

Reading the (Tea) Leaves

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Orchid leaves can tell you a lot about the health of your plant and give you feedback on your culture. Often, the leaves will be the first to signal your orchid is not happy. You need to become a leaf reader (cup of tea optional).

Function of Leaves

If epiphytic orchids were houses the leaves would be the kitchen where all the raw ingredients are cooked up and food is prepared which is fed back to the plant to keep it growing. The process is called photosynthesis. It is the 'process by which gaseous carbon dioxide, CO₂, is chemically combined with water to produce simple sugars such as glucose.'¹; i.e. the energy food to build new roots, stems, leaves and flowers. The raw materials come via the roots for water and minerals and through the leaves that take in carbon dioxide through the stomata while sunlight activates the green pigment chlorophyll to drive the photosynthetic process.

Reading the leaves – What to look for

It would take several books to cover completely the multitude of leaf markings so these are just a few of the some common problems.

Droopy, wilting leaves – Could be a sign of dehydration/underwatering. Give it a drink. BUT, on the other hand, it could also be because it has been overwatered and the roots are drowned so they can't take up any water. Just as the foot bone is connected to the neck bone, so the root zone is vitally connected to the leaf zone and, very often, the problem in the leaves can be traced to the roots. When in doubt, check the roots!

Very deep green leaves – Often a sign that the plant is not getting sufficient light. If this is the case it probably won't flower so it needs to be relocated into brighter light.

Pale/very light green/yellowish leaves – The opposite situation. Too much light. This is a problem for plants that come naturally from low light environments. Give more shade.

Bronzing on the top surface of the leaf – Some orchids have a natural tendency for bronzing but mostly it is a sign of too much light. Give more shade.

Yellow spots – Immediately suspect scale insects. Check the underside of the leaf for clusters of the insects which are sucking the sap/chlorophyll causing the yellowing.

Silvering on underside of leaf – The likely culprits are spider mites. Nasty beasts that can spread virus. Insecticides will not kill them. If it is just a few plants wipe/wash them off and spray with white oil. If it is widespread you may need to use a special miticide. Follow all safety directions.

Leaftip dieback – Tricky one. Could be a lack of moisture or not enough. Often caused by an accumulation of fertilizer salts. It is a good idea to flush the pots with plain water every month or so.

Other marks on leaves – streaking, spotting, mottling, etc. The causes can be many. Pathogens such as bacteria, fungus or virus cause markings on the leaves so you need to do some research. The Canberra book, *Growing Orchids in Cool Climate Australia*, has a good chapter on Orchid Pests and Diseases.

Dieback of all mature leaves – hopefully it is a deciduous orchid, and this is part of its growing cycle otherwise it might be time to say, "Goodbye".

1. Ben Wallace, Crassulacean Acid Metabolism in Orchids, *Growing orchids in Cool Climate Australia*