

Choosing the Right Pest Control Operator for Honey Bee Removal: A Consumer Guide¹

M. K. O'Malley and J. D. Ellis²

As African honey bees continue to spread throughout the state of Florida, there is an increasing need for homeowners and property owners to locate and contract reliable, knowledgeable, and properly trained pest control operators (PCOs). African bees differ significantly in behavior from their cousins, the European honey bees (the gentle bees managed by beekeepers), and African bees can exhibit defensive behavior that can potentially compromise public safety. Trained professionals who remove honey bee colonies with proper equipment and appropriate procedures are essential to providing safe areas for work and play and eliminating bees without the hazard of neighbors, bystanders, or animals getting stung. This document will serve as a guide to the Florida resident who wishes to ensure that the honey bees on his or her property are safely and professionally removed.

When to Contact a PCO

Currently, the state of Florida recommends that all wild (or feral) honey bee colonies found in proximity to people (in walls, birdhouses, trees, etc.) be eradicated by a certified PCO. Statistics out of the Southwest show that 50% of Africanized honey bee stinging attacks occur in instances where the victim was aware of the colony's existence but did nothing about it. Therefore, if the nest had been initially removed, the stinging attack would not have occurred.

Many residents do not wish to eradicate honey bee colonies on their properties because the bees may not have been disturbed or caused any harm in the past; however, just because a colony is calm now does not mean that it will always be harmless. Honey bee colonies become more defensive once their nest is established as they have something to protect (honey, brood, pollen, etc.). Nest establishment can take a few months. Also, there is evidence that the average queen lives about 6 months to one year. When a new queen emerges to replace the old queen, she leaves the colony to mate in the air with 15-20 different male bees (drones). Therefore, she is mating with any drones from nearby colonies (not with bees from her hive). If African bees are in the area, there is a possibility that the new queen will mate with African drones. The resulting offspring may display African characteristics. Therefore, a feral colony that was calm (or even European) 6 months ago may be defensive (or even African) today, and should be eradicated.

Florida residents aware of recent news reports about honey bees will recognize the threat that Colony Collapse Disorder or CCD is causing to the beekeeping and pollination industry (See *Resources* section at the bottom of this document for *Colony Collapse Disorder (CCD) in Honey Bees* Edis document.). The concern over the disappearance of honey bees caused by CCD is both warranted and important to the industry, and many residents are reluctant to have colonies eradicated as a result of this concern. However, as far as most experts are concerned the African

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2. M. K. O'Malley, Extension assistant, and J. D. Ellis, assistant professor, Entomology and Nematology Department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

bee issue and the disappearance of managed honey bees are unrelated. This means that eradicating one wild honey bee nest in Florida does nothing to hurt honey bee populations overall. In fact, there can be as many as 100-200 bee colonies per square mile in areas where African bees occur. So, even removing 1 colony does very little to the overall population of wild bees. It's simply a public safety issue. State officials are NOT searching for wild colonies in an effort to destroy them all. But, they do recommend that honey bees found nesting in proximity to people be eradicated by trained Pest Control Operators.

If a Florida resident has a colony or swarm of honey bees on his or her property, it is imperative that he or she contact a trained PCO as soon as possible.

How to Find a Trained PCO

The Florida Department of Agriculture and Consumer Services (FDACS) maintains a list of pest control operators who have been properly trained by either FDACS or University of Florida staff to safely remove honey bees. This list is available from the AFBEE Program website under the *Bee Removal* tab and from the FDACS website (links follow in *Resources* section of this document). PCOs that have undergone this training possess the necessary skills to remove and eradicate honey bee swarms and established colonies.

If a homeowner or property owner wishes to contract a PCO and is unsure if the pest control operator is trained in honey bees, the homeowner should inquire to ensure that the PCO has been trained for honey bee removal by FDACS or University of Florida staff, and that the PCO has experience removing stinging insects. If a PCO lacks either of these assets, the homeowner or property owner should not contract him or her for honey bee removal.

