AFRICAN HONEY BEES

Texas Master Beekeeper Program

Advanced Level Module

European vs. African

- Both types of honey bees belong to the genus *Apis*.
- Recognized honey bee is the western honey bee, *Apis mellifera*.
  - North America has 5 European subspecies
- African honey bee: *Apis mellifera scutellata*

Africanized Honey Bees

- Hybrid between African and European honey bees
- Commonly used acronym: AHB
- African honey bee genetics have been diluted due to:
  - Large population of European honey bees
    - Beekeeping industry and feral colonies
- AHB genetics can result in unpredictable behavioral traits
  - More defensive than European honey bees
  - Be aware and be safe!

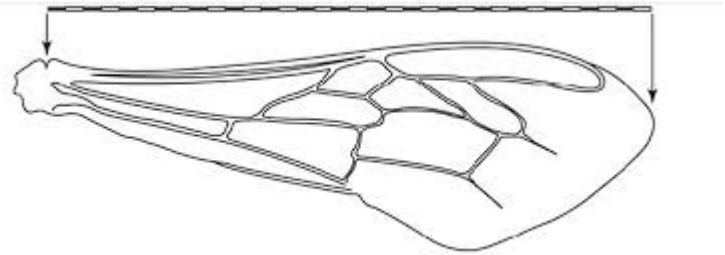
Photograph by W. H. Kern, University of Florida

African vs. Africanized

- African honey bees = pure race of honey bees in Africa
- Africanized honey bees = hybrid between European and African honey bees
- Feral honey bee colonies in Texas have a high possibility of containing African genetics.
  - Can only be confirmed through morphometric or genetic testing

How can you tell the difference?

- Visual inspection cannot confirm whether a honey bee is European or Africanized
  - Laboratory testing is required to differentiate between the two.
- Fast African Bee Identification System (FABIS)
  - Morphometric test
  - Identifies AHB in a lab
  - Florida is the only state that accepts samples from the public.



- If FABIS cannot give a clear identification, then USDA-ID (Universal System for the Detection of African honey bees) is used.
  - More comprehensive morphometric test.

AHB – General Precautions

- Be aware of any bee activity in the area.
- Examine your surroundings before using loud machinery.
- Do not disturb a swarm/colony if one is discovered
- Make sure to have an EpiPen on hand if you or a family member are allergic to honey bee stings.

AHB – What do you do if…

1) You find a swarm/colony
   - Do not disturb the bees or attempt to remove them.
   - Do not spray the bees
   - Contact a beekeeper or pest control operator to remove or eradicate the swarm/colony

2) If the bees become defensive
   - Run away! And in a straight line.
   - Protect your face as you run.
   - Get into an enclosed area and stay there!
   - Do not jump into water or hide in bushes.
   - Do not swat at the bees.
   - Call 911

AHB – What do you do if…

3) If someone gets stung
- Remove the stinger as soon as possible!
- Wash the affected area with soap and water
- apply ice to minimize swelling
- Seek medical attention if:
  - A severe allergic reaction occurs (trouble breathing, hives covering large portions of body)
  - Stung many times (5-10 stings/pound of body weight→ venom overdose)

Bee-Proofing for Texas Citizens

- AHB can nest almost anywhere
  - EHB need an enclosed space
  - AHB can build nests in exposed areas
- Most insect problems have an easy fix, not the case with AHBs
- They can create dangerous situations for children, the elderly, and pets in the surrounding area.
- Bee-proof your property!
  - Prevent/remove AHB nesting sites
  - Possibility of stinging incidents decrease
  - Saves money- bee removals can be expensive
  - Constantly inspect area to make sure it stays proofed

Credit: Bob Cymbolin

Locating Potential Nesting Sites

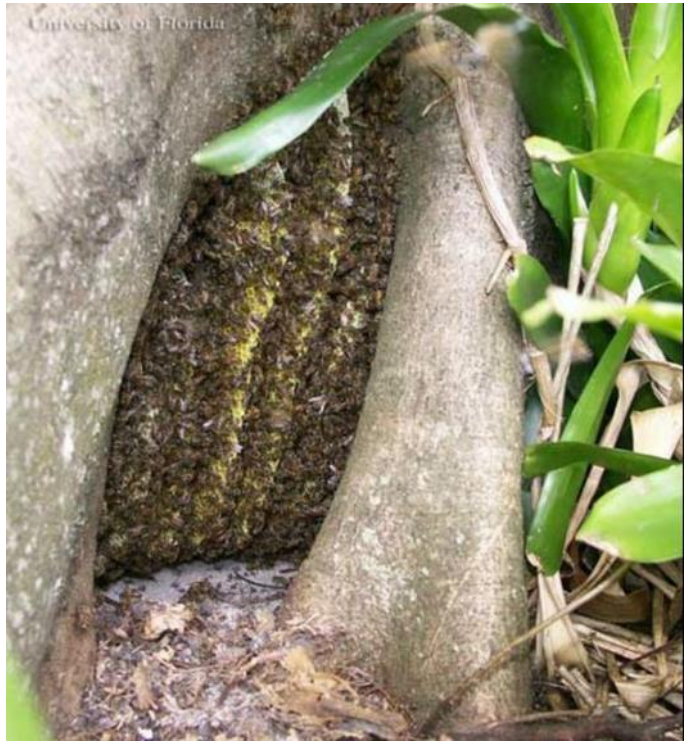
- Identify areas that are choice sites for swarms to inhabit
- Attractive sites:
  - Small opening to an open, shaded area
    - Ex: water meters, holes in exterior wall, pipes, etc.

Potential Nesting Sites

- Some areas may be difficult to bee-proof
  - Ex: under eaves, under a house/shed, cement blocks, recesses in a roof
  - Regularly inspect these areas

Other Potential Nesting Sites

- Signs, tree hollows, playground equipment, empty containers, old tires, chimneys



How to Prevent Nests from Forming

- Screening
  - Use 1/8” hardware cloth or standard insect screen
  - Staple or attach over access hole
  - Method best used to close off vents, drains, etc.
  - Screen allows air/water to pass through while preventing bees from entering
- Caulking
  - Use 100% silicone caulking
  - Seal cracks, crevices, or other voids that are 1/8” or greater in width
  - To seal cracks/crevices in concrete surfaces, use latex concrete-crack filler

How to Prevent Nests from Forming

- Foam
  - Use expanding/insulating foam sealant for holes or cracks in a wall.
  - Paint over the surface to prevent foam from eroding due to weathering.
- Filler
  - Wood filler/concrete patching can also seal up walls if caulk or foam cannot be used.
- Tape
  - Duct tape can seal holes in water meter covers or other small holes

Inspecting Your Property

- It's difficult to bee-proof every possible nesting site, but it is important to regularly check the property for bee activity.
- Swarm season is between March and July (although it could be longer in certain parts of Texas)
  - It is important to be extra vigilant during this time of year.
- Do not seal a hole in a wall if bees are seen coming and going
  - Sealing the hole will cause the bees to go further into the wall/structure
  - Remove the colony first before sealing the opening
- If you do discover a colony or swarm, contact a beekeeper or a pest control operator.
  - For a list of beekeepers, please visit the Texas Apiary Inspection Service website (txbeeinspection.tamu.edu)