

June in Your Orchid Collection

By Dr. Martin Motes



Aerides houletteana

June Climate Data

Average high: 89.5

Average low: 75.2

Average mean: 82.4

Average rainfall: 8.54"

June is the most dramatically tropical month in South Florida. As the southeast Trade Winds blow cool moist air off the Gulf Stream daily, as surely the heating effect of the center of the peninsula percolates up massive thunder heads. The increased cloud cover drawing a veil across the afternoon sun provides much cooling relief for our plants late in the day. Because of this additional cloud cover, our plants are less stressed than in the brightest of May sunshine. The increased humidity makes June feel hotter to us, but this humidity brings blessed balm to our plants from the unrelentingly dry heat of late spring. The shading clouds are also the harbinger of the almost daily rains that arrive like clockwork with the thunderstorms that recirculate the moisture laden air back toward the ocean in the afternoon. These showers can drop the temperature 10-12 degrees in almost no time, again bring our plants relief when they need it most in the peak heat of the day. In June, such soaking rains that can sometimes be an inch or more an hour, are the norm rather than the exception.

For orchids grown outside in South Florida this month, how to dry them out becomes more the question than how or when to water them. For most sympodial genera (cattleyas, dendrobiums, oncidiums, etc.) the natural rainfall of June is sufficient. Only in those rare once or twice times during June when no rain falls for nearly a week is it necessary to think of watering sympodial orchids in June. Even then it usually is a thought that can be dismissed. A thorough "hard" drying in this first month of the rainy season is usually of much more overall value to sympodial orchids than the slight extra push of additional water. Harder plants that have not been pushed with extra water are much more disease resistant than softer more lushly grown orchids. Vandals and other high water requirement plants may still need periodic watering in June but remember that these types too relish occasional "hard" drying and the heavy often lingering, rains of June are just the nostrum for rehydrating them even when they have become as dry as the cork in a wine bottle dry. When watering in June, remember at no season is the standard 'water early in the day' rule more relevant; those extra hours of drying are

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crucial. If your vandas or other orchids really need water, water early in the morning to allow time for them to dry not merely by night but by the time the all too likely afternoon thunderstorms arrive to soak them again. Be sure when you water that the roots of the vandas are saturated until they turn overall dark green. This will still take two applications of water spaced a few minutes apart. June is the archetypical month for careful but totally thorough watering. For those of us committed to sloth, this month is one in which benign neglect becomes a virtue

With an eye to efficient drying which the season demands, June is an excellent time to review the spacing of our plants. Always give your plants sufficient space to allow for good air circulation to permit rapid drying. Crowded plants stay wetter longer encouraging fungus and bacteria. Scale and mealy bugs also thrive on the soft lush growth generated by overcrowded, overshadowed plants. Mites too love the extra protection from dislodging rain that overgrown plants provide. When looking at the spacing of your plants also allow some extra space for the new growth that will be rapidly developing in the new growing season. Remember your well grown plants will be much larger at the end of the rainy season when the fungi are savagely on the prowl. Plants and trees in your yard also will have grown in the past year and will be growing more in the rains of summer. June is a good time to think of pruning vegetation that is blocking light and air from our orchids. Come the true heart of hurricane season in September you will be glad that you did! Tree pruning alas, slips to a low priority in the face of an approaching storm. Your orchids will be glad right away that you pruned, rewarding you with harder, healthier growth sure to produce yet more lavish blooms in season.

A persistent problem in June is how to apply liquid fertilizer to our plants under these often persistently wet conditions. As all of our orchids are in rapid growth in June they need to be fed, ironically this comes in the face of super abundant moisture. While rain contains minute quantities of nitrogen, heavy persistent rain can in fact strip nutrients from our plants by reversing the normal osmotic process. To a degree this effect of the heavy rains can be positive leaching away any excessive fertilizer salts that have accumulated over the dry season but overall the rain leaves them needier than before. Those of us who have kept our plants well nurtured in May will be ahead of this curve but we all must keep our plants fat and happy at the onset of the heavy growing season. For orchid grown in pots with media, the relatively new, slow release fertilizer widely sold as "Dynamite" (i.e., Nutricote) is of especial value at this time of year. Other brands of slow release fertilizer have not proven to be as reliable (neither consistent nor durable) under the hot humid conditions of South Florida. In general, a good rule in June is that when some opportunities to water present themselves, think rather of applying liquid fertilizer instead of just water. Remember too, the oft repeated bad advice to water your plants before fertilizing them is particularly erroneous in June when over-watering can quickly have negative consequences. In June, as always, replace a watering with an application of the proper concentration of liquid fertilizer. Another frequently sought strategy is to apply fertilizer in conjunction with fungicidal sprays. In general it is not advised to combine balanced fertilizer (20-20-20, 18-18-18) with sprays because with South Florida's highly alkaline water. Any phosphorus in the fertilizer tends to bind up most of the trace elements when conjoined to South Florida ground water. Phosphorus (a very active metal) can also have adverse reactions to

