

Green Garden News

Volume 3, Issue 7

July 2005

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Bee Aware! African Honeybees Becoming Established In Florida

African honeybees, also known as killer bees, have entered Florida, and a University of Florida researcher says the aggressive insects may eventually spread throughout the state and move into other areas of the southeastern United States.

The bees, which tend to sting in large numbers, have been found and stopped at various Florida ports over the past decade, but now it looks like they're here to stay, said Glenn Hall, an associate professor of entomology at UF's Institute of Food and Agricultural Sciences. He said Florida's warm climate is ideal for the bees, which could be bad news for the state's \$16 million honeybee industry.

"If African honeybees become established in large numbers over the next few years, they will affect the beekeeping industry and the pollination of many crops," Hall said. "Public safety, recreation and tourism may also be affected, leading to liability problems."

Hall, a bee geneticist who developed DNA markers to identify African honeybees, said that, to the untrained eye, they look the same as resident European honeybees.

African bees more aggressively defend their nests than European bees. African bees may swarm as many as 16 times a year while European bees swarm about three times a year, he said.

The African bees invaded five southwestern states in the 1990s and have periodically turned up at Florida's deep-sea ports since 1987, Hall said. Until recently, swarms entering through ports such as Jacksonville, Miami and Tampa have been successfully captured in bait hives maintained by the Florida Department of Agriculture and Consumer Services.

"However, new finds in the Tampa area suggest that African bees are spreading and becoming established in the state, and they are being found farther inland from the ports," Hall said. "We did not believe that enough bees could arrive on ships to form an established population, but they did so in Puerto Rico, and now appear to be doing the same in Florida."

He said the infestation around Tampa is still small, and the bees are not unusually aggressive. As isolated swarms enter one by one through the ports, daughter African queens from the swarms have no choice but to mate with the resident European male drones. Fortunately, the hybrid offspring are not as aggressive as their African parents.

"Once the combination of hybrids and new introductions reaches a critical mass, bees of African descent will likely start to mate with each other, resulting in offspring with more

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Bee Aware! African Honeybees Becoming Established In Florida

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African-like characteristics,” Hall said.

He said that the arrival of African bees is not unexpected and should not be viewed with undue alarm at this time.

“Concerns about the bees have been exaggerated, with some media and motion pictures portraying swarms of deadly, stinging insects invading cities,” Hall said. “Nevertheless, it’s important to be aware. African bees have attacked and killed people and livestock in Africa, in South and Central America, and in other states.”

There have been 14 fatalities in the United States, and hundreds of nonfatal stinging incidents have been reported.

Neither the European nor African race of honeybee is native to the Americas, Hall said. The European honeybee (*Apis mellifera*) has been managed by commercial and hobby beekeepers worldwide for many centuries, selected for desirable traits such as gentleness, honey production, tendency not to swarm, winter hardiness and disease resistance.

On the other hand, the African honeybee (*Apis mellifera scutellata*) is adapted for survival in Africa’s harsh environment where climate, predation and other factors have produced a hardy race, Hall said. In the 1950s, Brazilian scientists thought that the bees from tropical regions in Africa might thrive in South America’s tropical environment better than the previously imported European honeybees.

“They were right,” Hall said. “Once the African honeybees were released in Brazil, they quickly spread throughout South and Central America, advancing up to 300 kilometers a year through the tropics into Mexico. It was only a matter of time until the African honeybee population reached the United

States.”

Movements of African honeybees have been tracked more closely than any other invasive insect. First detected in the southernmost counties of Texas in 1990, they quickly spread to New Mexico, Arizona and California by 1993. Since then, they have moved into southern Nevada and Utah.

Many of the wild (feral) colonies of honeybees in these states are of African descent, making it difficult for beekeepers to manage European honeybees and keep out African honeybee genes. In areas colonized by African bees, regular bee-

keeping operations with European honeybees are disrupted, and costs of management are increased.

Because of urbanization in Florida and public fears over African bees, coupled with increasing liability, apicary sites could be more difficult to obtain in the future, Hall said. These concerns — along with the marginal income from beekeeping —

could discourage beekeepers in the future. That would decrease the availability of bees and increase the price of renting bee colonies that are essential for the pollination of crops.

“Large populations of European honeybees managed by beekeepers are probably our best defense against African bees,” Hall said. “The European honeybees compete with African bees for food sources. When they interbreed with the African bees, defensive stinging behavior in their offspring is reduced.”

