

## Bee-Proofing for Florida Citizens<sup>1</sup>

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M. K. O'Malley, J. D. Ellis and A. S. Neal<sup>2</sup>

### Introduction

As Africanized honey bees (AHBs) continue to spread throughout Florida, the need for awareness and precaution will continue to grow. One AHB characteristic that concerns the public is the bee's ability to nest almost anywhere. While European honey bees—the docile races of honey bees that beekeepers manage—generally only nest in enclosed areas, AHBs are more likely to construct exposed nests in proximity to humans. Naturally, this generates an area of concern for Florida's citizens although with proper training and education, they can work to alleviate such concern.

Residents often deal with many sorts of insect issues—ants invading the kitchen, mosquitoes hovering around a backyard gathering, wasps constructing a nest in the doorway, etc. However, there is a difference between these somewhat routine occurrences and an interaction with AHBs. Generally, any problems insects cause to people can be fixed with a little common sense and some bug spray. But, when an AHB nest is disturbed, several hundred bees can come out to defend the nest; therefore, the resulting amount of stings is greatly increased from that of European bees, and children, the elderly, and

pets especially are not able to sustain many stings. Therefore, it is important that any AHB nesting sites be eliminated by bee-proofing the property.

Bee-proofing is the practice of methodically removing or restricting access to potential AHB nesting sites. This practice is beneficial for many reasons. Naturally, if an area is bee-proof, the potential for feral (or wild) colonies to move into that area is greatly lowered; therefore, the risk of stinging incidents is also lowered. In addition, colonies that establish themselves inside a wall or around a structure must be eradicated immediately by a PCO. This process can be expensive and often requires structural repair (which also costs time and money). Bee-proofing a property not only makes the area safer, but it also saves time and money. It is an ongoing process that requires an initial set-up procedure to address a majority of the sites on a property; also, it requires follow-up inspections to maintain the bee-proofed area.

### Locating Potential Nesting Sites

The first step in eliminating areas that may be attractive to honey bee nests is actually *locating* these areas—think like a swarm. What areas might bees

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  2. M. K. O'Malley, extension assistant, J. D. Ellis, assistant professor, Entomology & Nematology Department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611 and A. S. Neal, extension agent, St. Lucie County, Ft. Pierce, FL.

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favor as a nesting site? AHBs, especially, have been known to nest almost anywhere, yet all honey bees favor certain sites over others. Sites that are potentially attractive to honey bee colonies consist of a small opening that accesses an open, shaded area. Examples are water meters, manholes, holes in a structure that lead to open space inside a wall, gutter down-spouts, pipes, etc. Examine these photos as a reference.



**Figure 1.** Closed water meter.



**Figure 2.** Open water meter.



**Figure 3.** Small hole in siding.



**Figure 4.** Void in tree branch.



**Figure 5.** Open space in metal drain cover.



**Figure 6.** Crack in cement that creates opening.

Although this type of nesting site may be the first choice for the bees, they certainly will nest at many other locations. Some of these locations are difficult to bee-proof; therefore, it is important that regular inspections are done to monitor for any bee activity. Examine the following pictures as a reference point for your inspections. They include examples of places that are difficult to bee-proof.

Other sites where colonies have been found include signs, eaves, hollow trees, abandoned

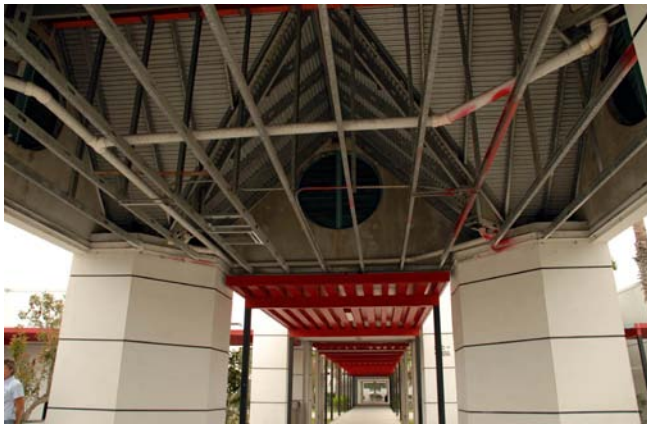


Figure 7. Large recess under roof.



Figure 10. Cinderblocks.



Figure 8. Inspecting under house.



Figure 11. Under eave of house.



Figure 9. Dense shrubs and bushes.



