

# Africanized Honey Bees

California State Polytechnic University, Pomona

Environmental Health & Safety

## Identification

### A New Public Nuisance

Because the Africanized honey bee, or so-called “killer” bee, now lives in parts of Southern California, it is important to be able to distinguish among various similar insects. Bees are robust bodied, hairy insects with four wings. They usually are dark with some coloring such as yellow. Their hind legs are used to carry pollen. Bees feed on nectar and pollen from flowers.

Worker honeybees are about five-eighths of an inch long and are brown or black with yellow striped abdomens. Africanized honeybees are slightly smaller than the regular honeybee, but the bees look so much alike that only lab analysis can tell them apart.

Wasps are slender with a thick waist. Their “skin” is generally smooth and somewhat shiny, often with sharply contrasting black and yellow patterns. Their hind legs are narrow.

Yellow jackets are marked with black and yellow. They prefer to nest in the ground but can be found in wall voids and similar places. Their bodies are wider than those of wasps.

## Bee and Wasp Identity Chart



5/8 inch

11/16 inch

European

Africanized

Bumble Bee



3/16 inch

7/8 inch

Carpenter Bee

Mud Dauber



13/16 inch



5/8 inch

Paper Wasp

Yellow Jacket

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## Africanized and Domestic Honey Bee Quiz

1. Africanized honeybees are larger than domestic bees and therefore easier to identify.

True

False

2. Africanized honeybees are a purebred race of bees from Africa.

True

False

3. Africanized bees are more dangerous when they are swarming, that is, when they appear as a large cluster of insects searching for a new home.

True  False

4. Africanized bees will live any place a domestic bee will live, including a manmade hive.

True  False

5. Africanized bees do not produce honey.

True  False

6. Honey is the only valuable product beekeepers contribute to the economy.

True  False

7. A person who does not eat honey has no use for honeybees.

True  False

8. Africanized bees are called “killer bees” because a single sting can kill you.

True  False

9. Africanized bees hunt people down and kill them.

True  False

10. Africanized bees fly faster than domestic bees, making it more difficult to escape by running.

True  False

11. Swatting bees is the worst thing you can do if bees are attacking you.

True  False

12. All honeybees can sting only once.

True  False

Answers on page 6.

## Habitat

### At Home

Africanized bees will nest almost anywhere around your home, even inside a meter box or in a rainspout. It's important to be on the lookout for bees around your home and yard, as well as in barns and pens where animals are confined.

#### Potential Bee Nesting Sites Near Your Home

- Holes or cracks in building walls
- Holes in trees
- Underneath mobile homes
- Culverts or drainage pipes
- Flower pots
- Old tires
- Bird houses
- Barns or sheds
- Wood piles
- Wooden spools often used as playground equipment

### Outdoor Recreation and Bees

Outdoor activities such as hunting, camping, hiking and even picnicking can put you at greater risk of unknowingly disturbing a hive of Africanized honey bees.

- When participating in outdoor recreation activities, watch for numbers of bees flying around the vicinity and listen for buzzing sounds. If you encounter either, leave the area immediately.
- When picking out a picnic site or setting up camp, first scout the area for bees. Never let young children play in an area you have not checked for bees.
- When hiking, listen and watch for bees. Never step on or turn over logs or rocks where bees may be nesting.
- When activities take you into outdoor areas where bees may be nesting, have an escape plan.

### **Potential Bee Nesting Sites in Recreational Areas**

- Tree hollows
- Piles of rocks
- Rotted or hollow logs
- Underneath picnic tables
- Park shelters
- Park trash cans
- Stacks of firewood
- Bird houses

## **Economics**

### **Economic Effect of Africanized Bees**

- The introduction of the Africanized bee could cause economic losses to the U.S. bee keeping industry ranging from \$29 million to \$58 million annually, according to the Economic Research Service, USDA.
- In some parts of Central and South America, unmanaged Africanized bees reduced honey production of domestic bees by 60 to 70 percent or more, largely due to competition for available nectar.
- Domestic honeybees that interbreed with Africanized ones may become harder to manage for use as pollinators and less efficient at producing honey.

### **Honey and Other Hive Products**

- Honey bees in the United States produce about \$150 million worth of honey annually.
- California ranks number 1 in the country for honey production with 13.8% of all honey produced in the United States. California produces about 27,300,000 pounds per year totaling \$22,932,000 in revenue.

### **Pollination**

- Cultivated crops known to benefit from honeybee pollination are estimated at about \$9 billion annually in the United States.

