St. Augustine Orchid Society

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Cold Tolerance of Some Orchids

October 2000

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Orchid Growing Tips

It is time to prepare for frosty nights and “Orchid Injuring” cold. While some Orchid species can survive light frosts, others suffer sub lethal stress at 50 deg. F. It is important to know which to protect and which plants to leave out awhile. Remember too, that the forecasts are not always correct so always err on the side of caution when you decide whether to bring a plant in or light the heaters in the greenhouse.

Cymbidiums are one of the most cold tolerant groups even though some come from warmer areas. Hybrids are almost certain to be cool tolerant. Many growers leave their mature Cymbidiums outside in a south-facing location where they are protected by the overhang of a house or tree until there are hard frosts. Plants with frost damaged leaves often have magnificent inflorescences and larger than normal flowers. The same effect can be obtained with temperatures above freezing. The general recommendation is to bring plants in if the temperature is predicted to be below 35 or plants are in an unprotected location subject to frost.

Cattleyas, too, do not mind a nice cool down, but not to the same degree as Cymbidiums. Night temperatures in the lower 50s do no harm as long as the roots are not wet and the day temperature rises. The key is never let a Cattleya stay damp and cold 24 hours. If kept dry, most hybrids do fine even if it gets below 50. Some species and their hybrids, notable Laelia purpurata and L anceps, will grow alongside Cymbidiums this time of year and flower with better colors if allowed to cool into the 40s.

Paph rothschildiana and its hybrids have the reputation of being difficult to flower. Many books suggest that they must be very large before they will flower. However, they will flower readily if they are given a month or two of 50-degree nights, less water, and less fertilizer. Once they slow growth and begin to develop an inflorescence raise temperatures and water as you would other Paphs.

Zygopetalums that develop new growths when nights are in the 50s generally produce a bloom spike at the same time. Some species and many hybrids will flower repeatedly as long as the nights are cool. Do not limit water and fertilizer for this group because they seem to stay in a growth mode.

Vandas, Ascocendas, and their close kin are known to be warm loving, but can take a bit of cold, into the 50s, if they are dry and are able to warm up the next day. It is not recommended that they be left outside in conditions continuously below 60 F. Buds will blast and the plant will go into dormancy if they are not kept warm during the day or if they get continued cold nights. Some books used to suggest that they would not flower well if night temperatures were in the 60s. Not only is this not true, but flowers are brighter, clearer and larger if nights are cool, as opposed to the warm sultry nights found in Florida. Vanda coerulea and a few other high elevation species actually like these cooler nights; a fact that may explain why so many vandaceous hybrids flower better when nights are cool. It is

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important to provide bright light, warm days, and good humidity if you want your Vandas to thrive during the winter, but they are not harmed by a few cold nights.

Phalaenopsis are probably the warmest loving of Orchids, but still need a cool down to initiate spiking. This is true for most of the large-flowered species and hybrids, but not for the fragrant summer blooming species such as Phal violacea and amboinensis. October is the ideal month to initiate this process and is accomplished by letting your Phals cool down into the upper 50s or lower 60s. The trick is that they must also warm up the next day 25 degrees F or more. The change in temperature is the most critical component in the initiation of spikes in this group. Most greenhouse growers find that spike initiation occurs without trying, but indoors growers may have to consciously create these conditions to obtain flowers.