"I don't suppose anybody really knows how bad a thing can be until it actually happens."

— Rodman Philbrick

My bee school students often ask me, "Should I worry about such-and-such?" My standard response is, "Hey, this is supposed to be fun! Don't worry about anything!" Since I don't keep honey bees as a meaningful source of income and I don't have more invested than can easily afford to lose, I do attempt to live as we've been taught: "Which of you by worrying can add a single day to his life's span?"[1]

That applies to swarming too. Attentive, educated beekeepers know that swarming isn't a good thing. But it happens. For me, it happens a lot! I understand the biology of swarming (see "Swarm Season is Here!") and I can describe a dozen different swarm-abatement techniques, but between bad beekeeping and sneaky bees, they take off anyway. Instead of wringing my hands and losing sleep over it, I laugh it off and say something cute like, "I'm doing my part for the repopulation of feral bees in North Carolina!"

But here's the thing: putting comedy and stress-reduction side, swarming is bad. Let's not forget that, even as we joke about it. Yes, swarming represents natural reproduction of the honey bee species and is a well-embedded, irresistible force for a colony, but we don't let our dogs and cats breed wantonly, do we? Remember: honey bees are not native to America – they don't "deserve" to have their spawn spread across the landscape any more than Fifi or Fluffy does. If you aren't convinced, here are five reasons that we all should double down on our swarm-reduction efforts.

Loss of honey crop

In Central North Carolina, swarm season coincides with honey season. We have roughly two months for our thousands of tiny employees to earn their keep. If half the workforce quits just as the work needs doing, we are left with bupkis. Nada. Zippo. Not only does any chance of reward for all of our hard work disappear in a swirling cloud of bees headed off toward the horizon, we inherit a left-behind colony that may very well need extra care to get it firmly back on its feet. That's not what honey bee husbandry is designed for. For those who say, "I don't care about getting any honey," it is a whole lot cheaper, easier and less stressful to keep non-Apis bees for pollinating our gardens or for communing with nature (see "The Right Bees for You" and "Maybe We Shouldn't Keep Honey Bees After All").

Swarms are fun to watch and even more fun to catch, if we are lucky enough to do so. But most of them get away. Once they are out of sight, should they be out of mind? What happens to the ones that we aren't fortunate enough to re-hive?

We aren't repopulating the wild

Despite the romantic notion that those swarms disappearing in the distance are going to add to the feral honey bee population, that isn't the case. They are going to die. In a study of swarm outcomes, Seeley found that "… only 23% of founder (first-year) colonies … survive winters."[2] And that was in Cornell's magical Arnot Forest, where feral honey bees seem to have some sort of a survival advantage. The colonies that dodge starvation and winter stress

[1] Matthew 6:27, New American Standard Bible.

[2] Seeley, T.D. "Life-history traits of wild honey bee colonies living in forests around Ithaca, NY, USA." Apidologie 48, 743–754 (2017). https://doi.org/10.1007/s13592-017-0519-1

succumb to Varroosis. This is real life, not a Disney movie.

Your neighbors should hate you… if they only knew

One of the biggest reasons that swarms are bad is that they go somewhere. If that somewhere is the unused equipment that's stacked behind your barn, hurray! But if it is the attic, walls or floor joists of your neighbor's house, that calls for a big "Oops!" Removing honey bee colonies from a structure is often quite difficult and it is always time-consuming. Unless someone is doing it for fun, it can be very expensive -- $1,000 for accessing, removing and cleaning up a colony, then restoring the structure to its original condition, would be a cheap job. If scaffolding is involved, multiply the cost and complexity.

The homeowner cannot successfully sue you for rearing the pests that invaded their home[3], but if they know enough about beekeeping and honey bee biology to put two and two together, I suspect that you won't be invited to their New Year's Eve party this year.

Swarming endangers the left-behind colony

According to Bee Informed Partnership (BIP) surveys, the top three causes of colony loss are Varroa mite issues, "queen events" and starvation, in that order.[4] The term "queen events" covers the loss of the queen for a variety of reasons, chief among them being failure to successfully requeen (naturally or with beekeeper intervention) following swarming. In case the significance of that isn't fully appreciated, let me restate it: Failure to recover from queen loss, as in swarming, kills more colonies than any other cause except Varroa mite issues.