## **Stings**

### **Bee Sting Facts**

- Everybody reacts in some way to stings. Most swell around the stung area. That's **NOT** the same as a systemic allergy.
- Less than 1 percent of the population has a systemic allergy to bee stings.
- Symptoms of a systemic allergy, obvious within 20 minutes of the sting, may include swelling of tongue or throat, hives, dizziness or difficulty with breathing, loss of consciousness.
- For a normal, healthy person to receive a deadly dose of bee venom, it would take about 10 stings for each pound of body weight, or 1,500 stings for a 150-pound person.
- Because such a small portion of the population is allergic, doctors don't recommend that everyone have an allergy test, but you can if you want to make sure.
- A honey bee only stings once, then it dies.
- Honey bees are attracted to hair and dark colors.
- Regular honey bees will chase you about half the length of a football field. Africanized honey bees may pursue you three times that far.
- Venom content is the same in all honey bees, but the Africanized honey bees have about 27 percent less than European honey bees.

### **Do**

- Remove stinger quickly.
- Remove stingers in a sideways motion with a fingernail, knife blade, credit card or similar material.
- Seek medical attention if the person shows signs of a systemic allergy or if swelling extends beyond two joints (if you are stung on the finger and the swelling extends past the wrist and elbow).
- If you are allergic, always carry an adrenaline kit.
- A sting-kill ointment may reduce pain.

## Do Not

- Don't let stingers remain in the skin, because venom can continue to pump into the body for up to 10 minutes.
- Don't tweeze or pinch stingers when removing. That will squirt more venom into the body.
- Don't cut the skin, try to suck venom out or use a meat tenderizer on the wound. That could lead to infection.

## What to Do

### Take Some Common Sense Precautions at Home

- Make a "bee patrol" around your home once or twice a week during swarming season usually in the spring and fall. Listen for the sound of bees in the air. Persistent buzzing may mean a hive or swarm is nearby.
- "Bee proof" your home by filling in potential nesting sites such as tree cavities and holes in outside walls. Put screens on tops of rainspouts and over water meter boxes in the ground. Remove piles of trash and junk.
- If you discover a bee colony, don't disturb it. Find out who removes or destroys wild colonies in your area and report it to them. Try calling a pest control operator to see who removes bees.
- If attacked by Africanized honey bees, your best defense is to run away as fast as you can. Seek shelter immediately in a building, a car or heavy brush.
- If you are stung many times, seek medical attention immediately.
- If you are allergic to bee stings, or think you might be, consult your physician immediately for the best precautions to take.

### Mowing or Operating Other Machinery

- Vibration and exhaust from mowers and other equipment can disturb the beehive, and bees will respond by attacking.



- Check the area carefully for bees and hives before starting motorized mowers, weed choppers or chainsaws.
- Be aware of culverts or drainage pipes that may be harboring a colony and junk piles or dense shrubbery that may be shielding a hive from sight.
- Don't allow grass clippings to be propelled into suspect areas.
- Have an emergency plan. Know where you will run for cover if attacked.

### While at Play

- Watch and listen for bees.
- Avoid beehives and bee traps hanging in trees.
- Bees nest in hidden places. Don't play near old buildings or junk piles.
- If you notice numbers of bees flying around your home, contact authorities.
- If bees start flying around you, run away. Don't swat them—it will only make more bees want to sting you. And don't "freeze" in place—you will still get stung if you do.
- If bees attack, don't try to escape by jumping into a swimming pool or pond. The bees will likely be waiting for you when you come up for air.

### Protect Confined Animals

- Check carefully for bees in pens or barns where animals are confined. Regularly check areas where pets are kept on leashes or in small fenced yards or pens.
- Call authorities to remove nests or swarms.

- If bees are disturbed and begin stinging, open gates and cover animals, if possible. Move animals to a safe distance.
- Animals stung repeatedly should be seen by a veterinarian. First aid is the same as for humans
- Watch for allergic reaction, such as pinpoint pupils, shaking and vomiting.

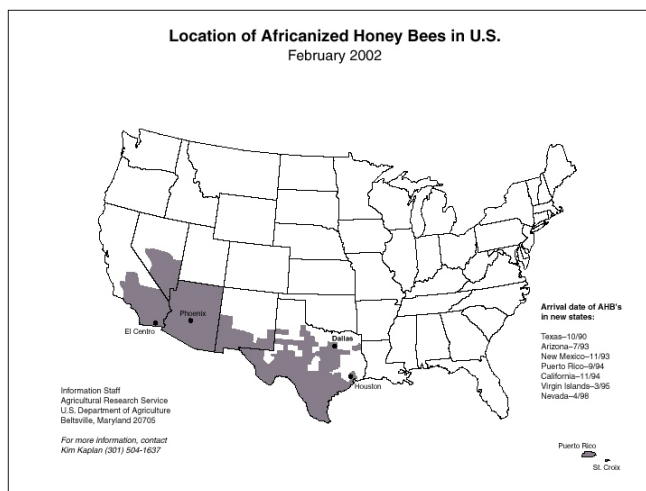
## Know the Facts

- Africanized and domestic honeybees look the same, so stay away from all bees.
- Africanized bees will build a nest almost anywhere.
- If you know of any wild bee nests, have the nest removed.
- Africanized bees defend a wide area around their home, so you may not even see the hive before bees start buzzing around you.
- Large numbers of Africanized bees are likely to sting when they sense someone is too near their nest.
- If you get stung or hear bees buzzing run away fast and get inside a house or car. If there is no shelter, run through bushes or high weeds.
- A honeybee will leave its stinger in your skin if it stings you. Get the stinger out by raking your fingernail across it. Don't pinch or pull the stinger out. Put ice on a sting to reduce the swelling.

