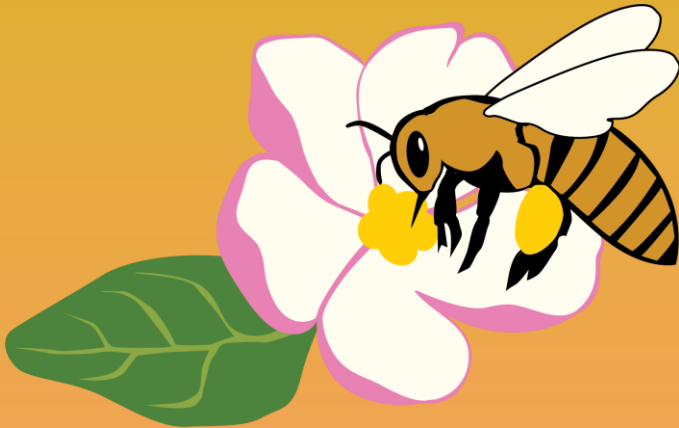


Basic Honey Bee

Colony and Hive Inspections



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If any part of this guide is not clear or if you still have questions, please contact us at

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Your suggestions and questions will help us improve this guide and, thus, may help many other new beekeepers.

Thank you!

Fred

Definitions

Colony – a superorganism consisting of the collection of living, interdependent honey bees.

Hive – the inanimate structure in and on which the colony lives (boxes, frames, covers, bottoms.)

You will inspect both the colony and the hive for different reasons.

Get your equipment ready before opening hive

- **Smoker lit.**
- **Empty deep box to save your back.**
- **Nuc box for frames removed.**



Smoker

**Should be making
copious amounts of
white smoke**



Break the propolis seals

- Bees will propolize the seams between inner cover, boxes, excluder, slatted rack, bottom board and more. Bees make pr and use propolis as a sealant like we use silicone caulk.
- Use your hive tool to break that seal so you can separate the parts.



What is propolis?

Propolis is made by honey bees from the waxy resins on the buds of trees like cottonwood, birch, alder, and poplar. The bees mix the resins with their saliva, beeswax, natural oils, pollen, and enzymes and use it to seal cracks, reinforce hive structures, and provide antimicrobial protection.

Propolis is very sticky substance that can stiffen and harden over time which is why the hive tool is a must for separating boxes, covers, and frames.

Smoking (the bees)

It's not advisable for the beekeeper to smoke inside the veil.



Puff some smoke under the telescoping cover as you lift it.

Give them a few seconds to retreat, then continue.

Use smoke as needed from this point on.



Where to set boxes as they are removed

- Set an empty deep box on the ground to serve as a base for other boxes. It's much easier to lift a heavy super from this position than from the ground (beekeeper ergonomic tip!)
- Set the telescoping cover on this box.
- Set other boxes on the telescoping cover to avoid losing bees on the ground.



Queen excluder (if you are using one)

Remove the queen excluder from hive and set in on broodless supers.

This keeps the queen from ending up in the super(s) inadvertently.

Do not use a queen excluder unless you already have a lot of drawn comb in the boxes.



Queen excluder

Do not use a queen excluder unless your frames have drawn comb. Bees do not like to make comb in boxes where all of the frames above the queen excluder are undrawn foundation.

You can use a queen excluder if you already have frames of drawn comb that you can mix with undrawn foundation that needs to be drawn out.

Removing frames

- In a 10-frame hive with 10 frames, loosen and remove the #2 or #9 frame first.
- In an 8-frame hive with 8 frames, loosen and remove the #2 or #7 frame first.

The reason: Queen is less like to be on an outside frame so it's less likely to crush your queen while removing and replacing frames.

Outside frames can be attached to side of box by bridge comb so when you remove it, the bridge comb can scrape along the capped honey creating a honey mess in the hive.

However!! The queen can be anywhere so remove that first frame carefully.



Bridge comb on outside frames

Outside frames are usually mostly frames of honey.

