

## Flies may help rescue besieged plant

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October 16, 2007



The weevil had mostly been found in rural parts of the state, but one was spotted at a south Orange home in July, and another near Conway Road in recent weeks. (UNIVERSITY OF FLORIDA / October 12, 2007)

The fight to save Florida's wild bromeliad population from an "evil weevil" now lies with a fly.

The state's native plant species has been under attack by the Mexican bromeliad weevil. But scientists hope that the weevil has met its match in a parasitic fly named after an entomologist who has led the battle to save the bromeliads.

In another attempt to control the weevil, biologists released 120 *Lixadmontia franki* flies Friday at the Arthur R. Marshall Loxahatchee National Wildlife Refuge, west of Boynton

Beach. The franki fly lays its eggs in the weevil's body, destroying it.

"We've got to control this weevil," said Howard Frank, the fly's namesake and a University of Florida researcher who for years has studied ways to save the plant. He compares the problem to the severe die-off of the state's sago-palm population, which has been smothered to the point of near-extinction in some areas by a tiny insect called a scale.

The weevil had been mostly discovered in rural locations such as state preserves in southwest Florida. But in July, a master gardener saw an invasion on an ornamental plant at a home on Ownby Court in south Orange County -- the first urban spotting in the area. About two weeks ago, another was found on an ornamental plant in the Conway Road area, Frank said Monday.

"I don't see the bromeliad population coming back [where it's died]. If you look farther south, such as at Myakka River State Park, you will see a tremendous amount of damage."

At that park near Sarasota, the weevil has all but killed off several species, including the endangered giant airplant, cardinal airplant and twisted airplant. It also has done some damage at Fakahatchee Strand Preserve State Park in southwest Florida, which has the state's largest population of wild bromeliads.

In Central Florida, the weevil has been found at Kissimmee River State Park in Polk County, at Disney Wilderness Preserve and Three Lakes Wildlife Management Area in Osceola, The Enchanted Forest, a wildlife preserve in Brevard and Tosohatchee State Preserve in Orange.

The weevil has charged through Florida's wild bromeliads since 1989, when it entered Fort Lauderdale apparently from Mexico on a shipment of plants. With no predators, the weevil has romped without slowing through the South Florida populations, attacking four species that are only seen in Florida, where 16 species of the plant grow.

Black with a single yellow or orange band, the weevils eat the leaves and burrow into the plants, killing them.

Some homeowners don't know what to look for, while bromeliad lovers might be more aware of the problem, Frank said.

Plants can be treated with a reduced concentration of an insecticide -- such as Sevin -- labeled for beetle adults and grubs and applied as a spray or dip every two to three months to prevent infestations.

Frank, though, is mostly concerned about the wild plants, where the bug has room to roam unchecked.

"It's not surprising that it happened," Frank said of the ornamental spotting. "But it's less of a concern simply because people who grow them can use chemicals, and you can't do that in the parks. My first duty is to try to save the bromeliads in the parks."

Bromeliads, of which pineapples are a member, grow mostly in trees and are often called "air plants." They attract a large following of fans, not unlike the orchid. The Florida Council of Bromeliad Society has hosted plant sales, donating profits to support research.

The plants, experts say, are easy to grow, adding to their popularity. In the wild, they can grow large in the canopy of trees, creating a colorful display overhead.

"There are people who come to the gardens just to see the bromeliads," said Robert Bowden, director of Harry P. Leu Gardens in Orlando, which houses a large variety of the plant. "They have such a range of colors, more than you can possibly imagine."

Researchers at the University of Florida had worked for years on the problem to no avail until UF assistant professor of entomology Ron Cave discovered the fly in mountain forests of Honduras in 1993. Bringing the bug back to the Indian River Research and Education Center in Fort Pierce and naming it the "franki fly" after Frank, he and other researchers nurtured and studied it for 14 years until deciding the fly may well be the solution to the bromeliad problem.

To assist with their research, they needed to grow larvae, so they used pineapple tops, one of the few bromeliad varieties they could think of that they didn't mind using.

"We had to convince stores to save them for us," Frank said.

Besides Friday's effort, the state also has released the flies in Hillsborough, Palm Beach and Brevard counties. The latest release Friday near Boynton Beach was a joint effort between the University of Florida Institute of Food and Agricultural Sciences and the South Florida Water Management District.

A lone graduate student is studying the fly project closely and will report the results in 2009. Until then, Frank isn't resting. He plans to travel to Guatemala early next month searching for new alternatives to his namesake fly.

"It's a crusade," he said. "I've got to do this."

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