## Location of Africanized Honey Bees in the U.S.

Arrival date of Africanized honey bees:

- Texas – 10/90
- Arizona – 7/93
- New Mexico – 11/93
- Puerto Rico – 9/94
- California – 11/94
- Virgin Islands – 3/95
- Nevada – 4/98



## Answers to Bee Quiz

**1.FALSE**, Africanized bees look like any other honeybee to the naked eye. Though they are slightly smaller than domestic bees, only scientists in specially equipped labs can identify the bees.

**2.FALSE**, Africanized bees are actually crosses between African bees and European (domestic) bees. Unfortunately, the aggressiveness of the African ancestors is a dominant trait in the offspring.

**3.FALSE**, Africanized bees do swarm more often than domestic bees, but they are actually less dangerous at that time because they do not have a nest to protect. However if you encounter a swarm, move away slowly and don't bother the bees. If the swarm is near people or confined animals, contact authorities for removal.

**4.TRUE**, It is a myth that Africanized honeybees are 'wild' bees and will not live in a manmade hive. Africanized bees are less selective about nesting sites and will live in places domestic bees usually would not live, including holes in the ground, water meter boxes, and drainage pipes, for example.

**5.FALSE**, Africanized bees are honeybees and do produce honey. However, they are less easily managed by beekeepers for honey production because of their defensiveness.

**6.FALSE**, Honey production is just one of the economic benefits of U.S. honey bees. Of greater economic importance is the increased production and quality of vegetables, fruits, nuts, seeds and fiber through honeybee pollination.

**7.FALSE**, One third of the American diet is directly or indirectly dependent on pollination by honeybees.

**8.FALSE**, Killer bee is a misnomer popularized by Hollywood and the media. A single sting from an Africanized bee actually has slightly less venom than that of a domestic (European) honeybee. For most people, a single bee sting is painful, but not life threatening. However, if you are allergic to honey bee stings (less than one person in 100 is), a single sting from either bee --Africanized or domestic-- could cause a severe allergic reaction. If you are allergic, you should carry a bee sting kit.

**9.FALSE**, Africanized bees do not seek out victims. If you go near their hive however, the bees will defend it vigorously.

**10.FALSE**, All bees fly about 12 to 15 miles per hour. However, Africanized bees may chase a person farther than will a domestic bee. A domestic bee may chase you for 50 yards, but an Africanized bee may chase you for 100 to 150 yards.

**11.TRUE**, It is a myth that by swatting them away from your face, you can prevent most bees from stinging you. When a bee's body is crushed by swatting, it produces an odor that incites other bees to attack in greater numbers. The best thing to do is to run away fast and seek cover in a house, car, tall brush, or trees.

**12.TRUE**, It is a myth that Africanized bees are more dangerous because, unlike domestic bees, they can sting you repeatedly. A portion of the bee's abdomen remains with the stinger when she flies away, and she dies soon afterward.



## For More Information....

[www.roadsideamerica.com/attract/TXHIDbee.html](http://www.roadsideamerica.com/attract/TXHIDbee.html)

[http://news.bbc.co.uk/1/hi/english/sci/tech/newsid\\_72000/72744.stm](http://news.bbc.co.uk/1/hi/english/sci/tech/newsid_72000/72744.stm)

[www.pa.msu.edu/~sciencet/ask\\_st/072397.html](http://www.pa.msu.edu/~sciencet/ask_st/072397.html)

[www.cmp.ucr.edu/Students/Bees\\_are/Mendoza/2.html](http://www.cmp.ucr.edu/Students/Bees_are/Mendoza/2.html)

<http://texnews.com/1998/texas/bee0714.html>

<http://news.uns.purdue.edu/html4ever/9804.Hunt.gene.html>

[www.acesag.auburn.edu/department/ipm/afrbee.htm](http://www.acesag.auburn.edu/department/ipm/afrbee.htm)

[www.desertusa.com/mag98/sep/stories/kbees.html](http://www.desertusa.com/mag98/sep/stories/kbees.html)

[www.sciencedaily.com/releases/1997/11/971119072003.htm](http://www.sciencedaily.com/releases/1997/11/971119072003.htm)