

## HOT HIVE by Catherine Edwards

You have cheered your new colony on since spring and it has rewarded you by producing lots of honey. Only problem is that the bees are becoming more defensive now that the colony is 5 or 6 boxes strong and the nectar flow has all but ceased. You may be getting stung far from the hive or a neighbor has complained. Your beautiful bees have become a big problem - something has to be done, and soon.

First of all, trying to decide whether the bees have become Africanized won't help. Non- Africanized bees can be quite aggressive too, and you still have to do something about it. Also, DNA testing only determines the maternal contribution, not the paternal side.

It may be temporary insanity brought on by the dearth or environmental factors. This does not help either, unless the factors can be quickly identified and remedied.

The remedy most often touted for fixing a hot hive is re-queening. That's all well and good, but, in the first place, you may not have had any experience doing that, you may not have a spare queen handy, and just opening this hive at all is a scary proposition, let alone going through it frame by frame to find the queen.

Perhaps euthanizing the hive is the best course, but that also is easier said than done if you don't have experience with it. A failed euthanasia can result in many more stings, more stinging victims, and more bad publicity for urban beekeepers.

The problem with much beekeeping advice is similar to the problem with computer technology help – it too often assumes some familiarity with the subject that a beginner doesn't have, so it skips some steps. I'll try to start at step 1.

The first step for dealing with a hot hive is to temporarily tame it so it can be worked.

There may be other ways to do this, but this way has worked for me.

Step 1. Move the hive a few feet away from its present location. It need not be far – 2 or 3 feet will do. Moving it back works better than placing it in the same row. You can do this rather efficiently by quickly dismantling it as you would for an inspection and reassembling it quickly in another location. Or you can get a friend to help you move it all at once. Have a nuc box ready to place in the old location immediately upon moving the bottom box with its landing board. The nuc box should have some frames in it already that are empty or have some food. The foragers will immediately begin entering this box. Put in a frame of brood from your hive (or have one in there already from a different hive, if you wish). This is your catch box. All the nasty foragers will go into it, leaving the main hive with very few bees that will harass you. This will give you time to go to step 2 onward without feeling under the gun (or the sting).

Step 1a. You can close the entrance of the nuc box at night or early in the morning when all the foragers are inside. My favorite way to close an entrance is to use duct tape to tape a piece of window screen over it. Or just plug the hole with the entrance plug if you are using a cardboard nuc box. Use a ratchet strap to tighten down the cover. Move this box of grumpy bees to a yard where they will do no harm.

(Sometimes the reduction in size and resources is enough to tame the behavior of these bees making it possible to keep them where they are. This is a judgement call.)

Step 2. Using a fume board or your favorite other method to chase the bees down out of the supers of the original hive (which should be much tamer than before), remove the supers and secure them from bees getting into them. You should be able to reduce the size of the hive to 2 or 3 boxes. Put a screen excluder between these boxes. Wait about 4 days. In the meantime, you want to scare up a substitute queen, if you don't have one handy. After 4 days, separate the boxes, (covering the ones you aren't working on so as to keep the bees calm and to not stimulate robbing) and look for the queen. She is in the box that has eggs. Remove her. Put the hive back together, still with queen excluders.

Step 3. Putting in a new queen: If the season is early enough, you can put in a queen cell or a frame of brood with eggs from a gentle hive. Just remember it will be 3 or 4 weeks before a newly made queen will be mating. Will there still be sufficient drones?

Make sure there have not been queen cells already started by the hive. If you wait another 4 days or so, then remove any started queen cells, the hive should be hopelessly queenless (unable to make more queens) and will be more likely to accept an introduced queen. Since you have put the queen excluders back after the old queen's removal, you only have to search one box for queen cells, the one you found the old queen in.

Step 3a. If the hive is sufficiently huge, you can split it, dividing the resources more or less equally, and re-queening both.

Step 4. You still have the nuc box to deal with. Re-queen as you did the original hive or let it re-queen itself if you have provided brood with eggs from a gentle hive. It can also be newspaper combined with another hive, (using lots of smoke during the dearth). It can also be easily euthanized, if that is the best choice.

## EUTHANIZING A HIVE

I believe an aggressive hive can generally be saved if one knows what to do. It should not be necessary to put it down.

However, it is useful to know how to effectively euthanize a hive. Sometimes it is necessary when encountering a case of American Foulbrood. But it is easy to mess up the task.

The key to effective euthanizing is to be able to completely seal the hive. A half-assed job will result in failure and angry bees. When closing the entrance for hive moving we try to provide ventilation. If a few bees escape in the car, it is not a big deal. In this case we do not want ventilation, and escaping bees is a big deal.

During the day remove the inner cover and any shims you may have holding up the outer cover. Tape seams and gaps well, making sure the tape won't get undone. Seal off the entrance in the evening after all the foragers are home. At night, using a red flashlight (I covered a flashlight with red tissue paper for night beekeeping tasks), open the top cover and pour the euthanizing substance down the seams

between the frames. I use rubbing alcohol and use a lot. Anyone who has done an alcohol wash knows it kills bees quickly. When the cover is put back on, the fumes will finish off any bees not directly touched by the alcohol. The equipment is not affected and can be re-used without any problems. Other substances recommended are:

ethyl acetate--this liquid is what entomologists use in their insect killing jars (and is the ingredient in nail polish remover). It's safe to use, and evaporates completely. Seal the entrance in the evening and dump a half a cup over the top bars and replace the hive cover. Available on Amazon and elsewhere.

Laquer thinner from the hardware store also works very well, and again evaporates completely--leaving no residues.

Two methods I would not recommend are:

Dry ice – it is awkward to handle and put on the hive at night. If not enough, bees could simply be put to sleep only to wake up later.

Soapy water – not efficient and it makes a mess of your equipment.

I always experience great sadness and grief if I have to euthanize a hive. I would never do it out of anger, and will not do it when an effective alternative exists.