"I rob banks because that's where the money is."

- Willie Sutton

We are smack in the middle of the summer nectar dearth. Sure, there are lots of pretty little flowers blooming in our area (Crape Myrtles are an example) but our honey bee colonies are at maximum population and the major nectar producing flowers (tulip poplar, black locust, fruit trees etc.) are long gone. The few flowering plants that are producing nectar right now don't produce enough to supply all of those hungry bees. So colonies that are not under the watchful eye of their keepers may be at risk of starving (see January 2015's <u>Yum Yum,</u> <u>Eat 'Em Up!</u> for more on this topic). And loads of forager bees are sitting around idle with nothing productive to do.

The proverb "Idle hands are the devil's workshop" applies to honey bees just as well as to humans. Spill some honey in the bee yard and unemployed forager bees quickly discover it. If they find easy pickings once, there is bound to be more... maybe in that weak hive next door! A few guard bees are no match for hordes of opportunistic honey robbers. Normally it is easier to get nectar straight from a flower but if no flowers are open for business, foragers go to Plan B.

The typical result is a furious frenzy of flight at the hive entrance and fight-to-the-death engagements on the landing board. Look carefully and you'll also see honey bee search parties attempting to gain access to the hive at every seam or crack in the boxes. After a robbing spree has been going on for a while, the bottom board will be dusted with chewed wax bits or, if the bottom board is screened, the wax will be on the ground directly under it.

New beekeepers often confuse these battles royal with orientation flights but the two are extremely different activities. Orientation flights occur when a new flush of young bees reaches the age when they are ready to fly. For a bee, this is a wonderful day because now they can leave the hive to go to the bathroom – they've been "holding it" all this time. In the



A robbing screen is a valuable tool in the bee yard. This one is on a nuc. Robbers follow the hive smell and try to enter at the screen at the bottom while resident bees quickly learn to enter and exit via the opening at the top.

classic case, mid to late afternoon on a warm, pleasant day, young bees will walk out onto the landing board. They'll turn to face the hive entrance then spring backwards into flight. Humming loudly, they'll hover and bob in the air a few feet in front of the entrance, memorizing what it looks like and how it relates to surrounding landmarks. This activity will last perhaps 30 minutes or so and then abruptly stop for the day. When there are a large number of bees taking part, an inexperienced beekeeper may become quite concerned with what appears to be frantic behavior, confusing it with either swarming (see April 2019's Swarm Season is Here for a description) or robbing. But this is "happy flight" and is a very good thing like a Soviet military parade, it shows off the numerical strength of the colony's newest recruits!

On the other hand, a robbing frenzy involves a lot of fighting and death. You'll see bees locked together in combat, roiling on the bottom board and in the grass in front of the entrance. If you stand to one side of the entrance, you will likely get stung in all of the confusion.

Note that if aggressive robbing has been

going on for several hours, the colony being robbed may "give up" and you won't see fighting. Perhaps all of the guard bees have been killed. Regardless, foreign bees will continue to pour in and pick the robbed hive clean.

One way that you may be able to distinguish robbing from normal abundant and enthusiastic flight is to stand directly behind the hive that is suspected of being robbed so that you can clearly see where the exiting bees are flying off to. Doing this, I've been able to clearly track the flight path of streams of bees coming out of the entrance of one hive and going back to another in the same bee yard. The mystery of "who dunnit" was solved.

An ounce of prevention is worth a pound of cure

How can we prevent robbing? First and foremost, robbing is often the result of beekeeper negligence during the dearth. Maybe we spill some honey in the bee yard. Or during an inspection, we leave the hive open and uncovered for longer than we should. Or we feed using Boardman entrance feeders, which are very easy to rob, instead of hive-top or internal feeders (see October 2014's <u>A Few</u> <u>More Wintering Tips</u> for descriptions of several different feeder types). Even worse: we openfeed in the bee yard. Maybe we place weak splits in the same yard as strong, wellestablished colonies and forget to restrict their entrances.

So the surest way to prevent robbing is to not do something that sets it off. Try to keep colonies in the same bee yard at equal strengths. Don't tempt robbing by leaving spilt syrup or honey around where bees can get to it. Keep your colonies well-fed. Use internal feeders. Be mindful of how long hives have been open during inspections. Observe bees' behavior during inspections to see if neighboring bees are taking an interest in the hive that is open. Fill feeders in the evening to minimize the time robber bees have to scout around and find spills. This is all just common sense.

