive.
- Nurse bees will stay local to certain areas of the comb and they will stay with that area to tend to the brood.
 - Even if that area is moved to another spot in the hive, the nurse bees will find that area.
- Queen cells make excellent queens
- Nurse bees added to a colony will adapt to their new conditions without

When should Splits be Done?

- Consider when queens are available if using a process in which you will introduce a queen in the box split off from the 'mother' colony.
- When you bees are growing and a swarm is going to be imminent.
 - Move the queen to the split off box to stem the swarming process.
- Just before or during the major nectar flow when the bees are prolific and it is easier to sustain a new Nuc.
- In late summer early fall when considering splits for overwintering Nucs.

Equipment Needed

- A separate hive configuration: Bottom board, 1 hive body, inner cover, telescoping cover, and an entrance reducer

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- Frames of foundation and/or drawn out comb to complete the box.
 - Queen Excluder
 - Bee brush
 - Spray bottle of sugar water (optional add ins - with honey bee healthy, lemon oil, essential oils, etc.)
 - The fragrances added to the sugar water help to mask pheromones.
 - Feeder

Tips to Remember

- Consider making the splits during the middle of the day when the foragers are out of the hive.
- Protect the brood when moving them
- Don't use smoke when splitting a hive. It will chase the bees out of the hive and you want them to stay put when pulling frames for making a split.
- Protect the brood from chill or overheating.
- Put an entrance reducer on the hives. They will have less bees to defend and the split off hive may potentially not have foragers depending up on the method used.
- When it is cooler outside consider placing the split off hive on top of the original hive so they can share heat. You would put a screened divider so heat can pass from bottom to top.
- Suggest to split a non productive colony with a weak queen.
 - Pinch the queen* and split the bees into two colonies and supply new better queens.
 - *It is a consideration to save the old queen for emergencies but they are not the best stock.

Method 1 - Not Necessary to Find the Queen

Note: This procedure assumes you are making a split of a two deep hive configuration in the SPRING.

1. Take equipment need to the yard. Prepare this equipment in the apiary by removing remove all of the frames out of the equipment brought to the apiary so it is an empty box.
2. Spray the bees lightly with the sugar water mixture. Take the following frames from your mother hive and place them - without bees - into the spare equipment.
 - 1st frame - a frame with honey or nectar. Bees are removed.
 - Shake bees into mother hive and then flick them off with the bee brush.
 - Place the honey frame on the far side of the box (away from you)
 - 2nd frame - a frame of pollen. Bees removed.
 - Place the pollen frame on the near side of the box (closest to you)
 - 3rd frame - a frame of drawn comb (or foundation if you don't have drawn comb). Bees removed.
 - Place drawn comb on the far side of the box, inside of the honey frame.
 - 4th frame - a frame of open brood. Bees Removed.
 - Place in center of hive
 - 5th frame - a frame of open brood. Bees Removed.
 - Place in center of hive
 - 6th frame - a frame of open and/or capped brood. Bees Removed
 - Place in center of hive

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- 7th frame - a frame of open and/or capped brood. Bees Removed
 - Place in center of hive
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 - 3. Reassemble the mother hive by placing frames of foundation (or built out comb if you have it) in the vacancy left from taking frames to make the split.
 - Combine any original frames not taken to make the split in the center of the mostly empty hive body and place the newly added frames evenly to the outside.
 - 4. Lightly smoke the bees so they remain stationary in the bottom boxes and place a queen excluder over the mother hive. Place the newly populated equipment without bees over top of the queen excluder, place the inner and outer covers on the hive and leave it alone for 24 hours.

The following day, take a 5 frame Nuc box out to the hive in preparation for moving the split to a Nuc body¹.