Figure 12. Opening under shed.

vehicles, empty containers, fence posts, lumber piles, utility infrastructures, old tires, tree branches, garages, outbuildings, sheds, walls, chimneys, playground equipment, etc.

### Preventing Nests from Forming

Once an initial inspection reveals what the potential nesting sites might be, the next step is to



Figure 13. Opening around pipe.



Figure 14. Opening around pipe.



Figure 15. Under playground equipment.



Figure 16. Small hole in light pole.

block-off or remove those sites. This can be done using several methods.

**Screening:** Close off areas by stapling or attaching 1/8<sup>th</sup> inch hardware cloth or standard insect screen over the hole. This method is preferred for restricting access to voids in trees; also, it is best for closing off vents, drains, downspouts, or other plumbing as the screen allows air/water to pass through while stopping bees from entering.

**Caulking:** Use 100% silicone caulking to seal cracks, crevices, or other voids 1/8<sup>th</sup> of an inch or



Figure 17. Small hole in light pole.

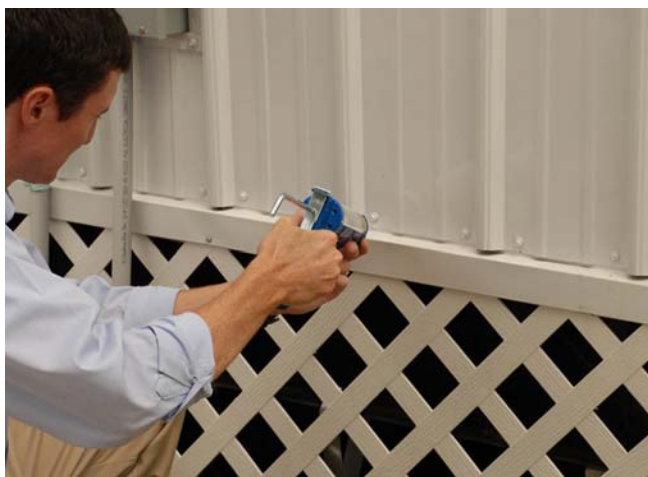


Figure 18. Gutter downspout.



Figure 19. Placing screening over pipe.

greater. Also, latex concrete-crack filler can be used to seal cracks and crevices in cinderblock or concrete surfaces.



**Figure 20.** Caulking opening in siding.

**Foam:** Expanding/insulating foam sealant is best for sealing off holes/cracks in walls. If foam is exposed to weather, be sure to paint the exposed surface to prevent cracking or eroding of foam.



**Figure 21.** Foaming holes in side of building.

**Filler:** Wood filler or concrete patching can also be used to seal crevices or voids in walls where foam or caulking is not appropriate.

**Tape:** Duct tape can be used to close off holes in water meter covers or other small holes.

**A note on closing off holes in walls:** If bee activity is detected within or around a hole (bees are seen entering/exiting the hole, bees can be heard within the wall near the hole), do not seal off the opening, for this would force the bees further into the wall and possibly into the structure. The colony must be removed first, and then the opening can be sealed.

**Equipment list:** silicone and latex caulking, caulking gun, roll of screen mesh, clippers to cut screen, staple gun, staples, wood filler, concrete filler, putty knife, duct tape, expanding foam, and carrying container.



**Figure 22.** Bee-proofing tools.

## Inspecting Property

It will be impossible to eliminate *every* potential nesting site as AHBs can nest virtually *anywhere*. However, it is still important to take steps to bee-proof areas that would be of considerable interest to the bees and areas exposed to frequent human traffic. Because some potential sites will be left open, it is essential to conduct regular inspections of the property to check for bee activity and to maintain previously bee-proofed sites. Look for bees entering and/or exiting an area or hole; this signifies that a colony is nearby. Bees visiting flowers are not a threat. Swarming season for the bees occurs between the months of March and July (although bees can swarm much later, particularly in southern Florida), so it is vital to inspect weekly during these times as bees are looking for a fitting nesting site and are most likely to move into an area. If a colony or swarm of bees is found, it is imperative that a pest control operator (PCO) who offers bee removal services is notified. PCOs have been trained to use the right equipment and protection for the removal of the bees. For a list PCOs trained to deal with bees in your area please contact your local county extension office or the Florida Department of Agriculture, DPI.

For additional information, visit the AFBEE Program's website at <http://afbee.ifas.ufl.edu>, the Solutions For Your Life website at <http://solutionsforyourlife.ufl.edu>, or visit your county extension agent.