



## Swarm Capture How-To



*Note and warning: "Swarms" are not "hives"! This warning is about established hives with wax combs. Honeybees will protect their hive if established long enough, and the degree to which they will defend their hive is dependent on many factors. If you are not an experienced beekeeper, but someone just needing help to remove an established hive, seek an experienced beekeeper for their advice/training or services. Also note that pest control operators are generally not beekeepers. Do not attempt to relocate or kill it yourself! Leave it alone unless you want to risk injury to yourself, pets, and neighbors. Hives can remain agitated for up to a couple days after being disturbed if not handled carefully. Spraying the entrance of a hive (with anything) will generally only provoke them, and uncovering or opening their hive WILL NOT make them "move on".*

### "But I Thought..."

Fallacy #1 – "A swarm won't sting you."

I've found that about half can and will, but generally in fewer numbers and mostly because I've accidentally crushed some which can induce them to give off their warning scent that they are in danger. Also, those swarms stayed idle on a given location for longer, tended to want to defend the location more than those that have recently landed.

Fallacy #2 – "You need to smoke them."

Leave your smoker device at home, it's not helpful during swarm capture.

Swarm capture is best done at the end of the day to ensure most bees go home with the swarm – foragers and scouts are still active during the day until the swarm locates to a new home. However, morning and mid-day captures are common and also recommended since you can never really tell when a swarm will decide to move to its permanent location. This decision can be made in as quickly as 5 minutes, or it can take several days. In general, we have found the average time for a swarm to remain on a branch to be about 3-6 hours with the swarm leaving by mid-afternoon.

If you need time to prepare yourself to capture a swarm, thoroughly mist the swarm with water (optional: add a bit of sugar or honey) every 20-30 minutes. This interrupts the scouts from dancing - the decision making process - and looking around for new homes. Have some form of protection since occasionally a few bees may not care to be misted.

Whatever bees get left behind usually dissipate (peacefully) by the end of the day to the parent hive or other colonies in the area. However, swarms that have trouble relocating to a new location for whatever reason (lost queen, or not actually a swarm, but an absconding hive), or a swarm that has been idle on a location for several days may require a second visit to capture lost bees if not done toward the end of the day. A branch covered with some beeswax, or with a bit of wax comb attached can indicate they have been idle for more than a few days. In this case an evening/sundown removal is best.

### Swarms On A Thin Branch

These are the easiest and most fun in my opinion simply because most of the bees along with the queen can be shaken into your container of choice more accurately and quickly.

First, prune vegetation so you can make room for your bucket or other suitable container to be positioned underneath the swarm. There's nothing more frustrating than a mass of thin spiny branches between falling bees, your hands, and your bucket. Mist the swarm with water. This is optional, but it does help to keep more bees from becoming airborne while falling into your bucket, but keep in mind that wet bees on the ground will take a bit longer to gravitate back to the container.

Next, get your bucket into position underneath the swarm, get yourself largely out of the way (did I mention you might want to duct tape or strap your pants to your ankles?), grab hold of the branch the swarm is on, and while holding the bucket and lid with one hand give the branch a forceful shake to get as many of the bees into the bucket as possible. During this game of what might feel like a one-man game of twister, you should have your bee brush under an arm or between your legs for quick access. A few strokes of the remaining bees with your brush and you most likely have the queen in your bucket.

Put the lid on while carefully trying not to crush any bees, and wait. Observe their behavior to see if you notice bees fanning while clinging to the lid. Other bees will join the bucket as they pick up the pungent message that the queen is inside. Repeat the brushing and shaking of the original location until most bees land on the bucket lid. Periodically lift the lid to let others in and shake off the bees into the bucket.

### Swarms On A Structure Too Big To Move

If located on a thick branch or structure the majority will need to be brushed or scooped off. Scooping would involve a very slow cradling action with your glove covered hand or some a thin card stock or other makeshift scoop. Once you have brushed or scooped a good number into the bucket (more than half of the total), and they seem to remain or march around inside the container in an orderly way, lay or hang the bucket near the remainder of the swarm. Knock a few more bees into the air and see whether several fly to the bucket lid and begin fanning. The goal is to get the queen into the bucket which will make the rest of the capture much easier. In general bees don't care to be brushed. If the remainder of the swarm is repeatedly knocked to the ground the bucket can be turned onto its side so the rest can march in. If the bees are airborne the bucket can generally be left uncovered while observing that the rest of the swarm flies into it.

A small box with queen lure of your choice (commercial, lemon grass essential oil, or a tincture made from spent queens soaked in alcohol on a Q-tip) can be set up in the original resting place of the swarm to capture stragglers that can later be joined to the swarm or put down with soapy water that will quickly suffocate a bee. We generally don't bother with this step unless it's located in a highly trafficked public space.

### You're Too Late

If a swarm decides to disperse into the air in masse, all you can do is wait to see if they will land and reform a cluster nearby. Occasionally, they will reenter the parent hive if they failed to drag the queen along with them. Keep a close eye in order to identify a possibly much larger problem such as migrating into an enclosed space like a wall or shed floor. Generally, the last course of action will be to enjoy the show as they circle about, gain speed in a general direction, and eventually easily out run you. There's usually no point in trying to keep up with them unless you're a distance runner in an open park or pasture with few obstacles.

## Care of the Swarm

Keep them cool!

