

## Scale, Ants and Mould

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Scale insect is probably the biggest pest of cultivated orchids. There are many species of scale but Boisduval scale appears to be the most common. These sap suckers can severely deplete or even kill an orchid if there is a heavy infestation.

Scales have three life stages: egg, larva (nymph) and adult. Eggs are laid under the female's waxy shell and remain there after she dies. These hatch into mobile nymphs, called crawlers, that can move between plants. They are also tiny and can be blown around by the wind or by a greenhouse fan. After finding a suitable place the nymphs settle to feed, sucking the sap from your precious orchid.



As they feed they secrete a sugary substance called honeydew – and this is where the ants come into the story. Ants literally farm scale to feed on the honeydew. They can carry the scale to the choicest, juiciest part of the orchid such as the soft, new growths where the sap is easy to access and the output of honeydew is maximised. Win – Win!

This honeydew can also cause sooty mould. The ants, whilst transporting it back to their nest often smear it on the leaves and stems. This sticky substance grows sooty mold; an unsightly, black, dusty fungus. If you see this on an orchid you will almost

certainly have a scale problem.

If your scale problem is due to the presence of ants the question is: What to deal with first, the farmers or the feral livestock?

If you can follow the ant trail and it ends in one of your orchid pots the solution is reasonably simple. Take the pot well away from the growing area and tip the plant out. (Zap the ants with a suitable brew or boiling water.) Remove all the media from the orchid roots and wash the orchid thoroughly to remove any ants AND all of their eggs. Check for any scale and clean if necessary. Repot in fresh mix. Monitor carefully for any fresh scale hatchlings.

If the ant trail leads to a hole in the ground or goes into a brick wall then you'll need to use some ant poison following the maker's instructions.

Having, hopefully, put the farmers out of business you then need to deal with the unwanted livestock. The scale's most vulnerable stage is the crawler so, if it is only one or two plants you can manually remove them by scraping or wiping them off. Look for the soft crawlers and also the adult igloos which may be covering many live eggs ready to re-infect your plant. If it is a wider infestation you may need to use an insecticidal spray. You will have to do this at least twice because surface sprays will not usually kill the eggs which are protected by the waxy surface of their igloos.



Of course, ants are not always to blame for scale outbreaks. Scale can arrive with a newly acquired plant or by wind-blown crawlers if your orchids are outside. Telltale signs are small brown or white blobs on the leaves of pseudobulbs or yellowing patches on the leaves. This is usually a sign of an active population of scale on the reverse side of the leaf. They also

congregate in the dried sheaths at the base of the pseudobulbs so grooming your plants and removing all old bracts and hiding places will help manage the problem.

While treating the scale problem is necessary when an outbreak occurs, prevention is obviously a better course. Using a systemic insecticide in spray or granular, slow-release form should give your orchids protection against the pesky beasties.

Sources: Growing Orchids in Cool Climate Australia, OSC; Orchid – Bulletin of the AOS, Sept. 2003; AOF Orchids in Australia – Common Cultural Problems - article by Ben Wallace.