—by Chuck Wood, UF/IFAS news release 6/20/2005



July Gardening Tips

Flowers

- Annuals to plant include celosia, coleus, crossandra, impatiens, kalanchoe, nicotiana, ornamental pepper, portulaca, salvia, and vinca.
- Lightly re-fertilize flowering annual and perennial beds in order to retain their vigor and keep them colorful.
- Remove old flowers (deadhead).
- Keep leggy growth pinched back.

Trees and Shrubs

- Remove spent flower heads from crape myrtles so that they will continue to bloom.
- Watch for spider mites on shrubs and flowers; lacebugs on azaleas and pyracantha; flower thrips on roses, gardenias and other blooming plants; and oleander caterpillars on oleanders. Control these pests if necessary.
- Mature palms should receive a complete granular fertilizer formulated for palms ("palm special") four times per growing season. Broadcast the fertilizer under the canopy of the palm but not up against the trunk where newly emerging roots may be injured. Fertilize palms every other month from March through September.
- Do any necessary pruning of hydrangeas as soon as flowering is finished. They must have sufficient time to re-grow before the dormant season.
- Do not heavily prune any of the spring flowering shrubs such as azaleas, camellias or spiraea.

Fruits and Nuts

- Prune blueberry bushes, if needed, as soon as possible after harvest is completed.

Vegetable Garden

- Vegetables that can be planted outdoors include eggplant, lima beans, okra, southern peas, peppers and watermelon.
- Set out new tomato plants by late July in order to have a fall crop. Purchase tomato transplants or root disease free suckers from the spring crop. If possible, obtain one of the "hot set" varieties.
- Watch for and control tomato hornworm and fruitworms.

- Remove old tomato plants from the garden once harvesting is complete. Diseased plants should be burned or removed from your property. Do not place known diseased plant parts in the compost pile.
- Establish a compost pile. The high temperatures and frequent showers of summer help to speed up the breakdown process.

Lawns

- Watch for sod webworm in lawns; chinch bugs in St. Augustine lawns; and spittlebug in centipede. Control these pests if necessary:
 - Keep lawn mower blades sharp. This reduces some disease problems and gives the lawn a neater look when it is cut.
 - Phyllanthus (common name chamberbitter or gripweed), often described as that little "mimosa looking weed", began germinating in May. Check the lawn and landscape for its presence. Contact your local Extension service if you need help with recommended control measures.
 - Time for mole cricket control. Use the soap flush technique to determine if sufficient crickets are present to warrant treatment.
 - Lawns will begin experiencing more stress as temperatures rise this summer. Raise the mowing height one-half inch as hot weather approaches. This helps relieve some stress and enables the grass to better tolerate summer conditions.



Spittlebug adult



Chamberbitter, also known as gripweed

Upcoming Events

Every Tuesday in June: *Plant Diagnostic Clinic.* This free clinic is open to the public from 9:00 am to 1:00 pm on Tuesdays at the South Santa Rosa Service Center at 5819 Gulf Breeze Pkwy. If you are having problems with your lawn or plants, bring a sample in and an Extension Horticulturist or Master Gardener will be available to discuss your gardening questions. For more information about what type of sample to bring visit our website at <http://www.santarosa.fl.gov/extension/horticulture/diagnostics.html>.

Every Tuesday and Thursday through Sunday: *Panhandle Butterfly House.* Open 11am to 4pm. The Butterfly House is located in the Navarre Park, 8543 Navarre Pkwy (Hwy 98), next to the Navarre Beach bridge. For details call (850) 939-3267.

July 4, 2005: *Extension Offices Closed*

July 21, 2005: *Gulf Coast Gardening From the Ground UP: Container Gardening.* This free program is open to the public and will be presented at the Milton Library at 5541 Alabama Street, Milton, FL. Registration will open at 6:00 pm and the program will start at 6:30 pm. Theresa Friday, UF/IFAS Santa Rosa County Extension Faculty will be presenting a program on "Alien Invaders". Find out which plants are invasive, how to remove them and what to replace them with.

For persons with disabilities requiring special accommodations, please contact the SRC Extension Office at least 5 working days prior to the program so that proper consideration may be given to the request.
(850) 623-3868

Slime molds...unsightly, but seldom injures your lawn

With normal summer rains, comes calls from homeowners alarmed about a devastating looking fungus or slime attacking their lawns.

The attack is not near the detriment that it appears. Slime molds, which appropriately describe these fungi, will cover the turf leaves with a dusty-gray, black, or even dirty yellow mass.

When you look closely, you see tiny, round balls scattered over the plant. If you rub these balls between your fingers, a minute sooty-like powder will cover them. This sooty-like powder is the reproductive spores of the fungi.