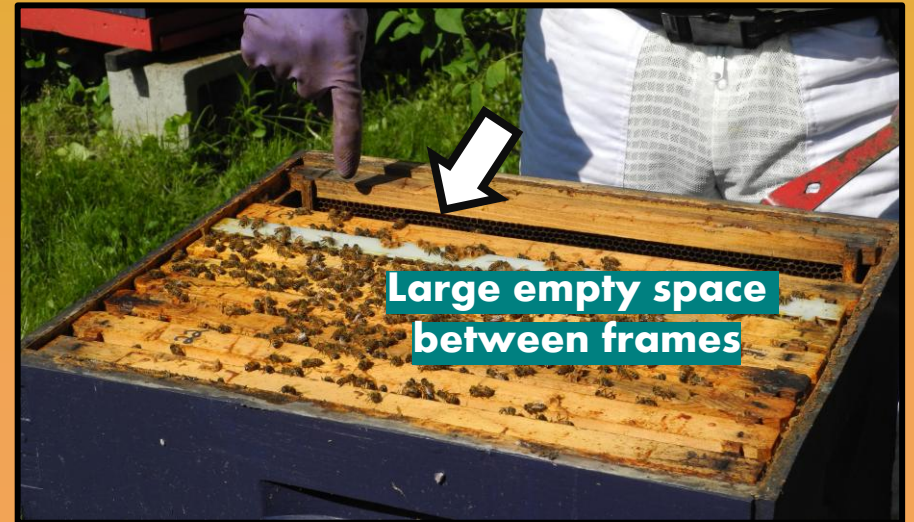
Outside frames (1&10, 1&8, 1&5, 1&4) are often attached to side of box by bridge comb so when you remove them, the bridge comb can scrape along the capped honey creating a honey mess in the hive.

Remove 2nd frame from side of box, then move outside frames away from bridge comb on the side of the box.



Removing frames

Set this first frame into something like a nuc box or Pro nuc box leaving a large empty space in the box being inspected.



Lots of space to separate frames now...



If you find the queen...

Set the frame with her on it into the nuc box or Pro nuc box and cover it.

She'll be safe there while you complete the rest of your intended task(s).