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the fungicide itself, lessening or abnegating its effectiveness. The solution to this dilemma is to use a fertilizer without phosphorus when a bit of nutrition is desirable. The best source is potassium nitrate 13-0-44 (available at farm supply stores in 50 lb. bags) which provides the additional potassium our plants crave. 1 Tbsp per gal can be added to the spray solution. Be sure to use "Spray Grade" not "Prilled" which would need to be dissolved in hot water. Thiophanate Methyl, Cleary's 3336 or its combination Banrot or Duosan should be applied prophylactically in June. Keep a sharp eye on your plants for any signs of black rot (Pythium). Should soft black or brown spots appear, they should be excised immediately using a sterile knife as this disease can spread quickly in wet conditions. Banrot gives good control but Alliette is the best fungicide to control this disease if it persists.

To minimize the need to apply fungicides, June is an excellent time to review our overall sanitation and cultural conditions in the growing area. It is always important to keep the growing area as clean as possible. In June, cleanliness becomes even more essential because water is the chief vector of most orchid diseases. Dead leaves, roots or other dead orchid tissue frequently harbor diseases that can be loosed upon our orchids by the heavy rains of June. Weeds (dead or alive) can hamper air flow and also harbor disease. This month whatever one can do to enhance air circulation is a plus. Under cover, fans to move air are of great value to Phals and other genera. Hopefully, if we have been doing a good job, our plants will have grown significantly since last year's rainy season. They all may well need more space. Remember that old time orchid growers would say one needs a cat to be a good grower in South Florida because a cat should be able to walk orchid benches without knocking plants down when they are properly spaced.

Snails and slugs will have the whole world as their stage in June and can travel considerable distances to eat our tender orchid shoots. Baits containing metaldyhyde are very effective if applied evenly and often. Remember, bait draws the pests; spread it thinly but repeat weekly for thorough control. Snails and slugs always require multiple applications. Overly heavy applications of bait will merely waste in the heavy rain.

Although mites and to a degree thrips are washed away by the heavy rains of June, the warm conditions of summer speed the growth of scale and mealy bugs. At the first sign of either of these pests spray with Soap at 2 oz. per gal or an appropriate insecticide. Oil is no longer an option in the heat of summer. If the soap doesn't prove effective enough, try something stronger but apply with care early in the morning or late in the evening as the high temperatures of mid-day in June can exacerbate phytotoxic reactions.

June is a great month for top cutting strap leaf vandas, teretes (papilionanthes) and reed stem epidendrums. Most sympodial orchids are already in growth and unless their media in totally broken down are probably best left undisturbed till their new growths have matured and they have flowered. If you have not gotten your Phalaenopsis out of last year's sphagnum moss wait no longer! Phal roots in soggy medium in June is a receipt for "Fails"

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For those of us so in love with Florida that we would never think of insulating ourselves with air-conditioning, the rains of June provide pleasant relief from the harsh Mediterranean sun of late spring. As my son Bartholomew at age two so aptly said "Rain sweet as honey". Enjoy! Our orchids do.

Tasks for June

- Careful watering this month often means no watering at all. Arise early to enjoy the cool and water only when truly necessary.
- Space plants amply. Good air circulation is essential across the coming months.
- Re-pot Phals and reset Vandas. Make sure that plants are firmly set in their new abodes.
- Begin or continue a disease prevention program with the prophylactic application of Thiophanate Methyl (Cleary's 3336) and Alliette or with Banrot.
- Clean up growing area and plants. Remove dead leaves from plants and the ground. Pull weeds.
- Prune trees and shrubs to increase light and air circulation.
- Apply snail bait lightly early in the month and again lightly mid-month.
- Set air conditioning thermostat at 80 and enjoy living in the Tropics.

The Dreaded Thai Disease: *Phyllosticta*

Phyllosticta capitatus, also known as *Guignardia* is most commonly referred to in Florida as Thai fungus. In fairness to the Thais, it is in fact cosmopolitan. Amateur growers have exceptional difficulty controlling this disease largely because of a lack of understanding of its life cycle. An understanding of this fungus makes it no more difficult to control than any other of the leaf spotting fungi such as *Cercospora*.

