

# Bait Hive / Swarm Traps

## Fishing for bees

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Bait Hives, or Swarm Traps are a great way to get free bees. It is certainly a lot easier to set up a bunch of traps on a weekend, go to work all week, and check on them occasionally to see if you got lucky. Of course, feral bees are the bees knees. They are survivor bees. They have found a way to beat the mites, at least enough to get to your bait hive. Its evolution at its finest, and being part of that is just so cool. Its not often you can play a direct role in the pivot period of a species.

There are three fundamental aspects of a good bait hive, basically a three-legged stool. All three need to be present for a good swarm trap and increase your odds.

SCENT	ACCOMODATIONS	LOCATION
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#### **1. Scent**

Bees have a keen sense of smell, and that leads them into much of what they do. Finding a new home is no difference. There are a few layers of scent, and using the terminology from fragrances, we can understand the how they play together.

**- High Notes-** This is Lemon Grass Oil, or Swarm Commander, or any other commercially available lure. These are citrus smelling, and ones humans can pickup well, and also travel well on the breeze. This is the flashing neon sign for a swarm trap. These mimic the Nasonov scent of the bees.

**- Medium Notes** – This is honey, wax and propolis. You need to be a bit closer to smell them, but they are undeniable when you crack open a hive and take big whiff.

**-Low Notes** – These are the musty smells of old black comb and old wood. You can't smell it much outside a hive box, but for bees, its undeniable when they enter a hive.

#### **2. Space – Accommodations**

40 liters is generally considered the gold standard, as Thomas Seeley discovered. Actually, maybe its 30 or 50, but I don't know any research that has proven otherwise yet, so 40 liters is our target. That is basically a 10 frame deep box, or 2 mediums if that's what you have.

Bees want to know that there is space in the box, so you need to leave about ½ of it open. Use foundationless frames, or frames with just starter strips.

A small entrance essential. They need to come and go, but they also need to defend their entrance and keep warm. So about 2 square inches seems to be a good compromise. A standard entrance reducer works fine.

It needs to be dry. Bees won't tolerate a wet hive. A good roof is important.

Air flow needs to be minimal. A drafty space is not good for a new colony that is trying to make a space about 98.6 degrees to raise brood. If they can't control the heat, they won't survive.

Having some comb available for the queen to lay eggs in immediately is a big bonus. The sooner the bees can start storing nectar and pollen, and the queen can start laying, the greater the odds of the swarm staying, and surviving. Bees know this too, and are looking for an old hive. If a previous colony use it, it must be good.

### **3. Location**

Getting a bee swarm to move into a site requires a vote of democracy. For a full understanding of all this, read Thomas Seeley's book HoneyBee Democracy. For a bee to get others to vote, they must be able to tell the others about where they found this wonderful home (swarm trap) you have built, and return to confirm, and get more to come and vote.

So, put your hive somewhere that is identifiable for bees. Imagine trying to find it from 30 feet up - The edge of a building, under a big tree, at the corner of a fence or hedgerow.

Of course higher is better, such as 7-15 feet, but there have been many who have caught swarms at bench height. A second story deck is good, or top of a garden shed.

Afternoon shade seems to help. A hot box of a hive is not inviting. 90 degrees max is good.

So, in light of all that, here's my basic formula:

- One deep 10 frame box with a bottom board attached. Well used. Older is better. 40 liters is close to a 10 frame deep. I have also used 2 mediums stacked up, which ends up close to the same size. You could also use 8 frame equipment. New wood is not good for a swarm trap. If that's all you have, brown the inside with a torch and rub old beeswax on it, then melt that into the wood with the torch. The box needs to smell like bees.
- Some manner of lid to keep things dry inside. No ventilation. Vented bottom boards should be blocked off. I sometimes screw lids on if I know I need to lift them up and down a ladder.
- About 2 inches of opening set with a piece of wood or something else shoved in the opening. Big enough for everyone to get in, but small enough for them to defend. A standard reducer works fine.
- Drawn comb. Darker is better. All you really need is one frame of dark drawn comb, but two will increase the scent in the box. Place it furthest from the entrance. This is the key ingredient. In the spring, I am always looking for some

old black comb, and begging from my beekeeping friends for some.

- A couple of frames of foundation on either side of the old black comb. Helps them build up quickly and orderly. It also keeps the heat up around the new colony, which is key to getting the queen to lay as soon as possible, and get the colony settled and growing.

- Fill the rest of the box with frames with just starter strips, or foundation less frames. The bees want to see and hear that the space is big enough when they are scouting the box. So frames without foundation make the place seem spacious, but also give them some hint to where to build when they do move in.

Swarms build comb at a crazy rate when they move in. Don't be tempted to fill the box only half way. They will build onto the roof and make a mess of a transfer. If it's a 10 frame box, put in 10 frames.

- Swarm lure. Put a couple of drops on a paper towel in the back of the hive, and on top of the frames. Also, put some on the front porch or front of the box.

Essential Lemon Grass oil is good, so is Swarm Commander. This is the flashing neon light that gets passing bees to stop in and check out the place in the first place. Don't overdue it, and re-apply every month or so. Its like perfume, Don't overwhelm your date. Too much is indeed, too much. If you can't open the box on a regular basis, put the paper towel in a ziplock plastic bag to make the scent last longer.

- Set the Box as high as you can. About 7' high is good if you can still get it back down. Bee safe. Falling off a ladder with a box of bees is not a good day. Partial or full shade is good. A hot box is not inviting. Set the entrance away from the prevailing wind. (usually east or south around here) The eddy current of the wind helps concentrate the smell of the box.

