

# University of Florida Researchers Take Aim at **CARIBBEAN CRAZY ANTS**

By Rudi Scheffrahn and John Warner

An invasive ant species, the Caribbean crazy ant is part of a group of **supercolony ants** referred to as “**crazy ants**” due to their **quick and erratic movements**.

**W**hile jogging with his daughter in a park near his South Florida home in late summer 2010, University of Florida Professor of Entomology Rudi Scheffrahn noticed tremendous numbers of reddish-colored ants running quickly along the trail. He put on his glasses to take a closer look and realized he was observing an infestation of Caribbean crazy ants (*Nylanderia pubens*).

An invasive ant species, the Caribbean crazy ant is part of a group of supercolony

ants referred to as “crazy ants” due to their quick and erratic movements. Sometimes mistakenly known as the Raspberry crazy ant, the Caribbean crazy ant (CCA) follows trails in extremely large numbers. Thick foraging trails with hundreds of thousands of ants occur along sidewalks, around buildings, and on trees and shrubs. Though little is known about CCAs, it appears they nest in multiple locations and have numerous queens. It is assumed that CCAs scavenge for food by feeding on dead insects and honeydew from insects like aphids, whiteflies, mealybugs and scales.

Scheffrahn’s colleague, Research Scientist John Warner, surveyed the site, officially known as the Plantation Preserve Golf Course and Linear Park Multi-Use Fitness Trail. He circled the 211-acre property and noticed there were other ant species surrounding this infestation, but the CCAs didn’t extend into the other ants. It was as if there was an island of CCAs in the middle of the site. He found them going up and down trees, as well as following cart paths and running trails.

Warner put baits in their path to see if they would stop and feed, but they re-



Rudi Scheffrahn and John Warner spray Transport GHP along the golf cart paths and jogging trails at Plantation Preserve.

## Identifying Caribbean Crazy Ants

Here are some identification tips/behavior insights about the CCA:

- They are uniformly sized, 1/8-inch long, reddish-brown ants
- They forage in massive numbers — sometimes in the millions
- They have erratic actions — hence the name “crazy ants”
- Their foraging trails follow structural guidelines
- They nest primarily outdoors, under objects that retain moisture
- The workers are attracted to sweet parts of plants, including nectaries and over-ripe fruit, as well as honeydew-producing insects
- The workers will forage indoors, in homes and other structures
- They do not bite or sting



mained loyal to their trails and few stopped to feed on the bait.

**RESEARCH OPPORTUNITY.** Warner and Scheffrahn recognized the Plantation infestation as a great research opportunity since only one property owner was involved. Normally, invasive ant species forage over hundreds of meters to find food sources, so multiple property owners are usually involved—and they rarely agree on treatment options. But the Plantation Preserve Golf Course and Linear Park Multi-Use Fitness Trail is owned solely by the City of Plantation, Fla. The city was willing to let them try to get the infestation under control.

The ants covered the entire exterior perimeter of the golf course clubhouse and all of Linear Park, but they hadn't entered a building yet. CCAs don't sting or cause any damage but they are a serious nuisance pest due to its sheer numbers. However, CCAs seem to be attracted to the warmth of electrical boxes and have caused minor electrical failures.

Warner contacted FMC Professional Solutions about participating in a research study. Dina Richman, FMC pest product development manager, designed a protocol for a controlled research study using two FMC products: Transport GHP insecticide and new Talstar XTRA GC granular insecticide.

A sand-based granular product, Talstar XTRA is a combination of bifenthrin and zeta-cypermethrin. Richman knew the product could be spread on the areas covered with high or dense vegetation outside the jogging path. Whereas a spray application might remain on top of the vegetation, Talstar XTRA granules would fall to the ground to reach the ants. To provide a complementary treatment, Transport GHP could be sprayed directly on the trails to provide quick knockdown and longer residual control. Richman planned the combination approach as an area-wide strategy to control the infestation.

**MAKING THE APPLICATION.** Prior to the treatment, Warner painted numbered spots along the paths at more than 20 locations where ants were trailing heavily. He then took counts of ants crossing the spots within 30 seconds before and after the treatment to quantify the level of infesta-

tion. This included counting spots beyond the treated area as a control.

On Sept. 24, 2010, Warner and Scheffrahn went to the Plantation Preserve site to apply the treatments. They were joined by Dina Richman and Bruce Ryser, FMC market specialist for Florida, who helped with the applications. Ryser applied Talstar XTRA with a granular spreader, treating the borders of the pathways and other areas. He applied 250 pounds of product to approximately 1.8 acres, spreading the granule from 5 to 8 feet out from the paths into the taller grasses.

Scheffrahn and Warner applied Transport GHP to ant trails along the paths with backpack sprayers using a 0.11 percent solution. They applied 23 gallons of product to ant trails over an almost 2-acre area. In addition to the edges of parking lots, they sprayed some of the golf cart paths and the bases of trees, going up about a foot.

**RESULTS.** Warner monitored ant counts on a weekly basis after the treatment—both inside and outside the treatment area. It was clear that ant foraging declined dramatically after treatment, despite the rainfall that occurred after application. It remained that way for more than a month. They showed that an area-wide treatment had a significant impact for a given period of time—about six weeks.

Because they knocked the ant numbers down significantly, Warner was able to find some of the nests he previously couldn't locate. So on Oct. 5 and again on Oct. 15, he made spot treatments of Transport GHP to hit the areas and nests they originally missed.

Scheffrahn and Warner significantly reduced the numbers of ant foragers for at least a six-week period. While eradication of any ant species is often difficult in a large area, Scheffrahn recommends an area-wide management strategy for the Caribbean Crazy Ant. The treatment held for more than a month and the researchers report anecdotally that it is still keeping ants away after six months. **PCT**

The authors are with the Ft. Lauderdale Research & Education Center at the University of Florida, Institute of Food and Agricultural Sciences. Scheffrahn can be reached at rscheffrahn@giemedia.com. Warner can be reached at jwarner@giemedia.com.

**InVict<sup>Gold</sup>**  
cockroach gel  
**The Best  
Cockroach Gel is  
Always  
on Sale!**



**45% More Bait Per Box**  
Five 35 gram tubes per box vs.  
four 30 gram tubes per box

- 2.15% Imidacloprid, making it the fastest killing and most potent bait on the market
- Proven Secondary Kill
- Multiple Food Attractants which are intentionally quite different from that of other popular baits, making it an excellent choice for rotation or problem accounts
- Now contains none of the top 8 food allergens

**Call your distributor  
and try some today!**

**Rockwell Labs Ltd.**  
creating the future of pest control  
Toll Free 866-788-4101  
[www.rockwelllabs.com](http://www.rockwelllabs.com)

InVict and Creating the Future of Pest Control are trademarks of Rockwell Labs Ltd. ©2011 Rockwell Labs Ltd

[www.pctonline.com/use\\_reader\\_service\\_#72](http://www.pctonline.com/use_reader_service_#72)