A Safe Beetle Trap? October 1, 2023

"Cure the disease and kill the patient."

— Francis Bacon

Patrick Henry, the "give me liberty" guy, developed an intestinal blockage (intussusception) at age 63. The medically-accepted cure at that time was to drink a vial of liquid mercury (please don't do that!). He did so as he sat in a chair surrounded by family and friends. He watched his fingernails slowly blacken and he died right there. At least he didn't die from the intestinal blockage!

Beekeepers' war against Small Hive Beetles (SHB) can be a similar situation (see "Love a Beetle?") The cure can be as bad, or worse, than the disease. There are You-Tube-trained beekeepers who put all sorts of unapproved poisons in their hives to kill the pests, oblivious to the fact that honey bees will exchange food with entrapped Small Hive Beetles. So anything that is eaten by a beetle could potentially be passed on to our bees and their brood, and perhaps could end up in our honey. Maybe not a lot, but some. How much is acceptable to your customers, if they only knew? Do you declare that added chemical on your honey label, e.g., "enhanced with trace amounts of coumophos!"?

Even seemingly benign treatments can create problems. Traps such as Beetle Blasters are designed to be partly filled with a foodgrade oil and fit between the top bars of frames. But clumsy beekeepers such as me slosh and spill the oil either when putting the trap in place or removing it once it is propolized to the top bars. Oil-covered bees are a sad sight to see and likely suffocate rather quickly.

One of the original beetle traps was designed to fit underneath a screened bottom board. Filled with oil, it killed beetles or beetle larvae that had the misfortune of falling into it. But a big pan of oil is very cumbersome to clean and refill, as well as requiring a level hive and special hive configuration. And the beetles tend to aggregate at the top of hives rather than near the bottom. That design wasn't popular for very long.



Swiffer sheets can trap lots of beetles, if you've got 'em. Photo: John Rintoul

Swiffer-type cleaning sheets offered a tidy solution. Half of a sheet on the inner cover gives the beetles a place to seek refuge from patrolling bees. The fuzzy microfibers trap the unsuspecting beetles' legs. All the beekeeper has to do is replace the beetle-laden sheets periodically. A perfect solution? Well, given an opportunity, fastidious honey bees will chew up and remove the material from the hive. Also, the microfibers that trap beetle legs don't discriminate --- they will trap bee legs too.

All of the popular control methods have drawbacks. The first line of defense against Small Hive Beetles is the bees themselves, but when that isn't good enough, we clearly could use some sort of intervention that:

- 1. Is non-toxic to bees and humans
- 2. Wouldn't be an embarrassment or get us in

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legal trouble if customers, the public or regulators found out about it

- 3. Doesn't cause harm to our bees or interfere with their daily functions
- 4. Uses easily-obtainable materials, ideally free or at least cheap
- 5. Is easy to use
- 6. Is clever but not Rube Goldberg clever, such that it is annoyingly complicated.

I recently heard about a SHB trap design that may satisfy these criteria. This tip comes from James Fischer, a frequent contributor to the BEE-L online discussion group and the inventor of Bee Quick. Full disclosure: I have not tried it yet myself. I don't generally have an out-of-control problem with SHB so a test at my place wouldn't prove much, one way or the other. But it sounds like this gizmo takes the best aspects of a couple of different approaches while reducing or eliminating the downsides. It combines the ease-of-use of traps that are often baited with chemicals with the safety of a mechanical rather than chemical methodology.

All that is needed is a CD or DVD case (as often used for the nasty/dangerous/illegal bait method) and a Swiffer sheet from the accidentally-catch-bees-legs method. Cut the flap end off of a CD/DVD case, creating a long entranceway. Trim a Swiffer sheet down to fit inside the case. Place the sheet in the case and close it. Place the trap flat on top of the top bars of the uppermost hive box. Periodically replace the beetle-filled sheet and remove propolis from the trap entrance as needed.



That's all there is to it. No spills, no illegal or questionable chemicals, no bees caught by the trap. If you are plagued with SHB, give this method a try and let me know how it works for you!

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