If your swarm takes up more than 1/3 of a 5 gallon bucket and the outdoor temperature is above 85F-90F degrees, they will have a hard time cooling themselves. A screened bottom will greatly help with this. Honeybees locate the queen by scent and will adhere to any perceived access points instead of going into the bucket. Keep in mind that all screened portions of the container could become clogged with bees.

Do not try to fill a 5 gallon bucket more than approximately one-third full with bees. If the swarm is extremely large use more than one bucket, and join them later, or use a larger container. Adding a branch within the bucket gives them more surface area so that they can better distribute the airflow. Mist them with water only a few times during the day. In especially hot days (greater than 90F) the outside of the bucket can also be misted to briefly drop the temperature through evaporation. Hanging the bucket in the shade of a large mesquite tree (off the ground) will also help to keep them cool. There the swarm can remain until it is time to place it in a hive.

## Observations

If they are fanning quite a bit in the bucket it's usually because they are trying to cool themselves (too hot). However, at times it can also be because they need to defecate, feed, or more often they sense the need to escape to a new location before their resources deplete and they die. After a few days, and especially during warmer weather, you may notice up to 20-50% of the swarm may have died due to exhaustion of trying to cool themselves in hot weather. Sometimes the swarm can still be hived with success. Again, keeping them cool will minimize the number of dead bees. It's highly recommended that when outdoor temperatures exceed 100F, move the swarm indoors and put a fan on them.

A swarm that has been left in the sun, because you failed to account for the sun's changing position during the day, will result in a bucket of sticky, wet, dead bees that have vomited their honey resources.

## Hiving The Swarm

For best results we wait 2-3 days before hiving a swarm. Swarms leave the parent hive with a certain amount of resources (nectar/honey) so they can start to build new combs immediately in their new location. By holding the swarm in the bucket for some amount of time their internal resources are diminished. Do not feed a swarm unless unforeseen circumstances, where you cannot put them in a hive, require you to hold them longer.

If a "fresh" swarm is placed into your hive the same day it was captured, the likelihood they will stay in the hive decreases. By drawing down their internal resources, the likelihood they will stay in the hive increases. Using a #5 wire mesh (which usually must be special ordered) or a queen excluder on a bottom board, further increases the chances they will establish since the queen cannot move beyond the barrier. Caging the queen for 3-4 days is also a good strategy if time can be taken to locate her. A good amount can be written on the subject of caging queens, but #8 wire mesh or aluminum window screen can be fashioned into a cylinder that can make a queen cage in a pinch if you plug the ends with rolled up paper towel or other material. Hung inside the hive with wire, the workers will tend to her as normal until you release her.

The size of your box should roughly match the size of the swarm. For a swarm that we consider large (a good third of a bucket), they should be established in a deep brood box with 8-10 frames. A top bar hive with its follower board spaced about 2 feet from the entrance should suffice for the same sized swarm.

The top bar hive space would also contain about 15 bars, a few of which would have donated brood combs (or other hint to encourage straight building). Smaller swarms do best in spaces about half this size or in a five-frame nuc box.

#### The Swarm Has Decided To Stay. Now what?

Now you have a responsibility to protect yourself and neighbors from the possibility of a highly defensive hive. Over the course of about 3-6 months you may notice a change in behavior from the docile swarm and hive they once were on their bright and brand new white combs, to very nervous and sensitized bees when you open their hive. This will take the form of lots of bees flying to your veil and crashing into you as opposed to just the occasional few. Take note of their smell. A distinctive banana-like odor will accompany bees trying to sting, and there is another odor that can only be described as “sweaty” for lack of a better comparison, that we tend to associate with highly feral/wild bees that in our experience is indicative of a higher potential to exhibit nervous behavior. Also, nervous behavior (running frantically all over the combs) is very undesirable.

These change can become especially apparent when you begin to inspect the brood area. If you notice this behavior begins to intensify as you near the brood area immediately replace all combs, and close up the hive. Take note of how far the bees follow you as you walk away and do not walk near or towards other people or animals. The main point here being you need to have a plan of how to deal with a potentially complicated situation far in advance.

If you live in an urban area that is not well isolated by larger vegetation from other human or animal housing you need to have another location (away from urban areas) where you can move them to so that they can be dealt with in other ways too numerous to include here. Don't wait to move them, or you will be dealing with a large and heavy problem as opposed to a manageable one.

Please note: although it is possible the behavior can change, the defensiveness of a hive will likely increase as the population grows (it can double every 21 days as long as food is plentiful).

In general, if the bees make you uncomfortable and nervous while working them, that is usually a sign they will not be appropriate for the space you are in. Trust your instincts on this one, and prepare to make the necessary changes.

#### Swarm Capture Checklist

- Bucket with screened lid, box/ductape, or large burlap bag or sheet (in a pinch – use your imagination, but no holes larger than 1/8” while maximizing fresh air ventilation)
- Hand pruners and/or larger branch pruners
- Spray bottle with water (optional: spiked with a bit of sugar or honey)
- Dishwashing soap (if needed to eliminate stragglers in a public setting that don't want to go home with you)
- Veil and/or beesuit
- Long sleeve button up shirt if no beesuit
- Dishwashing gloves (do not use suede or other material that may resemble animal fur)
- Ladder
- Bee brush, clump of long green grass, or fresh leafy young plant stems
- Thin, rigid postcard or cardboard for scooping.