

## Are African (killer) honey bees in Corkscrew? Are they cause for alarm?

According to Dr. Jamie Ellis, entomologist at the University of Florida, eight out of ten wild honey bee colonies in Florida south of a line from Tampa to Daytona are the African Honey Bees, often referred to as the killer bees. So the answer to the first question is, "Almost certainly they are in Corkscrew."

The only honey bee species occurring outside of Asia is *Apis mellifera* spp. No honey bees are native to North or South America.

European settlers brought a temperate European subspecies of *A. mellifera* with them when they colonized the Western hemisphere, and that subspecies has been the common honey bee in North America.

The African honey bee, *A. mellifera scutellata*, was first imported to Brazil in the 1970's by a beekeeper hoping that using a tropical subspecies from Africa would provide more productive honey producers in tropical Brazil. Escaped queens enabled the subspecies to spread north across South America, Central America, and the southern and southwestern United States in just 30 years. It is the most biologically successful invasive species.

There are no visual differences between the European and African honey bees. The African honey bee is slightly smaller and has slightly less venom, but the two are so close in size and appearance that the only way to distinguish is to send a sample to the University of Florida's lab for dissection. For that reason, when a bee colony is close to human activity, the state recommends that all bees be eradicated by a trained pest control operator.

What makes the African bee's spread so successful is its reproductive superiority over its European kin. The



Tell the difference? No one can by looking. The African subspecies is at the top, the European at the bottom.

goal of colonies is not to have lots of bees but to create more colonies. European bees have three to four swarms per year. The African bees swarm 15-20 times per year.

Swarming is a colony splitting in two. The new swarm is comprised of the old queen and about half of the existing colony.

The African bees have another advantage in that their swarms are much less selective about where a new colony is established.

European bees prefer to nest in large cavities (they need a size of a 5-gallon pail). African bees, on the

other hand, aren't particular about location or size. They nest in the ground, in utility poles, in water meters, in house siding, and even right out in the open – anywhere is fine with them.

Both subspecies defend the territories around their colonies, which is the only time the bees are aggressive as a group. But when a European colony is disturbed, on average only 10-15 bees attack. When an African colony is disturbed, 10,000-12,000 bees attack.

European bees will defend an area up to 10 feet around the colony. Once aroused, African bees defend a territory up to 300 yards from the colony.

Bees in the colony can detect vibrations in the ground up to 50 feet away from the actual colony, and the African bees can detect vibrations from heavy machinery such as tractors up to 100 feet away. However, colonies located more than 30 feet off the ground do not usually pose any sort of risk.

When bees attack, it's always to defend the colony. Dr. Ellis said that the only defense is to run away as fast as possible. Once out of the bees' territory, the attack stops. Several dozen stings will be painful but not lethal.

The answer to the second question in the headline is, "Not as long as one is cautious and uses common sense."

Some common sense precautions are to use the same respect with bees as used with snakes and fire ants, never approach hive equipment, and never disturb a swam (with African bees, you can't tell if it's a swarm or a colony).

At-risk groups for bee attacks are animals that are tethered or restrained in pens, cages, corrals, etc.; heavy equipment operators; and the elderly, young, and handicapped people who can't run away as fast.

Dr. Ellis recommended the following during a stinging emergency:

1. RUN! Most people can outrun a bee.
2. Do not stay and swat; the colony is probably close. Attacking bees are attracted to movement, so swatting just attracts more bees. Plus, the stinger left in the skin emits a pheromone which attracts even more bees (it smells like banana).
3. Do not hide in underbrush; the colony is probably close.
4. Do not jump in water. Agitated bees won't calm down for up to 30 minutes, which is longer than people can hold their breath under water.
5. Seek shelter (building, vehicle). Yes, you will have some stinging bees with you, but you can limit the number, and once they sting, they die.
6. Call 911
7. If you see someone else being attacked, yell at them to RUN. If they don't, do not try a rescue yourself; then there would be two victims.

Once an attack occurs, survival is the only concern. It takes 5-10 stings per pound of body weight before the attack may be lethal, so a 100-pound person could survive up to 1000 stings.

For first aid until 911 responders come, remove the stinger; use an ice pack for just a few stings; for many stings, apply a paste of baking soda and water for 15-20 minutes or apply amonia; and take acetaminophen.