To the rescue

Of course our best-laid plans don't always work out and bad things happen. If robbing has begun, what can we do to stop it?

There are lots of creative You-Tube solutions such as removing the covers from every hive in the bee yard, putting stinky stuff on the bottom board and so on. I wouldn't recommend anything like that; they sound clever but can easily lead to greater problems than the one we started with. At my bee yard, if a colony is being robbed, step one is to close off the entrance completely. I like to use a bit of rolled-up window screen so that the colony can still breathe. An age-old recommendation that does the same thing is to completely cover the hive with a wet sheet. That closes the entrance and the water prevents the colony from overheating and subsequently dying. However I do not see how this is better or easier than simply closing the entrance with screen.

With the entrance closed, the robbers should eventually lose interest. How long is "eventually"? A few minutes? Hours? Days? The answer is "yes", it could be any of those. At a minimum, I would wait until the next morning before removing the entrance closure, and then only if there are no longer any scouts investigating the hive.

I know at least one beekeeper who will spray the area on and around the hive with water from a sprinkler to encourage robbers to "get out of the rain" and seek the shelter of their own hives. That seems to help; it doesn't hurt!

When the robbing episode has fully ended, I put a robbing screen on the target hive. Robbing screens are simple yet elegant devices that keep out robbers while allowing the resident bees to go about their normal business. The key is in the design: robbers follow the smell of honey to the hive entrance, but it is blocked by a screen. Resident bees, on the other hand, exit the hive and, finding an obstruction in the entrance, they simply climb up the hive face and exit at the top of the device. Think of it this way: suppose bill collectors are parked on your front porch, hounding you for payment. No problem. You just leave the house through a second-story window, slide down a gutter pipe, and off you go. When you return, you know the drill: climb up the pipe, in through the window, and Bob'syour-Uncle, you've avoided a nasty confrontation on the front steps.

There are a variety of commerciallyavailable robbing screens. It also is pretty easy to make your own. The photo on page one and the figure on the right show the basic design. A frame holds a screen. The contraption, <u>open at</u> <u>the top and bottom</u>, fits snugly on the bottom board in front of the hive entrance. Resident bees can exit at the top while robbers, following the hive smell, congregate on the lower part of the screen while futilely trying to gain access to the entrance.

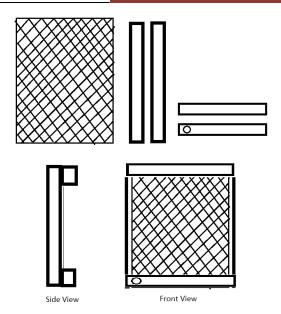
Note that the design pictured has a ¼-inch hole drilled in the bottom corner. If a robbing screen is used on a mating box, the hole allows the virgin queen to exit and reenter with a minimum of confusion while still providing an easily-defended entrance. If the screen isn't being used on a mating box, the entire thing can be flipped top-to-bottom to eliminate the bottom entrance entirely.

The width of the device should match the width of the bottom board so will vary for 10-, 8- or 5-frame equipment. The height isn't critical but needs to be "high enough": 5 or more inches is plenty. The screen can be regular, cheap window screen; it doesn't need to be 8-wires-per-inch Varroa screen, although you can use that if that's what you have on hand.

Depending on the dimensions, the device may fit snugly in the entrance without any help. Or it can be tacked in place, tied on with a

bungee cord, held with duct tape or secured using any other brilliant idea you can think of. I build mine with a short stub on one side of the bottom that extends within the entrance, holding the device firmly in place (see photo on right).





A piece of screen and four 3/4-inch by 3/4-inch sticks are all that are needed to make a robbing screen. The width will depend on the dimensions of your hive (5-, 8- or 10- frame). The height isn't critical as long as it is "enough".

For maximum protection of a very weak colony, it won't hurt to install a regular entrance reducer <u>and</u> a robbing screen.

I don't advise leaving a robbing screen on a colony all the time. It seems logical to me that after a while there will be so much footprint pheromone going in and out of "the secret entrance" that it won't be much of a secret anymore. At least one commercial design has a remedy for this problem: the top opening has two flaps, one covering the right side and one covering the left. Close the right side and open the left for a week, then switch, leaving the right open and the left closed. Does this solve the footprint issue? Try it and let me know.

Our assignment for this month is to act responsibly so we don't start robbing episodes in the first place and quickly shut them down if they do start. Let's take robbing off of our list of beekeeping worries!

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