Customers in need of a PCO should consider entering into an official contract that states the specific terms of the removal. A contract should detail the colony removal procedure—method of applying pesticides, disposal of dead bees, and complete removal of comb. Often, a customer will hire a PCO to remove a honey bee colony from the walls of a house, but the PCO will not remove the comb or inform the customer of the importance of comb-removal. Several days after the bee removal, insect larvae (including wax moth larvae and small hive beetle larvae) feeding on the remaining comb can enter the home, or stored honey drips out through the ceiling or seeps into the drywall and causes a stain. Without a contract that states specific

removal terms, the customer has no recourse if these events occur.

What to Expect from a PCO

When PCOs are trained to deal with stinging insects and removal of honey bees, they are provided with removal procedures that include details such as what types of pesticides to use and when, the best times to remove a colony, what personal protective equipment to wear, etc. The following list gives some examples of things you *should* expect a trained PCO to do.

A PCO should:

- Wear personal protective equipment which includes a veil, stinging suit and gloves
- Be able to recognize if the bees on your property are actually honey bees, and if the bees are in a *swarm* or a *colony* and be able to explain the difference to you (see document in *Resources* section: *Frequently Asked Questions about the African Bee in Florida* for more information about the difference between swarms and colonies)
- Explain that if the bees are honey bees they could be either African *or* European because it is impossible to differentiate the two without laboratory analyses
- Ensure that the area around the bees is secured from onlookers, pedestrians, anyone else who may be in proximity to the bee removal
- Ensure that no penned or tied animals are in or near the bee removal area
- Possess either a General Household Pest (GHP) license which covers indoor and outdoor removal—or a Lawn & Ornamental license (L&O) which covers removal of colonies and swarms *only if they are located outside*
- Apply only pesticides that are labeled for use on honey bees or labeled for use on the application area (e.g. some pesticides may not specifically mention honey bees on the label, but they may specify use in a wall void or ground cavity)
- Remove from the customer's property all dead bees and all combs associated with the colony. This is an essential aspect of the removal. If comb is not completely removed, cockroaches and other insects will be attracted

to the rotting brood, fermenting honey may produce an unpleasant odor, and melting wax may soak into the wall causing a stain and rendering that wall impossible to paint or wallpaper.

- Apply a residual pesticide to help protect against bees returning to the location; also, a swarm trap or sticky trap may be left in the area for up to one month to intercept any other swarms attracted to that location.
- Be responsible for checking, maintaining, and removing bees from any swarm trap or sticky trap left at the removed-colony location
- Discuss the removal procedure with the customer before beginning the removal. This is essential when the colony is located inside a wall or structure. Honey bee colonies established inside a structure and all comb associated with that colony should be removed as soon as possible, and the customer should be aware that a PCO may need to cut into a wall, subfloor, or other area of a structure to effectively perform the removal.
- Discuss bee-proofing with customer after completion of colony and comb removal (see *Resources* section for *Bee-Proofing EDIS document*)



Figure 1. A sticky trap is a triangle shaped piece of cardboard material coated with a sticky substance and baited with a pheromone that attracts bees. Sticky traps can be left in the area of a removed colony to intercept any bee stragglers.

Credits: AllFloridabeeRemoval.com



Figure 2. A swarm trap is a cylindrical trap made from recycled wood pulp and baited with a pheromone lure that can be left along with, or instead of, a sticky trap to intercept bees returning to the area of a removed colony.

Credits: M. K. O'Malley, University of Florida



Figure 3. Appropriate personal protective equipment should be worn by a PCO whenever dealing with stinging insects. Protective equipment should include a veil, full suit, gloves and boots or foot/ankle protection.

Credits: M. K. O'Malley, University of Florida

A PCO should *not*:

- Attempt to remove bees without wearing appropriate protective equipment
- Apply wasp spray or any other substance not labeled for honey bees or the specific application area
- Remove established colonies during the day (unless discussed and agreed upon with you, the customer).

