

May in Your Orchid Collection

By Dr. Martin Motes



Vanda Arjuna 'Illumined' AM/AOS

May Climate Data

Average high: 87.2

Average low: 72.0

Average mean: 79.6

Average rainfall: 5.52"

May is a month of transition in South Florida. Early in the month we can expect the driest weather of the year. Because of the clarity of the air and lack of cloud cover, temperatures rise rapidly in the late morning and can reach the upper eighties or nineties by mid afternoon before cooling substantially in late afternoon. Fortunately, over night radiant cooling rapidly dissipates the previous day's heat. May mornings are a delight, the wise orchidist rises early to enjoy them and to finish his chores before the heat sets in. Chief of these should be extensive dragging of hoses.

May's wide temperature swings and dry air suit our orchids to a tee. New growths on sympodial orchids are developing apace and by continuing the careful watering practices of April (i.e., drenching them thoroughly with repeated applications of water to saturate their roots and potting media, then allowing them to dry to nearly 'hard' dry) we can launch them into the summer in vigorous, disease-free growth. Remember, this saturation can only be achieved with two or more soakings to the point of runoff spaced a few minutes apart. Merely holding the water on the plant extra long will not suffice. The water needs to slowly soak into the roots and media. Test the weight of a "benchmark" plant to be satisfied that it is sufficiently heavy to be totally soaked. The arid air of early May will quickly dry the foliage but the roots can draw on the deep reservoir of water that you have provided with this careful, complete watering.

With the increased heat and light of May we do not want to put our orchids on too lean a diet. Fertilize with up to 2 tsp of 15-5-15 per gal of water every week or so. Alternating with Epsom salts and potassium nitrate at 1 tbs. each per gal. is still a best practice during May. Always substitute fertilizer for a watering and apply like the water in two doses to the point of saturation. Never follow the widely stated but antiquated advice to "water before fertilizing". It's a receipt for over watering without

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any basis in logic or science, Now is also a good time to apply a soluble trace or microelement fertilizer. Follow the dilution rates on the package as mixtures and strengths differ. You can apply this in conjunction with the Epsom salts/potassium nitrate but never with the 15-5-15, 20-20-20 or any other fertilizer containing phosphorus. In South Florida's highly alkaline water the phosphorus interacts with the other metallic elements, reducing the effectiveness of the trace elements. Potassium nitrate, 13-0-46, is the perfect companion to minor elements because it not only lacks phosphorus which would hinder the absorption of the trace elements but the nitrate nitrogen seems to enhance their uptake.

May is still prime time for repotting. With cattleyas, dendrobiums and other sympodials, the virtuous among us have long since finished this labor of love, but the majority of us are faced with the moral dilemma of doing the potting now or waiting until next year with the pseudo bulbs of our plants overhanging their pots and proclaiming to the world our sloth. The one instance in which this dilemma must be resolved absolutely in favor of the plant, is when the media has broken down in the pot. This condition will encourage root rot to become stem rot which will pursue the rhizome even into those over arching bulbs. If in doubt, give the media the "nose test". A pinch of media taken from below the surface of the pot should smell "sweet". A sour smell or the odor of a pond bottom indicates media that is broken down and must be replaced as soon as possible.

The case in which this is almost universally true is with plants potted in sphagnum moss. Sphagnum simply will not last beyond one year (even under cover) in South Florida. As the vast majority of commercially produced Phalaenopsis are now grown in sphagnum, recently acquired plants MUST be repotted annually. As most phals will be finishing their flowers, now is a good time to get them right for the new year's growth. When repotting, one can, of course, choose a more durable media; rock, red wood chips or various mixtures and avoid this annual ritual. Choosing a more durable media will entail modifying one's watering schedule to accommodate the faster draining, quicker drying qualities of these harder substances.

May is a great month for resetting vandaceous orchids whose baskets have deteriorated or that have grown too tall to be easily managed. keikis (off-shoots) can be most safely removed now. In both cases choose the most durable containers for the plants so they need not be disturbed for years. Teak or other hard wood baskets and clay pots last longest. Above all make amply sure that the plants are firmly fixed in their lodging. Vandaceous orchids, above all others, are intolerant of being loosely set. The very height of these plants act as a lever to keep them rocking unless we anchor them securely until their new roots affix themselves to the new containers. Stake and tie them securely until their abundant roots take over. Unsightly staking can then be removed.

As we bask, lulled into complacency by the nearly ideal weather of early May, summer sometimes surprises us. Toward the middle or end of May, the weather in South Florida literally undergoes a sea change. The large continental weather patterns which have dominated our weather through the winter and early spring give way to the tropics and the prevailing south easterly trade winds return us to the

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interaction of Gulf Stream and peninsular with its characteristic afternoon thunder showers. Although lacking the clockwork consistency of June, the rains have come and we must be prepared for them

The relentless and increasing crescendo of rain will, by summer's end, tip the balance in favor of the ubiquitous fungi lurking to attack our orchids. The time to scotch their plans is now; an ounce of prevention is worth a pound of cure.

