ENY-147

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Differences Between European and African Honey Bees[1]

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African honey bees and European honey bees are the same species (*Apis mellifera*), but the two are classified as different races or sub-species. European honey bees were first introduced to the Americas in the 1500s by European explorers. For centuries, European honey bees have been selected by beekeepers for their robust honey production and storage behavior, their reduced regular swarming (colony splitting) tendencies, and their gentleness. The African honey bee (*Apis mellifera scutellata*) was brought to Brazil in the 1950s in an effort to increase honey production. However, 16 queens were accidentally released and thrived in Brazil's native environment. Since then, African bees have spread throughout South America, Central America, and into the United States. The African honey bee is considerably more defensive than its European cousin. Consequently, it is important to understand key differences between the aggressive African bee and the docile European honey bee.

Figure 1. European honey bees only send out 10-20 guard bees when disturbed. Credits: Ian McGuire

European Honey Bee	African Honey Bee
May send out 10-20 guard bees in response to disturbances up to 20 feet away (Figure 1)	May send out several hundred guard bees in response to disturbances up to 120 feet away (Figure 2)
Once agitated, will usually become calm within 1-2 hours	Once agitated, may remain defensive for days
Disturbed colony may result in 10-20 stings	A disturbed colony may result in 100-1000 stings

Hive Defense and Stinging

Unlike wasps and hornets, honey bees can only sting once, and will die shortly afterward. Stinging is often a last resort in hive defense.

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Figure 2. An Africanized bee colony will send out hundreds of guard bees when disturbed. Credits: Ian McGuire

Swarming and Absconding

Swarming is a natural occurence when the colony gets too large. The colony rears a new queen and the hive splits. Absconding occurs when resources are scarce or there is a threat to the hive. The entire colony will abandon the hive for a new location. For more information about swarming, see Resources section for Frequently Asked Questions about the African Bee in Florida.

European Honey	African Honey Bee
Swarm 1 or 2 times per year	Can swarm 10 or more times a year
Swarms are larger and need larger volume to nest	Swarms contain fewer individuals, and therefore a much smaller cavity is needed (Figure 3)
Rarely abscond (or completely abandon nest) from nesting location	Abscond often and relocate to more suitable nesting locations

Selection of Nesting Site

Because Africanized honey bees swarm more often, fewer individuals are involved in each swarm, meaning they do not require a large cavity to build a nest. Africanized bees are often discovered in water meter boxes (Figure 4) and other man-made cavities, whereas European honey bees need a larger volume nesting site, and tend to nest in hollowed tree cavities (Figure 5).

Figure 3. A swarm of African honey bees. Credits: W. H. Kern, Jr. University of Florirda

Figure 4. A water meter box where a previous African honey bee colony had been nesting. Credits: Honey Bee Research and Extension Laboratory, University of Florida

European Honey	African Honey Bee
Nests in large cavities, around 10 gallons in size	Nests in smaller cavities, 1 to 5 gallons in size
Typically nest in dry, above ground cavities	Will nest in underground cavities with a high moisture content
Nests in protected locations, rarely exposing the nest (Figure 5)	Will nest in exposed locations, (e.g. hanging from a tree branch) (Figure 6)
Due to larger colony size, nests are often easier to detect	Due to smaller colony size, nests often go undetected until disturbed

Figure 5. A large hollow tree cavity suitable for a European honey bee nest. Credits: Honey Bee Research and Extension Laboratory, University of Florida

Figure 6. Exposed two month old African honey bee colony on tree branches. Credits: W. H. Kern, Jr., University of Florida

Additional Resources

• *Bee Proofing for Florida Citizens*, EDIS

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

University of Florida, IFAS Extension

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

Addresses questions frequently asked about the African bee in Florida.

• *What to do About African Honey Bees: A Consumer Guide, EDIS*

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

University of Florida/IFAS Extension

Offers recommendations and precautions to Florida's general public about the African honey bee.

• *AFBEE Program*

http://entnemdept.ifas.ufl.edu/afbee/

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 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. Visitors can find fact sheets, presentations, videos, and educational documents catered specifically for their needs. A list of certified pest control operators by county is available for download.

• *Florida Department of Agriculture and Consumer Services', Division of Plant Industry, Bureau of Plant and Apiary Inspection, African Honey Bee Page*
http://www.doacs.state.fl.us/pi/plantinsp/ahb.html

Links to videos, fact sheets, press releases, and more. It also includes a list of trained Pest Control Operators for download.