



St. Augustine Orchid Society

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Natural Predators

July 2011

by Dr. Courtney Hackney, hackneau@comcast.net

Yesterday, I put small caterpillars on some 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 recently purchased houseplant. You can imagine my horror because I had never had aphids before and they quickly spread onto paphiopedilum buds. I treated with light oil and noticed that large red ants were also on the orchid buds. I assumed the ants were transporting the aphids around. This particular type of ant, however, 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.

Some tropical orchids are protected by vicious ants that live on and in epiphytes. Some, like the myrmecophila, (previously known as the hollow-bulbed schomburgkia), even provide housing for ants. With northern Florida’s almost tropical nature, I wondered if these new residents of my greenhouse might 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 them looking for a way out. After a few unsuccessful tries, I gave up the natural predator approach and resorted to pesticides.

Many very effective, but 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 on pests such as scale. These products are much more expensive, but well worth the money, since spraying is greatly reduced, and the toxicity in growing areas is lessened. This also allows some of the other natural predators to live among your orchids.





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Here in Northeast Florida, I have two species of lizard that call my greenhouse “home”, as well as one 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 newfound ants? As I observed the ants it was clear that they were using the tiny drops of sugary fluid that exude from certain tissues, especially on the flowering parts of orchids. 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. Are the ants good 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.