Oh, so THAT'S where they ended up! Do you think the homeowner was giddy with joy about having honey bees in his wall? How much do you think it cost to have the honey bees removed, the area cleaned up, the sheetrock replaced and the wall repainted?

A colony walks a slippery tightrope as it attempts to requeen, with countless ways that things can end in disaster. Even if the nutrition, brood care, temperature and so on are just right for creating a new queen, the virgin can be eaten by a bird on her mating flight or get confused and try to enter the wrong hive on her return. And even if she does become properly enthroned, does the colony have enough time and environmental resources to recover from a month's break in brood rearing? Colony survival is never easy and queen events multiply the risk. How often do things not work out? Lots of times. That's where the #2 ranking comes from.

Afterswarms make things go from bad to worse

Primary swarms are bad enough for the mother colony, but afterswarms are common. In this situation, the primary swarm leaves with half or more of the colony's workforce. A little more than a week later, a virgin queen emerges. Watching "The Magic School Bus" or "Bee Movie" you may have learned that the

[3] Caveat: I am not a lawyer. This isn't authoritative legal advice, just supposition based on a layman's understanding of Common Law as it applies to honey bees.

[4] Nathalie Steinhauer, Dan Aurell, Selina Bruckner, Mikayla Wilson, Karen Rennich, Dennis vanEngelsdorp, Geoffrey Williams, *United States Honey Bee Colony Losses 2020-2021: Preliminary Results,* https://beeinformed.org/wp-content/uploads/2021/06/BIP_2020_21_Losses_Abstract_2021.06.14_FINAL_R1.pdf

first virgin kills all of her competing sisters, but that only happens if the colony allows it. At my place, the worker bees commonly prevent mass sororicide by keeping the emerged virgins away from each other and preventing others from exiting their queen cells. When the new batch of virgins are fit for flying, the colony will issue a new swarm with one or more virgins. They can retain as many virgins as the choose and swarm again and again, until there aren't enough bees or virgins left to repeat the process. In this manner, I have had colonies literally swarm themselves to death. The key to preventing this is to only leave one viable queen cell in the mother hive, but my honey bees are expert at hiding a few away in nooks and crannies.

No answers

In Fifty Years Among the Bees, in the chapter titled "Preventing Swarming", beekeeping guru C.C. Miller said:

> *I don't quite like that heading. It may be understood to mean that I am entirely successful in profitably preventing swarming, and I am not certain that I have yet attained to that. I say profitably preventing it, for there might be such a thing as preventing it in a way that would hardly pay. If a colony disposed to swarm should be blown up with dynamite, it would probably not swarm again, but its usefulness as a honey-gathering institution would be somewhat impaired. Swarming might also be prevented by means of such character as to involve an amount of trouble that would make it unprofitable; or it might be prevented in such a way as to have a very unprofitable effect upon the honey-crop. The thing I am after is profitable prevention.*[5]

Being far less experienced and far less wise than Dr. Miller, I cannot offer better advice on how to prevent swarms. There are methods that work for some people… sometimes. Study

Removing bees from walls is usually pretty simple compared to removing them from underneath floors, at least from the beekeeper's perspective. Fortunately, the way this house was constructed, I had ample working access to the underside of the floor without having to crawl around on my belly in the dirt and dark. In this photo, the comb has already been removed. All that is left is the removal of the straggler bees, careful clean-up so that the smell of comb and honey doesn't attract pests or a new round of bees, then the reconstruction of the structure. Even the simplest job takes quite a few hours.

different practices, ask advice of successful colleagues, put your knowledge of honey bee biology and sociology to work for you. But whatever we do, or don't do, we mustn't kid ourselves that swarms, especially those that escape our control, are good.

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Note: All previous articles are archived at https://baileybeesupply.com/educational_resources/

[5] Dr. C.C. Miller, Fifty Years Among the Bees, The A. I. Root Company, Medina, Ohio, 1911.