Phyllosticta seems to appear suddenly on otherwise healthy plants; usually after they have been subjected to cold stress in the late fall or early winter. The distinct, rough, often diamond shape lesions are in fact the fruiting bodies of the fungus. The fungus has been present in the leaves for some time and the sudden appearance of the lesions is analogous to the appearance of "fairy rings" of toadstools after a heavy rain. Just as mystery surrounded the latter phenomenon for ages, many growers cling to the mistaken notion that *Phyllosticta* is a systemic problem like a virus. Strictly speaking this fungus is a disease of the leaf not the entire plant. The disease spreads upward on the plant from lower infected leaves to the newly formed leaves as they emerge. Only under the most adverse growing conditions is this disease fatal to the plant. It is, however extremely persistent. To control this highly successful organism requires equal persistence on the part of the grower.

In Florida, *Phyllosticta* is spread from August through early October. Ironically, for the remainder of the year this disease is difficult to transmit. The corky lesions of the fruiting bodies need to be wet for a prolonged period in order to open and release their spores. For much of the year, *Phyllosticta* is much less virulent than most fungi but alas; the slow drizzles of late summer and early fall provide ideal conditions for this fungus to spread. Awareness of this period of peril is critical to control of the disease.

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As with all disease control programs; an ounce of prevention is worth a pound of cure. Good air movement, bright light, and adequate plant spacing are all of great importance. In Florida September, these good cultural measures are not enough if the pathogen is already present in the collection. When infected plants are present to provide inoculum, the entire collection needs to be immunized with systemic fungicides. Early and consistent spraying, beginning in mid-May is the best practice. Thiophanate Methyl (Cleary's 3336 or Thiomil) is the systemic most readily available to homeowners.

An initial spraying in early to mid May should be followed by a second spraying in two weeks. This second spraying should be followed with regular spraying every 4-6 weeks. Consistency is particularly important when using Thiophanate methyl to control *Phyllosticta* as some strains may have developed some resistance. Strobins such as Heritage (azoxystrobin) are also effective in controlling *Phyllosticta*.

A proper spray program will give complete control of *Phyllosticta* but isolating infected plants and removing leaves that bear the spore carrying lesions are also good practice. Some growers have had limited success painting the lesions with clear nail polish to prevent the emergence of the spores. The other virtue of the spray program outlined is that nearly total control of other leaf spotting fungi will result. *Cercospora* and anthracnose will be eliminated as well. *Fusarium* infections will also be severely curtailed or eliminated.

Controlling Snails and Slugs

Snails and slugs are recurring problems in orchid collections. Recurring because they are ubiquitous, persistent, and hard to completely control. They recur whenever the weather is favorably wet for them to move about with ease. These mollusks save their energy during dry periods to maximize their energy in eating our orchids when the environment is favorable.

Slugs and snails are creatures of habit. When they have found a lush patch of flowers or soft new growth they feed there at night and then follow their silver trails back to their snug resting places for the day. Old pots, boards, piles of decaying leaves or other vegetable material are mollusk hotels. The moist potting soil of ferns or other foliage plants can serve as bed and breakfast. These are the places to round up the usual suspects! Better still clean up these blighted parts of the neighborhood and eliminate the spawning grounds of these criminal elements.

When one actually encounters one of these slime balls whether at their home or at large, the crunch of their shells underfoot is always satisfying. Unfortunately, like other unsavory types they do most of their work late in the night when honest folk are abed. For this reason leaving these hungry night workers a snack in the form of metaldehyde bait is the most effect control for snails and slugs. These mollusks are fatally attracted to metaldehyde. They are drawn like moths to the flame. Spread the bait thinly, one pellet every foot or so. They'll find it. The smaller the pellets the better. Those small pellets which fall on desirable plants will do little or no harm and small bits are less attractive and potentially less injurious to domestic animals.

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Repeated applications at weekly or biweekly intervals (depending on rainfall) are absolutely essential. Bait is washed away by rain and irrigation. One also never manages to get all the pests with a single application. Any mature snail or slug has also almost surely reproduced and the next generation will be along soon. Please don't leave any starving orphan snails out there. Those repeated light applications of metaldehyde bait are like manna from heaven for snails.

Metaldehyde also comes in liquid form which can be sprayed to eliminate bush snails in hanging plants. Great care should be exercised in its use.