



St. Augustine Orchid Society

www.staugorchidsociety.org

The Usual Suspects – Common Orchid Pests

by Sue Bottom, sbottom15@gmail.com

Certain plants just seem to be prone to attack by certain pests. If you grow cattleyas, you battle scale infestations. Grammatophyllums are mite magnets. This article highlights the most common pests and their favorite orchids, along with some tips for eliminating them.

Scale on Cattleyas. Every cattleya grower has to be on the lookout for scale, particularly the white Boisduval scale. Mature males are cottony white masses while the mature females lay their eggs under whitish circular shields. The crawlers are the nymph state that emerge from under the shield until they find their new home.

The females love to find hiding places on the plant so they can attach themselves and suck the sap and vitality out of the plant. The leaf axil and base of the pseudobulb are favorite hiding places. They can grow and multiply unseen under the papery sheaths until they do such damage that the tissue becomes chlorotic and ultimately necrotic and dies. They can ruin the developing eyes on new growths.



1. The area in and under the leaf axil is a favorite hiding place.



2. Once you remove the papery sheath hiding the scale, the damage becomes obvious.



3. Scale on the base of a cattleya pseudobulb.

Vigilance is critical to catching the problem early. If you see yellowing on leaves and pseudobulbs, start investigating. Pull down the papery sheath on your cattleyas and look underneath. Look at the undersides of leaves with chlorotic spotting. If you find scale, prepare for war.

If you have just a few plants, you can water jet away the majority of the scale with a hose end sprayer set on flat. Then get to work with some isopropyl alcohol and a Q-tip to wipe away what remains. Some growers mix up a home brew concoction of 1 part isopropyl alcohol, 1 part Formula 409 or Fantastik cleaning solution and 2 parts water and spray that on their orchids. There are also some pesticides available at nurseries and big box stores that can be used, like Malathion or one of the products containing the active ingredient Imidacloprid. Imidacloprid products can be applied as a drench, poured through the pot with your fertilizer, where it is absorbed through the roots to protect the plant from the inside out. All of these techniques will require reapplication several times at two week intervals.

If you grow many cattleyas and really want to eradicate scale from your collection, invest in the broad spectrum pesticide Safari and the insect growth regulator Distance. Safari will kill the live adult scale and Distance will prevent any juveniles that survive the Safari from maturing. You may have to reapply this combo at 6 month intervals, but your cattleyas will thank you with a profusion of blooms.



St. Augustine Orchid Society

www.staugorchidsociety.org

The Usual Suspects – Common Orchid Pests

by Sue Bottom, sbottom15@gmail.com



4. If you see chlorotic spotting on the upper leaf surface, your first reaction should be to turn the leaf over.



5. You can see the scale on the leaf undersides, at the exact location of the chlorotic spotting on the upper surfaces.

Of course, there are other types of scale, including the soft brown scale that often appears on phalaenopsis and phalaenopsis flowers, or the armored scale that can appear on different varieties of orchids. If you see an unusual raised spot on your orchids, try rubbing it off with a soft cloth or Q-tip. If you confirm that it is one of the scale insects, your treatment options are the same as for the troublesome Boisduval scale on cattleyas.

Mealybugs on Phals and Paphs. Mealybugs are close relatives of scale that seem to gravitate to hiding places on phals and paphs. They can be found at the junction of the leaf and stem, crawling up the inflorescence, on flowers and even on the roots. They are very difficult to eradicate once they are in your growing area. If they have infested the roots, remove the plant from the pot, spray the roots and repot in fresh media. The treatment options are basically the same as scale. You will have the greatest success with systemic products that protect the plant from the inside out, in that mealybugs find obscure crevices difficult to reach with pesticides.



