



St. Augustine Orchid Society

www.staugorchidsociety.org

The Winter Resting Season

Plant Growth is Slowing

by Sue Bottom, sbottom15@hotmail.com

November, 2009 Keiki Club Presentation with Cold Damage Info from Martin Motes

Reduce Watering and Fertilizer. As the days get shorter and the light levels to your orchids are reduced, water and fertilizer requirements are also less. A general rule of thumb is water once rather than twice a week as you do during the summer. Phalaenopsis and paphiopedilums like to be moist but not wet. Cattleyas, dendrobiums and oncidiums like to dry between watering. Check the medium several inches down in the pot to see if it is still damp. If it is damp, delay watering. It is especially important to watch your largest pots since they are the slowest to dry out after watering, especially when it is cool.

Check Light Levels. Changing seasons mean changing light as the sun moves. Make sure that your orchids, either indoors or in a greenhouse, are receiving adequate levels of light. Check your light exposure with a light meter to make sure that you're providing enough light for your orchid to bloom.

- *Indoor Growing.* Windows that were perfect during the summer may now not provide enough light. Take the time to check out the number of hours your orchids are receiving light to make sure it is enough. If not, consider adding grow lights to provide 6-12 hours of good light.
- *Greenhouse Growing.* By late fall the intensity and amount of daylight has been considerably reduced and shade cloth should be removed to provide adequate amounts of light. Be sure to rearrange your plants so that plants that had been receiving less light under the shade cloth are moved to shadier locations.

Air Circulation. Winter is a time when many fungus and rots will attack your plants. They grow wildly under high humidity and poor air circulation conditions. Be sure to water in the mornings so that all plant surfaces have a chance to dry during the day. Keep adequate air circulation going at all times, both to keep molds from forming and to keep the air from getting too hot or too cold in any particular spot. In a windowsill area, those plants nearest the windows can become chilled even when the temperature in the rest of the house is in the 70s. Moving the air with a fan will help keep the temperature in any particular place more consistent.

Temperatures. Have a plan to protect your plant during the winter months.

- *Minimum Temperatures.* Protect your phals, vandas and phalaenopsis type dendrobiums when temperatures drop to 50 to 60 F and your other plants at 40 to 50F. Get projected hourly night time low temperatures for your area from Wunderground.
- *Temperature Differential.* Make sure that your orchids are getting some solar heat to get the day time temperature at least in the 80s. They will not grow well for you in a constant 65 to 70 degree environment. You may have to move your plants to a window with more direct sun to accomplish this. If you have installed artificial lighting to increase light, this may provide enough warmth for your plants.



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Treating Cold Damaged Orchids. Orchids exposed to cold weather can be damaged. Cold damage appears on orchids as whitening of the foliage and stems. The white gradually turns to brown as the affected tissue dies. Often this dead tissue simply dries and the damage is limited to the unsightly patches that are left. Frequently, however, the damaged tissue is infected with bacterial rot which can spread in the plant and cause further damage.

- Softening of the edges of the cold damaged areas or oozing of brown fluid indicates bacterial infection. Removal of the leaf or stem is a simple but somewhat drastic solution. If one is loath to lose so much of the plant, the most effective treatment for bacterial infection is treatment with cupric hydroxide (Kocide or Champion) which should if possible be combined in equal parts with mancozeb (Manzate or Dithane M45).
- This combination is packaged, pre-mixed as Junction. By adding a small amount of water to the chemicals in a jar, one can make a slurry that can be brushed on the lesions with an old toothbrush. Any leftover slurry can be placed on a high shelf (brush and all) and re-hydrated later. This stuff is also the cure for those soft spots that appear on phal leaves in summer.
- For large collections, with extensive damage, one tablespoon per gallon of cupric hydroxide and mancozeb can be sprayed. Mix the two and wait an hour or more before spraying. Do not apply this mixture to dendrobiums or bromeliads that are hyper-sensitive to copper.
- Be cautious when handling chemicals, read and follow label instructions.

Isolate those Plants that Need a Rest. Winter is a good time to group plants together that need similar winter conditions. *D. biggibum* and *R. digbyana* both need high light and less water during the winter months. Keep these and similar plants together so that you will know that they need only once a month watering. *Catasetinae* (*catasetum*, *clowesia*, *cynoches* and *mormodes*), *calanthe*, some *dendrobiums* (*nobile*, *seminobile* and *Callista* sections) need no water at all until the new growth starts in the spring. These can also be grouped where you know you will not water them. You can flag these plants with a special color tape or plant tag so you can identify them easily.

Stake Your Bloom Spikes. *Phalaenopsis* spike this season. Stake the inflorescences when they get 6 to 10 inches tall and attach the bloom spike several inches below the growing spike so the flowers will be displayed to their best advantage. Be careful not to change the spike's orientation to light because the spike will grow towards the light. If you move the plant and don't replace it with the same orientation, the flower spike will twist toward the new light direction and the flowers will not have the beautiful, pendant shingling so attractive in phals. Stake an *oncidium* inflorescence attaching the spike to the stake in several locations to encourage vertical growth. Take time to stake your *cattleya* flowers.



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Attach the pseudobulb to the stake with a tie to anchor the plant. Then as the buds emerge, stake the flower stem to the stake so the flowers will emerge upright and facing forward.

Practice Good Sanitation. When working with your plants, be sure to wash your hands between plants and clean off your tools in order to eliminate the possibility of passing viruses between plants. An alternative to this constant hand washing is to use thin latex gloves, one pair per plant.