- 5. The next day, remove the top covers and remove the following frames into the Nuc Box.
 - 1st frame - the outer frame of pollen - place it on the far side of the Nuc box. Take the bees with it.
 - 2nd frame - the outer frame of honey or nectar - place it on the near side of the Nuc box - take the bees with it.
 - 3rd frame - place inside the pollen frame a frame of drawn comb - take the bees with it.
 - Make sure this frame is empty as it will provide a space for the bees to grow. If there is no open space this Nuc could ramp up and swarm given this procedure is being done for a spring split.
 - 4th frame - place a frame of brood inside the Nuc - take the bees with it.
 - 5th frame - place a frame of brood inside the Nuc - take the bees with it.
- 6. Take the remaining bees and move them into the Nuc
 - Take the two remaining brood frames and brush the bees on the frames into the Nuc box. Return these brood frames into the original mother hive when done².
- 7. Remove the Nuc box to a spot in the apiary³.
 - Introduce a new queen to the hive⁴ immediately, or wait 24 to 48 hours to introduce her. If the bees are aggressive to the new queen when her cage is place in the Nuc, it is probably best to wait to release her.
 - If there is still aggression after a period of time, review the Nuc and make sure that a queen didn't somehow get introduced into the environment when the bees were transferred into the hive.
- 8. In 5 to 7 days check that the queen is laying and that the Nuc is functioning.

¹ This could be a full box if you don't have a Nuc body. Follow the procedure as outline and place drawn or foundation to the outside to fill out the box.

² This is done to get more nurse bees in the nuc to take care of the brood.

³ There is no need to move the new Nuc box to a new apiary. The nurse bees will stay put and take care of the brood since they are loyal to the brood, not necessarily the queen.

⁴ Optionally if you have recently deposited eggs, and sufficient drones in your apiary you could allow this hive to re-queen itself or supply it with a queen cell from another source. This is not covered in this procedure.

Method 2 - Making a split with finding the queen.

Note: This procedure assumes that you will utilize a separate box temporarily to house the queen during the reconfiguration so that she remains safe. It also assumes that you are capable of locating a queen.

- The empty equipment being used for the split needs to have a screened entrance so the bees cannot escape.
1. Take equipment need to the yard. Prepare this equipment in the apiary by removing remove all of the frames out of the equipment brought to the apiary so it is an empty box.
 2. Prepare the extra 'safe box' for the queen to be stored in. Ensure that the box is screened so the queen cannot escape
 3. Spray the bees lightly with the sugar water mixture. Locate the queen and remove the frame and bees she is on to the safe box and close the box.
 4. Take the following frames from your mother hive and place them - with bees - into the screened closed spare equipment.
 - 1st frame - a frame with honey or nectar.
 - Place the honey frame on the far side of the box (away from you)
 - 2nd frame - a frame of pollen. Bees removed.
 - Place the pollen frame on the near side of the box (closest to you)
 - 3rd frame - a frame of open brood, mostly uncapped.
 - Place drawn comb on the far side of the box, inside of the honey frame.
 - 4th frame - a frame of sealed brood.
 - Place in center of hive
 - 5th frame - a frame of empty drawn comb or foundation.
 - Place in center of hive
 5. Pulling one at a time, take two additional frames of open brood from the mother hive and shake/brush the nurse bees from the frames into the Nucleus hive.
 6. Take the queen from the safe hive and return her and the frames to the "mother" hive. Replace any other missing frames in the mother hive.
 7. In 24 to 48 hours introduce a new queen into the Nuc.
 - The queen could be release right away but one has to be careful about this. If the bees are aggressive to the new queen when her cage is place in the Nuc, it is probably best to wait to release her.
 - If there is still aggression after a period of time, review the Nuc and make sure that a queen didn't somehow get introduced into the environment when the bees were transferred into the hive.
 8. In 72 hours remove the screen (see note about an additional option with this step)
 - 72 hours should be sufficient time for the old pheromones to wear off and the new queen pheromones to permeate the hive.

Additional Options Note: Sometimes conditions are not conducive to leaving the bees screened in for an extended period of time. IF you wish to remove the screen and allow the bees to leave and forage, move the

hive to a new location at least 3 miles from the original. Forgo moving the hive and the foragers could return to the original hive and abandon the Nucleus hive.

Final Considerations

- New hives will need protection until they have sufficient bees to defend the colony.
- Hives should be fed with sugar syrup and pollen to aid in any comb that needs to be built out and in order for them to have the protein required for new bees.

49 minutes