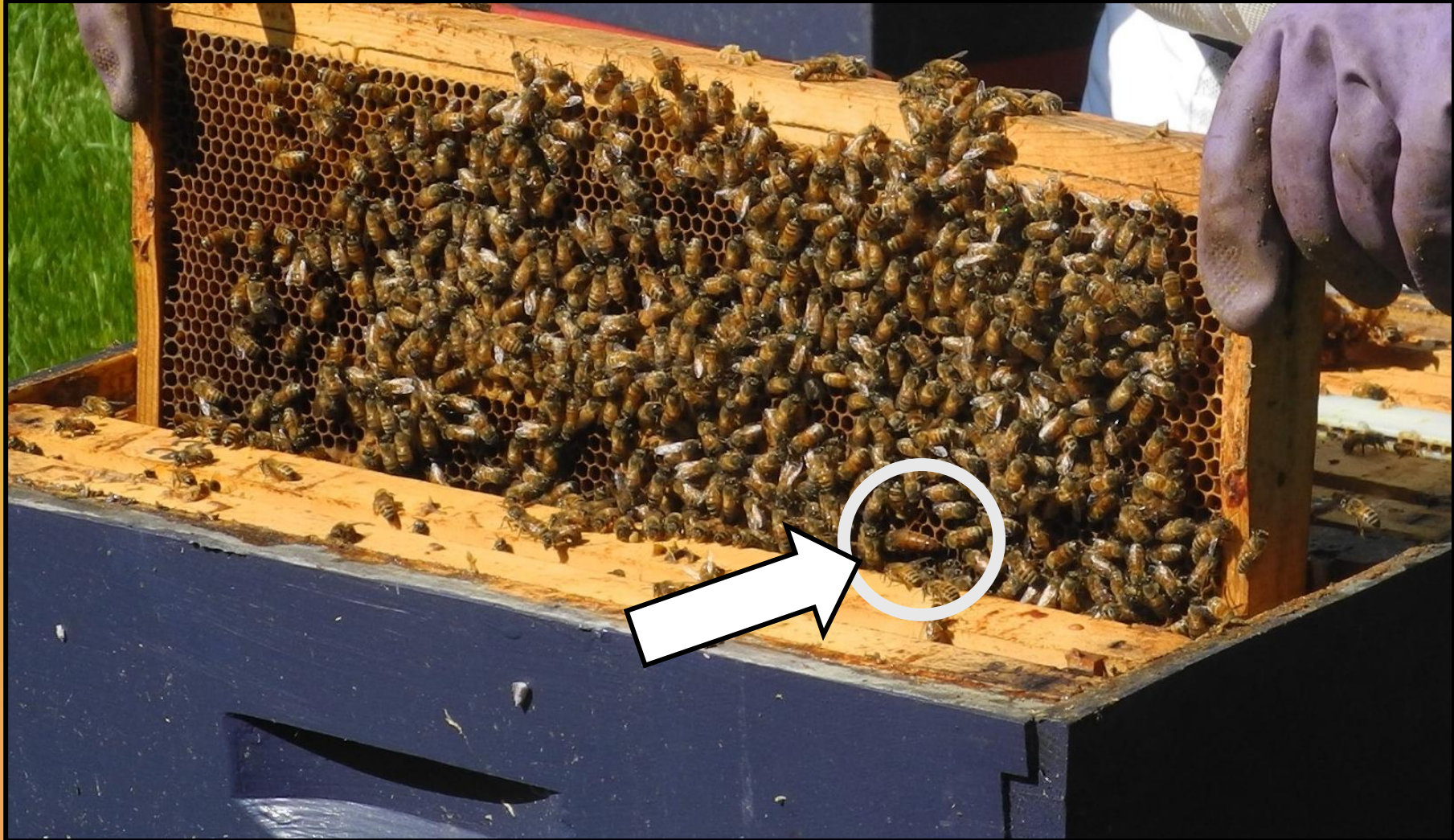


Why it's important to make the extra space...

If the frames are too close together, there would be a high likelihood that this queen would be crushed (rolled) while removing or replacing the frame because of her location on the frame. See next slide.



Why it's so important to make the extra space...



Basic Hive Inspections – A few things to remember

- **Always have a reason for entering and disturbing a colony.**
- **A “deep dive” is not always necessary.**
- **Don’t open the hive when it’s dark outside.**
- **Wear whatever PPE makes you feel comfortable to do not be coerced by others to wear less.**
- **Have all tools and equipment you will be using for the inspection ready at hand before opening the hive: hive tool, bee brush, smoker, Varroa check items, feeders, etc., etc.**

Common reasons for inspecting

(not exhaustive)

- **Making sure the colony is queenright.**
- **Checking on the status of supers (how full are they?) and possibly adding boxes.**
- **Checking on status of drawn comb and making frame adjustments such as moving undrawn frames inward or checkerboarding.**
- **Making reverse (swarm) splits.**
- **Adding or refilling feeders (when required)**
- **A “tip test” or hive entrance observations indicate that there might be issues with the colony.**
- **To obtain a (½ cup/300 bee) sample for Varroa mite testing.**
- **Supplementing brood with brood frames from a nuc.**
- **Installing a queen or queen cell frame.**
- **National honey bee health survey sampling (APHIS).**

Documenting inspections

Different ways to document inspections:

- Use a detailed "elimination" checklist. Check off everything you found, everything you didn't find, and everything you did. There are a bazillion forms for this but the one on the VBA website is a good option (next page).**
- As you gain experience with inspections and you intuitively know what to look for, you can use a fill-in sheet where you document only the significant things you found not what you didn't find. Also, briefly document what you did.**