St. Augustine Orchid Society

www.staugorchidsociety.org

The Usual Suspects – Common Orchid Pests

by Sue Bottom, sbottom15@gmail.com



6. Mealybug crawling on Paphiopedilum.



7. Mealybugs dine on roots too, beware!



8. Mealybugs feeding on tender Psychopsis flower.

Mealybugs will attack other genera of orchids, not to mention many of your landscape plants. During the growing season, mealybugs seem to come into the greenhouse from the outside environment and settle on the tender new cattleya growths.

Mites and the Mite Magnets. Mites seem to gravitate to certain types of orchids, Grammatophyllums, Dendrobiums, Catasetums and many of the thin leaved orchids. Thin or soft-leaved orchids are more susceptible to mite damage than those with thicker leaves, but no variety is immune. There are several kinds of mites, the most common being red spider mites that typically feed on the underside of the leaves. A hand lens may be needed to see the mites as small, red to brown pests scurrying around on leaf undersurfaces. The upper surface of a damaged leaf may have a silvery sheen that eventually becomes sunken and turns brown. Leaves may be streaked, stippled or spotted due to lack of chlorophyll. A diagnostic test is rubbing a white Kleenex along the leaf undersides, and finding reddish brown splotches from the mites.

Mites are not insects, they are members of the arachnid family, so insecticides are ineffective. There are home cures, typically involving some combination of water, dish soap and isopropyl alcohol or water and vegetable or light summer oil. Effective miticides for ornamental use include those containing the active ingredients abamectin (Avid), bifenthrin (Talstar), dienochlor (Pentac), fenbutatin-oxide (Vendex), and fluvalinate (Mavrik).



9. Red spider mites are much easier to see if you are looking through a microscope.



10. Characteristic stippling on dendrobium leaf lower surface from red spider mite.



11. Flat mites leave pock marked leaves on Phalaenopsis and Oncidium orchids.



St. Augustine Orchid Society

www.staugorchidsociety.org

The Usual Suspects – Common Orchid Pests

by Sue Bottom, sbottom15@gmail.com

There are also the less common flat or false spider mites in the *Tenuipalpidae* family that often feed on the upper surfaces of leaves creating a pock-marked appearance from empty and collapsed leaf cells. Flat mite feeding on thin leaves, especially the underside, is similar to the stippling caused by spider mites, but there is no webbing. Broad mites in the *Tarsonemidae* are microscopic in size and the initial symptom is chlorotic discoloration. These types of mites seem to gravitate to Phalaenopsis. They are virtually impossible to see and only certain miticides are effective against them.

Unlike the other pests that seem to have favorite host plants, thrips are indiscriminate feeders, attracted to the tender new leaves, buds and flowers of your orchids as well as landscape plants like gardenias, citrus, roses, vegetables and flowering plants. Infested buds can become dried and blast, flowers can be deformed exhibiting burnt or water soaked spots, leaves can be stippled and roots girdled.



12. It is easier to see the thrips damage where the leaf is burned than the many thrips crawling around on this flower.



13. Thrips have been feeding on these flower buds, ruining them before they have a chance to open.



14. The stippling with a bull's eye in the center is characteristic thrips damage on this tender young catasetum leaf.

Demon Thrips. Thrips are the most difficult to control of all the pests because they can fly from plant to plant and hide within flower parts making them hard to see or reach with pesticides. Orchids and landscape plants can be sprayed with pesticides like Orthene or Malathion and the stronger chemicals like Talstar, Avid or the Bayer imidacloprid product, rotating products and applying them in accordance with label instructions. Conserve is another alternative that can be sprayed directly on the flower, as can Orthene. If you are prone to thrips, you can just spray the buds and flowers twice a week using a pump up sprayer or spray bottle.

Except possibly for thrips, preventative spraying for your typical orchid pests is unnecessary. Learn to recognize the sign of damage they cause to your plants. Keep a loupe or magnifier handy in your growing area. If you see something that doesn't look right, inspect the plant, looking at both sides of the leaf. If you find a problem, treat it quickly using your poison of choice, and never forget to protect yourself from the chemicals you keep in your arsenal.