

## July 2011 - Of Ants and Caterpillars

A monthly growers advice column by Courtney Hackney. [Hackneau@comcast.net](mailto:Hackneau@comcast.net)

Yesterday, I put small caterpillars on newly emerging buds on a couple of orchids. Never before I have done such a thing, nor have caterpillars ever been recommended in this column as a cure for anything. So why was it done? It is a long story!

Almost two months ago, aphids arrived in my greenhouse on a houseplant stashed in the greenhouse. You can imagine my horror because I had never had aphids before and they quickly spread onto Paphiopedalum buds. As treatment with light oil began it was apparent that large red ants were also present on the orchid buds, so I assumed they were transporting the aphids around. This particular type of ant is usually associated with rotting wood here in Florida, so I assumed they were "up to no good". They were sprayed too, and that should have ended the story. Each day when I examined the plants that previously had hosted the aphids, the ants were present, but not the aphids. In fact, they seemed to be picking up the dead aphids and hauling them off.

In the tropics, every orchid collector knows that many orchids are protected by vicious ants that live on and in epiphytic orchids. Some like the *Mormyrica* (previously the hollow bulbed *Schomburgkia*), even provide housing. Northern Florida is almost tropical! Could these new residents of my greenhouse be helpful? That should explain the caterpillar experiment.

There have been many attempts to use natural predators to help with insect control in greenhouses, but none have proven successful. Releasing insect predators into the greenhouse typically results in the insects predators quickly looking for a way out. After a few unsuccessful tries, my experimentation ended with that approach and like most others, I resorted to pesticides.

Many very effective and toxic chemicals are no longer available, so the control of pests has become harder. Fortunately, there are some new chemical approaches that attack the insect hormonal system and which work very well. Of course, these products are much more expensive, but well worth the money, since spraying is greatly reduced and the toxicity in growing areas reduced. This also allows some of the other natural predators to live among your orchids.

Here in Northeast Florida there are three species of lizard, one a nocturnal gecko and several species of tree frogs that also come out at night. Do they control all my pest problems? Unfortunately, the answer is no, but they clearly help. No natural control can eliminate all pests because that would involve eliminating the food source for pest predators. Will the same fate befall my new found ants? As I observed the ants it was clear that they were using the tiny drops of sugary fluid that exudes from certain tissues, especially on the flowering parts. The green anole lizards also use this resource, which allows them to survive in winter when insect prey numbers are small.

So what happened to the caterpillars I put on my orchids? The ants quickly took care of these pests for me. So are they good ants or bad? The jury is still out, but so far they have done no harm, short of a nasty sting when they are in an orchid pot that is being repotted. More on this as the experiment continues.

*Jacksonville Orchid Society member Dr. Courtney Hackney, Retired Emeritus Professor of Biology at the University of North Florida, is a noted author and acknowledged "orchid expert." He published a column of orchid advice that ran for many years, and we are presenting select articles with his permission.*

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