Colony inspection checklist – Spring and Summer							
Apiary name:				Inspection date & time:			
Colony ID:				Weather/temp (general):			
Purpose/reasons for today's inspection:							
Pre-inspection tip test: relative weight compared to last inspection:				Heavier			
				Lighter			
				About the same			
Pollen gathering?				Add pollen sub?			
Nectar gathering?				Add syrup?			
Queenright?		Yes		Queen cells?		Swarm	
		No				Supersedure	
		Action taken				Emergency	
Development times for honey bees							
Development (days)		Queen		Worker		Drone	
Egg hatches after:		3		3		3	
Cells capped after:		8		8		10	
Adults emerge after:		16		21		24	
Evidence of eggs & larvae?				Worker brood in all stages?			
Space for honey:		Okay		Space for brood production:		Okay	
		Add a super				Add drawn comb	
Inspection for diseases							
Varroa mite count: (Alcohol wash preferred)				Varroa management action taken:			
Evidence of open brood diseases:		European foulbrood		Evidence of capped brood diseases:		American Foulbrood (AFB)	
		Chalkbrood				Parasitic Mite Syndrome (PMS)	
		Sac brood					
Vermont statute requires that all cases of AFB must be reported to VAAFM. Call the State Pollinator Health Specialist/Apiculturist if you suspect you have AFB.							
Evidence of virus symptoms:		K-wing		Evidence of external pests (skunks, bears, mice):			
		Deformed wings					
		Hairless or "greasy"		Voltage on electric fence:			
		Poor locomotion/paralysis					
		Brood deformities					
		Uncapped brood					

**Checklist version
free on the VBA
website**

<https://www.vermontbeekeepers.org/resources/for-beekeepers/vba-training-program>

Colony Inspection Notes and Actions

Home Apiary Sheet #1 of 4

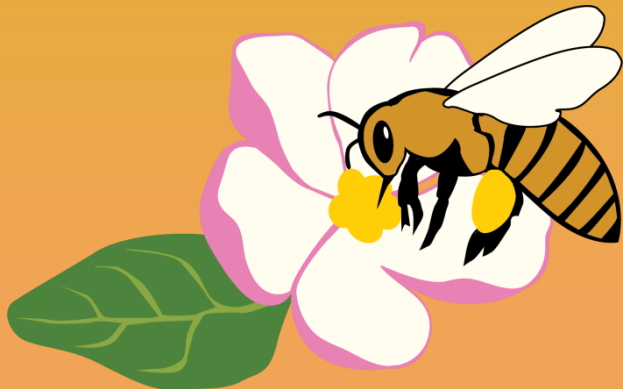
Date	Colony # 4	Colony # 5	Colony # 6	Colony # 7
05/5/2021				
Observation	Walkaway split from #10 into two 10-frame deeps of drawn comb.	Winter survivor. 2 deeps & 1 med. super.	2 frame walkaway split from #9 into a two deep 5 frame nuc	Walkaway split from #10. Deep frames have plenty of residual honey stores.
Action	Added one ½ gal. top feeders 1:1	Added super	Added two ½ gal. top feeders 1:1	
06/02/2021				
Observation	Population expanding. Tip test – heavier.	Tip test – heavier.		Population expanding. Tip test – heavier.
Action	Added a deep.	Added another super		Added super.
06/07/2021				
Observation	New queen mated. Found eggs. Population expanding. Tip test – heavier.		Colony population very small. Found eggs. New queen is mated. No brood.	Population expanding. Tip test – heavier.
Action	Added super.	Pulled 2 partial frames on brood incl eggs & larvae for #6. Doolittle method overnight.	Need to add brood frames with nurse bees. Added two 06/08/2021.	Added super.

**A simpler
version for
year 2+
beekeepers.**

Thank you for your interest!

Thank you for being in the “learning mode.”!

The learning never stops in beekeeping.



Questions?

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**With grateful thanks to the
photographer, Shan Ko.**