

Those Lousy Little Suckers!

The most commonly encountered insect pests, aphids and mealybugs, are by no means the most troublesome. So we will begin with the insects that are easiest to deal with.



Aphids, (shown at left) also commonly called plant lice, cause damage to orchid plants and flowers by sucking fluids from them. So in effect, your orchid has to share its food and water with the aphids. These insects are usually less than 1/8 inch long, greenish white or black. Aphids have soft, pear-shaped bodies, long legs, antennae, and sucking mouthparts to feed on plant juices. Most are wingless, but winged forms can migrate between plants when a colony becomes crowded. The adult female aphid gives birth to between 60 and 100 female nymphs every day for a period of 20 to 30 days. These nymphs immediately start to feed and grow, molting several times to mature to an adult female capable of reproducing within seven to ten days, all without maturing. So you can see that within a few days, thousands of aphids can be born. The effects of a large quantity of sucking insects can deform new growths, damage or abort flowers, and cause dehydration and a resulting decline in plant health.

Mealybugs (right) are more closely related to scale and create the same kind of problems as aphids by feeding on plants juices. Unlike scale however, both juveniles and adults are mobile

and can easily move from plant to plant. The complete life cycle takes six weeks to two months depending on the species and the environmental conditions, and females can lay 300-600 eggs. Like aphids, mealybugs can reproduce at a prodigious rate if not controlled early on. Mealybugs are small, a little over a sixteenth of an inch (2-4mm), and covered in a whitish waxy secretion that gives them a fuzzy appearance. Although they are small, they are easy to spot because by the time you discover mealybugs, there are usually more than one. Although the waxy secretion offers these insects some degree of protection, they are not nearly as formidable as the armored scales. Both aphids and mealybugs are capable of producing female-only generations, hastening the growth of a colony.

These pests can create additional problems that may end up being worse than the damage directly caused by feeding. Aphids and mealybugs excrete large amounts of honeydew as they feed making them attractive to ants. The ants actually "farm" them for this sweet substance and can contribute to spreading the pests to other plants nearby. This honeydew provides an excellent breeding ground for sooty mold. Additionally, all three sucking insects covered here can act as a vector for spreading diseases from plant to plant.





Thrips can destroy flowers overnight with their rasping mouth parts.

Thrips are the final insect to be covered here and to me, are the most insidious. Thrips are small, very small, and therefore difficult to detect. Usually, you see the damage before the thrip. Although thrips can and do cause damage to orchid plants, their preferred feeding ground is flowers and buds. There is nothing more heartbreaking than waiting a whole year for that favorite orchid to bloom, and find out that it has been defaced by thrips. They can even get between the folds of a just-opened bud and cause scarring or bud blast. As if they weren't hard enough to see, thrips can move quickly when disturbed and will hide under folds in the lip or where the petals and sepals meet. Although the insects have wings, being so tiny, they may just as frequently be dispersed by wind. One piece of common advice for managing thrips is to eliminate known host plants from around the orchid growing area. Here in Florida, gardenia is notorious for harboring thrips and orchid hobbyists are often advised to move or spray their gardenia bushes. Other host plants are ficus benjamina, camellia and magnolia.



Thrips are small, elongate insects ranging from 1/25 to 1/8 inch in length. They feed by puncturing the plant cells with their rasping-sucking mouthparts and withdrawing cell sap. This pest usually appears in 3-4 random cycles throughout the year. There do not seem to be any environmental conditions that indicate a thrip outbreak, although a dry warm autumn usually brings one. They can be a problem for 1-3 weeks and then not appear again for several months.

For eliminating these pests, first we will cover the most benign home remedies. These safe remedies will work, but require dedicated applications to effect control...once is not enough. For small, early outbreaks of aphids, scale or mealybugs, a safe and effective treatment is castille-peppermint soap used at a rate of 1tsp. per quart of water. The liquid soap (Dr. Bronner's or generic) can be found at natural food and some grocery stores. We keep a one-quart handsprayer of the solution in the greenhouse for zapping pests when we see them. You can set the sprayer on "stream" and wash away a small colony of mealybugs, or on "spray" to destroy aphids. You can also use household liquid soap at the same dilution but peppermint oil adds to the

effectiveness. 70% isopropyl rubbing alcohol will also work. We take the sprayer out of a new empty hand sprayer and insert it into a bottle of rubbing alcohol and use it to spray just about any insect pest. A longtime popular home remedy for insect pests is one cup of Formula 409 cleaner, one cup of 70% isopropyl rubbing alcohol to two cups of water. These home remedies are good safe treatments for people who grow their orchids in their homes, but they need to be applied every other day until the problem is under control.

Insectidal soaps (Safer's) and horticultural oils (Volck, Neem Oil) are useful against both aphids and mealybugs as well as other insect pests that feed on orchids. One thing to remember about using them is that they can cause damage to orchids if applied when the ambient air temperature is much above 80° F, although the soap is less likely to. Follow label instructions carefully and spray late in the day when temperatures are set to decline.

General purpose insecticides such as Sevin WP and Malathion will also control both scale and mealybugs as well as thrips, but many growers prefer Orthene 75% WP and it is also the preferred treatment for thrips. You can mix 1/4 tsp. to a quart of water in a handsprayer and use it for all three pests. Do not use any spreader-sticker or soap if you intend to spray flowers or buds for thrips. During a trip outbreak, we keep a couple of handsprayers with Orthene in the shadehouse and spray buds and flowers every couple days.

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