

Eco Bee Box



Mini Hive: Natural Queen Rearing

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Is Your Apiary Sustainable?

- How many know how to raise a queen?
- What happens if your queen is gone?
- Where do you get a replacement?
- What is the quality of the replacement?
- What is the pedigree of your queen?
- How long does a queen live?
- How long has your queen lived?
- Is your queen locally raised?

The beginning of the mini began April 13, 2013

- true half box

- mini frame





The Utah Hive



My Bedroom Window



Utah Hive Langstroth Top-Bar

- <https://www.youtube.com/watch?v=W6cVKUrh9WE>



Watching ½ mini through observation window

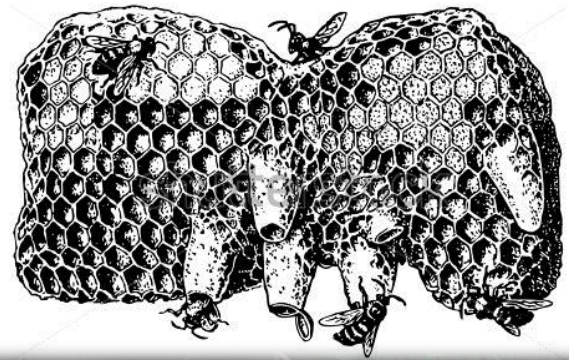
Important Queen Dates

- Day 1-3 they are eggs
- Day 4-8 they are larva
- Day 9-16 they are pupae

Notes:

- All larva fed royal jelly until day 5
- Worker bees remain in pupae until day 21
- Once cells are capped, 8 days until they hatch

The Beginning Raising & Mating Queens



Locating Good Stock



Desired Traits

- Winter hardy
- Large brood pattern
- Mild nature
- Pest resistance
- Local stock
- Disease resistance
- Type of bee
- Longevity
- Quality of bi-products

What traits would you seek in a colony?

Managing Colonies for Others

Those that want just pollination, education, or beauty, need management.

Splitting boxes

Culling queens

Capped queen cells

Ways to Start a Mini Colony



Take a queen from an existing desired colony, place her into the single mini box, take one deep frame with brood and brush the bees off of that frame into the single box with the queen. Give them sugar water 50:50 mix with Complete vitamins added and palm sized pollen pattie. After 3-4 days, return the queen to the hive she originally came from. Continue to feed for at least 3 weeks.



Place frame into hive you want eggs from.

Be sure you don't take the queen.

Great way to introduce a queen to a colony too. Capped and ready to hatch.



Take two drawn mini frames that have eggs and larva and the nurse bees attending them (NO Queen) and place them into a single mini box. Give them sugar water 50:50 mix with Complete vitamins added and palm sized pollen pattie. Continue to feed for at least 3 weeks.



Buy a 1lb package with queen, place it into two mini boxes. Give them sugar water 50:50 mix with Complete vitamins added and palm sized pollen pattie. Open entrance and let bees forage.



Place a small swarm into a 2-4 box mini. Close them in with the top entrance on closed position and give them sugar water 50:50 mix with Complete vitamins added and palm sized pollen pattie. After 3-4 days, open the top entrance and the entrance next to the Boardman feeder.



Place a 3-4 box mini up off the ground preferably in the shade. Melt some of the darkest comb you can find on the inside of the box wall. Open the top entrance, seal the bottom entrance and wait for a swarm to enter.