The following list gives some examples of things you **should not** expect a trained PCO to do.

When colonies are removed during the day, the bees that are out foraging for nectar and pollen on flowers will return to the colony location in the evening. This will result in numerous bees flying around the colony location. If daytime removal is conducted, it is recommended that the PCO leave a swarm trap or sticky trap to intercept returning bees.

- Indicate that the bees are African bees (or European bees) because it is impossible to differentiate the two without laboratory analysis
- Charge more for African or Africanized honey bee colonies; it is impossible to differentiate between African and European bees without a series of laboratory tests. Additionally, the procedure should be the same for removing both races of honey bees—they are, after all, the same species.

Identifying the Bees

Many homeowners are curious to find out if the honey bees that were eradicated from their property were African or European bees. The FDACS lab in Gainesville currently conducts the testing for African honey bees. The testing involves the measurement of morphometric relationships between specific wing venations and other body parts. If after the bees are eradicated, a homeowner is still interested in finding out if these bees were African, he or she can submit a sample of bees to FDACS, Division of Plant Industry-APIary Inspection Bureau. This identification process is not required (nor even requested) by FDACS personnel.

A sample of about 50 dead bees should be placed in an alcohol-filled jar, and the jar should be labeled with the date, location, and description of the colony. *Please note, a homeowner should never attempt to collect live bees for sampling.* Once the sample is prepared, a homeowner should contact Jerry Hayes from FDACS for information on where to send it:

Jerry Hayes, Assistant Chief
Bureau of Plant and Apiary Inspection
Apiary Inspection Section
Division of Plant Industry
Florida Dept. of Agriculture and Consumer Services
PO Box 147100
hayesg@doacs.state.fl.us
Phone: (352) 372-3505

Fax: (352) 334-0715



Figure 4. A sample of about 50 dead bees in an alcohol-filled jar ready to be sent for testing.

Credits: M. K. O'Malley, University of Florida

What a Customer Should Know

All Florida residents should be aware of the presence of African bees in Florida. This awareness should encourage healthy respect and caution of all stinging insects and a realization of the importance of honey bees nationwide. In addition to being aware of the African bee's presence, it may be helpful for a customer to know some basic biological and behavioral characteristics of this honey bee. Many resources exist to educate Floridians specifically about the presence of African bees. Please see the resources section for more information.

Additional Resources

Bee Proofing for Florida Citizens, EDIS

<http://edis.ifas.ufl.edu/IN741>

University of Florida, IFAS Extension publication that instructs homeowners and property owners in the specifics of bee proofing and its importance

Frequently Asked Questions about the African Honey Bee in Florida, EDIS

<http://edis.ifas.ufl.edu/IN738>

University of Florida/IFAS Extension EDIS document that addresses questions frequently asked about the African bee in Florida

What to do About African Honey Bees: A Consumer Guide

<http://edis.ifas.ufl.edu/IN739>

University of Florida/IFAS Extension EDIS document that offers recommendations and precautions to Florida's general public about the African honey bee

Colony Collapse Disorder (CCD) in Honey Bees

<http://edis.ifas.ufl.edu/IN720>

University of Florida/IFAS Extension EDIS document that discusses the details of the CCD phenomenon that is causing the disappearance of honey bees nation wide

AFBEE Program

or <http://www.AFBEE.com>

The African honey bee Extension and Education Program was established by the Florida Department of Agriculture and Consumer Services and the University of Florida, and it serves to educate all Floridians about the presence of African bees in Florida. The AFBEE Program website is a clearing house of information on African bees. In the resources section, customers can find fact sheets, presentations, videos, and educational documents catered specifically for their needs. The downloadable list of trained PCOs is available under the *Bee Removal* tab.

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<http://www.doacs.state.fl.us/pi/plantinsp/ahb.html>

This website includes links to videos, fact sheets, press releases, and more. It also includes a list of trained PCOs.