Leaving the taxonomic niceties to the experts, fungi which attack orchids in Florida fall into two broad classes; the leaf spotting types (*Cercospora* and *Phyllosticta*) and the soft rots (*Pythium* and *Phytophthora*). Fortunately, for modern orchidists, excellent systemic fungicides exist for both types. While these chemicals are no substitute for good cultural practices, i.e. adequate spacing, brisk air movement; the strongest possible light combined with careful watering, fungicides provide the edge to approach near total control of most fungal diseases even in their ancestral home, South Florida. May is a good time to take stock of the collection and see which plants are overgrown and need more space or perhaps even re-potting. The increase in air circulation is well worth the effort. Trimming shade trees and moving plants to brighter locations are also good strategies for May. May is also a good time to consider a preventative spray program before disease has a chance to get the upper hand in our collections. An ounce of prevention begins now.

Leaf spotting fungi are symptomatic of poor air circulation and inadequate light but even under good growing conditions are rarely entirely absent from orchids in South Florida. This near inevitability results because the same diseases also afflict so many other tropical plants in our gardens. Under the battering of the heavy and sustained rains of our wet season, the most minor of problems can occasionally blossom quickly into a major epidemic. Thiophanate methyl (Cleary's 3336, Domain, Fungo) is the proven and recommended systemic fungicide to control leaf spotting. It is even more effective when combined with Mancozeb (Manzate or Dithane M45.) Two pre-packaged combinations are available; (Duosan, and Tops MZ). Always follow label recommendations for rate of application.

To be truly effective, Thiophanate methyl should be applied initially early in the growing season (i.e., now!), then again in two weeks and then every 5-6 weeks thereafter across the rainy season. Faithfully followed, this regimen will control nearly all leaf spotting fungus, including the dreaded 'Thai crud': *Phyllosticta capitalense*. A spreader sticker enhances the effectiveness of the fungicide by holding it on the plant through the hardest rain.

The soft black rot of sympodial orchids and crown rot in vandas are caused by two different organisms (i.e., *Pythium* and *Phytophthora*) although in effect they are indistinguishable. Control of these diseases necessitates different chemicals from those used on the leaf spotting diseases. Etridiazole (Truban) has long been used. For the amateur it is readily available in combination with Thiophanate Methyl (the recommended chemical for leaf spotting) in the formulation Banrot. Applied in the same manner suggested above for Thiophanate methyl to control leaf spotting fungi, this pre-packaged combination should be adequate for most circumstances and

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control crown rot as well. If problems persist two other systemics give excellent control: Aliette (Fosetyl-aluminum) and Subdue 2E (metalaxyl).

All chemicals should only be applied at the rates and according to the label instructions. If in doubt about whether to or how to apply a pesticide always call your County Agricultural Agent at 305 248 3311 for advice.

Tasks for May

- Repot Phalaenopsis out of sphagnum
- Finish repotting of various genera
- Reset vandaceous plants, remove keikis
- Water heavily early in month, more guardedly later
- Initial preventive spray maintenance program

Orchids in Drought Time

Most orchids in cultivation in South Florida are built to withstand drought. In fact drying is the chief strategy of orchids in their perpetual war against fungi. Drought is the friend of orchids, constant moisture is the cohort of fungus. Our current water restrictions give us an excellent opportunity to practice and re-enforce our best watering practices.

Different genera require different watering intervals but one thing all genera share is the need to be watered thoroughly when they are watered. Be sure that all the medium and the roots of the orchid plant are saturated when one has finished watering them. To achieve this happy state, more than one application of water is required. Because water coheres to water better than it adhered to any dry surface, the first application of water serves merely to "set up" the roots and medium for the second more deeply penetrating douse. The same coherent quality of water dictates that water should only be applied to the point of run-off. Once water is running off a surface or out the bottom of a pot, they can get no wetter with that application of water. Make both the Water Management District and your orchids happy by waiting a few minutes and making a second application to the point of run-off. If the medium and roots appear to be still less than saturated (usually their appearance or the weight of the container will tell), give it a minute and apply more water to the point of run-off. In very dry weather orchid roots behave like a cork in a wine bottle, they are too dry to easily wet. Several judiciously spaced applications of water are needed to break through this dryness. Don't drain the Everglades by trying to wash away the dry in a single prolonged deluge

Now is a good time to renew one's stock of water breaking devices. The shower head like breakers and mist heads allow the maximum efficiency of application and the maximum conservation of water. Every serious orchidist's bag of tricks should contain several of these widely available devices. Home Depot has them packaged with a watering wand that also by directing the spray allows the grower to get more water on the plants and less on himself. Make a virtue of necessity and water your orchid thoroughly and well!