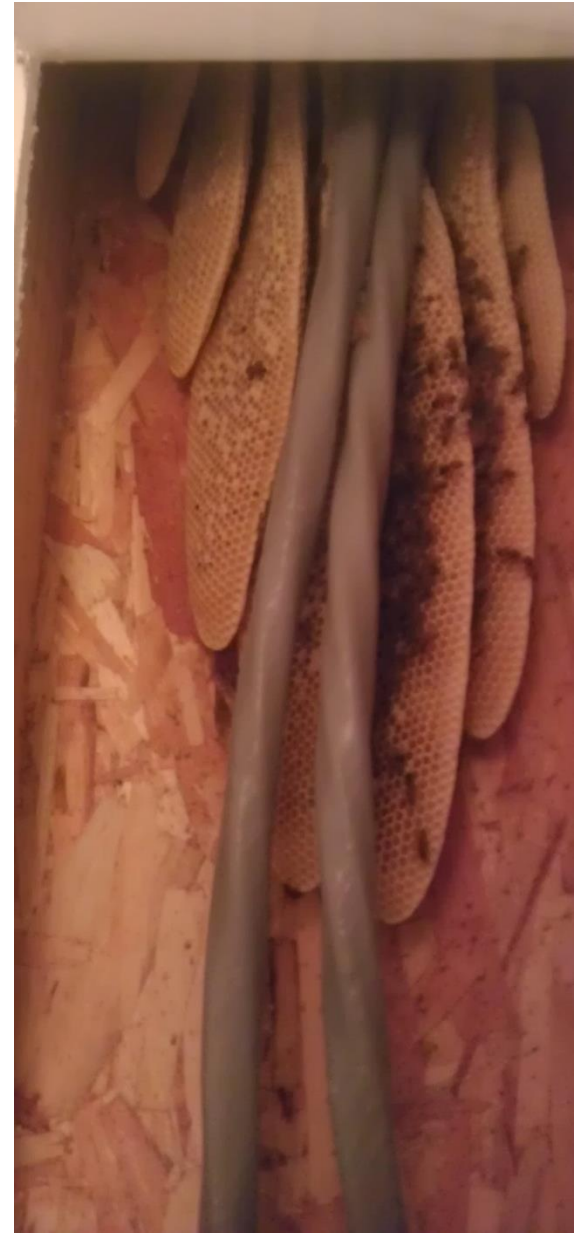
Cut-outs with Mini Equipment



Samples of mini hives







Threats to a Mini Colony

Problem:

When an available food source is scarce in later summer, **robbing** increases.

Solution:

Put entrance reducers to closed position, so bees can't enter or exit. Keep feeders filled for bees inside the hive. Place a hummingbird feeder 10 feet or more away, with less than a cup of sugar water. In a couple days put less than a quarter cup of sugar feed into the humming bird feeder. After a couple days of using this method, you can reopen your mini hive.

Points to consider:

Bees revisit nectar plants daily, as the nectar is replaced and ongoing. The bees don't want to fight for food and will choose the source that is easiest. This source will be revisited by robbers for a long time, diverting attacks on the small colony.

Feeding

Problem:

Mini colonies start with minimal resources and limited foraging bees.

Solution:

Include a feeding source so they don't have to spend effort gaining what they need.

Points to consider:

Bees are survivors. If they have the resources such as fertilized eggs, care-givers, food, protection, they will grow.

Wintering a mini

Problem:

Mini hives are small ... can they survive the winter?

Solution:

Mini colonies exist in nature, but not all areas. If feral colonies exist in your area, then it is possible for the mini hive to survive. They need resources, but only per capita per bee. A colony can survive with little resources if the colony is equally little. You can place the hive in a protected location, such as a window well.

Points to consider:

If placed in an indoor cellar, the bees need to still do cleansing flights. If external lights exist the bees will be drawn to it and will not return. Bees can't be too warm in winter or they will eat too much of their stores.

Eco-system in a Hive

Problem:

Few consider the micro world that exists in a colony.

Solution:

Replicate with known successful colony

Points to consider:

Each hive has a unseen world. There is a symbiotic relationship with the honey bees and the world .
Phage is an example of this.

Diseases & Pests

Problem:

Most diseases are brought into the hive via robbing or forging bees and drones. Or, can be introduced by the beekeeper

Solution:

Limit the amount of interaction from the area. Bee careful not to introduce foreign materials such as wax from unknown origin.

Points to consider:

There can be good and back transfer. Pests can be wasps. Wax moth is in most hives.

Medications

Problem:

Do you medicate a mini colony?

Solution:

You medicate because there is a problem or a high probability of a problem occurring. No mites, no disease threats, no forging bees, therefore do not medicate.

Points to consider:

Bees can fight off by just being healthy.

Rules of Swarms and Cut-Outs

Don't...

- ...put capped honey or sticky comb back in with the bees
- ...**bring bees back to your apiary initially**
- ...**touch anything until you have a waiver signed**
- ...**use equipment you are not familiar with**
- ...think everything is okay
- ...assume it is a swarm
- ...**forget to ask if they were sprayed**
- ...**forget to ask how long they have been there and if they were ever there before**
- ...**cut into any structural supports, wires or plumbing**
- ...**travel with beehives open**

Do...

- ...ask if they have yellow
- ...ask for them to send a photo of one or a group of them
- ...take comb with eggs and larva
- ...ask if they are on blossoms
- ...**know your risks**
- ...**understand bee diseases**
- ...learn from each job, and use every job as a teaching moment
- ...be prepared (equipment)
- ...**be thorough**
- ...take pictures
- ...have a hive ready, don't put it together right then
- ...have options available
- ...have a feeder source ready
- ...know the bee season
- ...**be safe first**
- ...have a water source ready