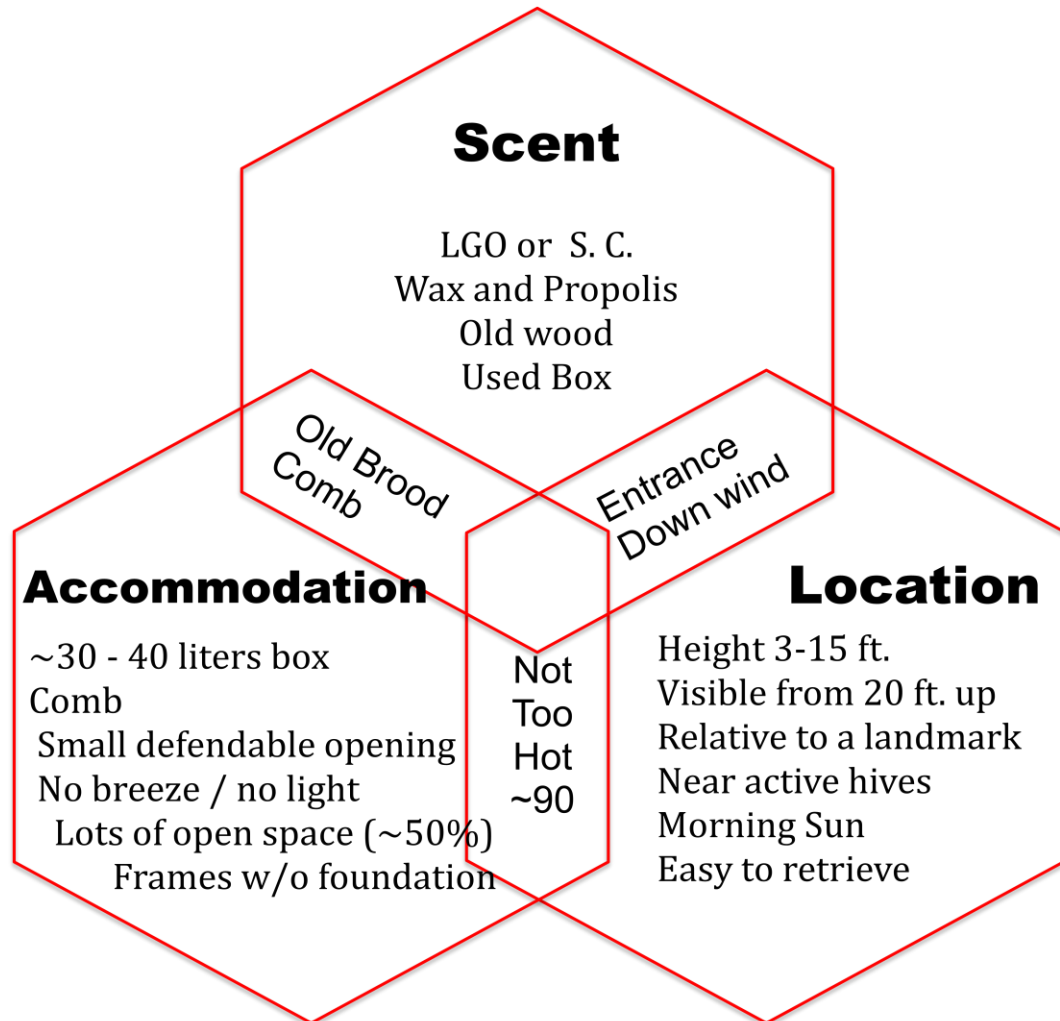
- Setting the box on the edge of a clearing, on top of a building, or near any other good landmark that one bee can tell the other about is always good. I have my best spot on top of my garden shed under a tall oak. I catch 3 swarms every year there. If you can see your spot on Google Earth, most likely a bee can relay that info to the others. Bees vote democratically. But you need to get a bunch of bees to your box to check it out, so they can vote. They need to be able to bring their friends to find the box, and then the swarm. Make it easy to find it from 30 feet up.

If its a sunny day over 60 when you put your swarm traps together, you will be amazed that you will see a scout bee or two inside of an hour. It's that quick, and just like fishing. You won't get a swarm unless a colony is ready to swarm. But you won't get that swarm if they don't know about your trap hive. As soon as they decide to start building queen cups, the scouts are looking for a new home.

It may take 3 weeks, or 3 months, before they show up. But if they already know about your box, they will go directly to it once they swarm. Always have several swarm traps set if you have spare equipment. I have caught swarms in February, and in October. I basically leave one of them up all year round. My friend down the block had his hive swarm, and they headed straight to my box, 4 doors down. He followed them. They knew where they were going when they left his hive.

If I catch a swarm, I replace the trap box as soon as possible. I have caught 2

swarms back to back, as there were two colonies scouting the swarm trap at the same time. One friend has caught 5 swarms in the same spot on his shed this year. Another friend watched 2 swarms come into his backyard in 30 minutes. Give them a couple hours to settle out, move them across the yard at night, reset the trap, and you may get another one tomorrow. Free bees are always good. Local bees are the bees knees.



Of course, bees don't read, and will do exactly the opposite of what I, or any other will tell you. They will choose plastic dinosaurs, spare tires, old wine barrels, and damp sprinkler boxes. Hopefully your bait hive is the best option.

Things I don't recommend:

- Fiber flower pots – PITA to remove the comb
- Nuc Boxes – small box, small swarm.
- New and unused equipment
- Traps without frames.