

Horticulture Column
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Native Pollinators Being Studied

The loss of many of our honeybees due to Colony Collapse Disorder (CCD) begs the question: How are our crops and native plants being pollinated? As the maturity of one-third of our food crop species requires movement of pollen by insects or other creatures, this is an important question.

First, there is still a sizeable population of honeybees. Though the wild hives all but disappeared a few years ago, area beekeepers have done a good job of sustaining colonies. A sizeable number of hives are currently being rented to farmers who grow melons and other crops requiring intensive pollination.

With this reduction in the number of wild and domesticated honeybees, something else is happening. There are many species of native pollinators that have been quietly going about their business, while drawing little attention to themselves.

Because honeybees have been such excellent pollinators in the past there has been little interest in studying other species that have also been performing this job. That has now changed as researchers are anxious to learn more about our native pollinators.

Pollinators other than honeybees include ants, beetles, butterflies, bats, flies, moths and wasps. There are also about 4,000 species of native bees in North America and 316 of them are in Florida. So little is known about these native bees, that even people interested in bees can only identify two or three of these species while they are in flight.

Some of the native species that help pollinate plants are highly specialized. For example, the so called “hard shell” gourds belonging to the genus *Lagenaria*, produce white flowers at night and are pollinated by night flying hawk moths.

Blueberries are most effectively pollinated by the Southeastern blueberry bee, which has the ability to reach all parts of the bell shaped flowers and “sonicating”, or shivering its flight muscles to release pollen from the male flower parts.

The University of Florida has recognized the importance of native pollinators and is one year into a five year study. This study will try to determine the most effective ways to attract native pollinators, keep them around and encourage them to pollinate Florida crops.



"Wasps are one of many insect species that help to pollinate plants". (Photo by Dan Mullins.)

The study, which is part of a larger effort known as Operation Pollinator, has been supported with a \$160,000 grant for its first year by Syngenta and the National Fish and Wildlife Foundation. Research partners include Michigan State University and the University of California, Davis. The objective is to evaluate native pollinators, especially bees, as pollinators of agricultural crops.

Dr. Akers Pence, a postdoctoral researcher at UF, has four sites around the state with experimental plots filled with native perennials and annual wildflowers. These plots are being monitored to determine which works best to attract native bees and other pollinators. Once more is known, agricultural producers and even backyard gardeners could plant those types of flower mixes to encourage native pollinators to visit, linger and even take up residence.

Much more information about bees and other pollinators can be obtained from the state beekeepers' newsletter. This quarterly publication is entitled The Melitto Files. The unique name is associated with the "bee dance" – a method that bees use to communicate with their hive mate concerning the distance, direction and quality of a flower food source. Go to: <http://entnemdept.ufl.edu/honeybee/extension/melitto.shtml> to download and view and/or print the newsletter.

The IFAS Small Farms website is also a wealth of information for beekeepers and those who are interested in learning more about pollination. Go to: <http://smallfarms.ifas.ufl.edu/> Scroll the menu on the left side of the page and open the beekeeping section for viewing and downloading publications.

For more information or if you have a question, call Dan Mullins, Extension Commercial Horticulture Agent, The University of Florida/IFAS-Santa Rosa County Extension, at 850-623-3868, between the hours of 8:00 am and 4:30 pm weekdays. Hearing impaired individuals may call Santa Rosa County Emergency Management Service at 983-5373 (TDD).

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