Slime molds normally live on the soil where they feed on decaying organic matter. They do not feed on living plants, but only use them for support during reproduction. The damage to turf and other plants would be only from shading them from sunlight, which may cause the leaf blades to temporarily turn yellow.

Slime molds most often occur in wet weather in spring, summer, and fall. They disappear rapidly as soon as it becomes dry. Control is usually not nec-

essary. You can break up the masses by sweeping with a broom or by spraying with a strong stream of water. In prolonged damp weather, you can apply any good garden or turf fungicide to affected areas.

—by Dr. Wayne Wells, Associate Extension Professor and Turfgrass Specialist, MSU



Questions and Answers

Q: Do fire ants bite or sting?

A: Many people say that they have ant bites when they have been stung by fire ants. You might be surprised to find out that fire ants do both, bite and sting. They bite the flesh with their mandibles in order to gain leverage to inject their venom with their stinger. The result is a white pustule that appears within 24 hours of the sting. Ouch and double ouch.

Q: I want to buy a hummingbird feeder. What do I look for and what do I fill it with?

A: Packages of instant nectar may be found at many lawn and garden stores. You also can prepare your own solution with 1 part white, granulated, cane sugar to 4 parts water. Boil the sugar solution to help dissolve the sugar. Then allow it to cool before filling a feeder. This concentration is about the same as that in wildflower nectar. Using a sweeter solution, sugar substitutes or honey could be lethal to hummers. It also is not necessary to add red food coloring. The birds will be attracted to the red feeders.

Several different feeder styles are available. The ones with perches are not necessary, but they do provide an unusual view of this bird without its wings beating rapidly. The upside-down jar-and-tube feeders have a tendency to leak.

Most feeders come with bee guards. Although hummingbirds will feed right next to bees, clusters of these insects will keep them away. If ants are attracted, moisten the hanging wire with cooking oil.

Hummingbirds are very possessive of feeders and usually will not tolerate another bird feeding from the same feeder at the same time. The less dominant ones just wait their turn. Juveniles are a bit more sociable than adults. If you are using more than 1 feeder, arrange them at least 10 feet apart so that all can feed peacefully at once.

Place the feeder where rain will not dilute nectar in the end of the tube. Also avoid direct sunlight as heat stimulates bacterial growth.

Sugar solutions must be kept fresh. Florida's

hot weather can cause rapid bacterial growth in these feeders and birds that drink contaminated water could die. To avoid this, change the solution every 3-5 days. Clean the feeders with hot water and white vinegar. Do not use soap or chlorine bleach (Clorox™).

Q: I have several tomato plants with tomatoes that are green and on the vine. On some, but not all of them, the tomato fruits have a big black spot on the bottom. I'm afraid this is a fungus that will spread to the other plants. What can I do?

A: Sounds to me like you have blossom end rot. The condition is caused by a lack of calcium in the plant when the tomatoes are the size of marbles. You can stop the problem on currently affected plants but you'll have to throw away the tomatoes that are bad now.

Use a calcium chloride spray (Stop-Rot, etc.) to help cure this disorder. Begin spraying plants when the first fruit cluster is seen. Apply calcium chloride every 7 to 10 days until 3 or 4 applications have been applied. Spray plants until solution drips off the plant.

Follow these recommendations to prevent the problem in the future:

1. Select a planting site that has well-drained soil and is in a sunny location.
2. Ensure that your soil pH is approximately 6.5.
3. Don't overfertilize tomatoes at setting. Mix one cup of 6-12-12 or 5-10-15 into the soil in a 2 by 2 foot area for each plant.
4. Mulch plants with pine needles, old leaves, grass clippings, etc., to conserve water and provide more uniform soil moisture for the plant.
5. Unpruned plants will have less blossom-end rot than severely pruned plants.
6. Do not let soil moisture fluctuate between extremely dry and wet. Irrigate plants thoroughly and often enough to maintain a constant, uniform water supply to plants.

Green Garden News is an Award Winner

The Green Garden News newsletter has recently received several awards for excellence. It won the 2005 state communications award for best individual newsletter from the Florida Association of County Agricultural Agents . It then competed in regionals where it was named a 2005 Southern Regional finalist for best newsletter from the National Association of County Agricultural Agents. The newsletter then went on to the national competition where it was named a national finalist for best newsletter.

Theresa Friday, UF/IFAS Santa Rosa County Residential Horticulture Agent, will be attending the NACAA national meeting in Buffalo, NY to receive the national award.



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