St. Augustine Orchid Society NEWSLETTER
November 2026
Volume 21 Issue #11

# Club News




**November 3 Meeting**
by Janis Croft

**Welcome and Thanks.** Tom Sullivan opened the meeting at 6:55 pm with 56 attendees. He thanked Dianne, Laura, Christine, Mary Ann, Dottie and Julie & Paul for the delicious treats and reminded all to remember to "Drop a Dollar" if you enjoyed. The dollar helps us pay for the coffee and paper good supplies.

*Orchid Shows* - The two remaining 2026 orchid shows are in Deerfield Beach in November and Fort Pierce in December.

*Calendars* - Terry does a calendar every year featuring orchids grown by members. Reserve your calendar for $20 so we can know how many to print up. You can prepay if not going to be at the Xmas party.

*Virtual Show Table* - is posted online to YouTube and Rumble once the video is edited. Most viewers watch the recorded version, but let us know if you want an invitation to the live presentation. Send photos of your blooming orchids for the next show by the 23rd of the month.

**Club Business.** Rachel introduced our 1 guest for the evening. She asked all with November birthdays to raise their hand for a free raffle ticket. If anyone is having a major life event or needs cheering up, let Rachel know.

*Election* - Sue first asked Linda Steward to stand to a round of applause in gratitude for Linda's 12 years of service as the Membership VP. Linda is stepping back from the Board, but she has recruited and trained Rachel Biello to be the next VP of membership with Sandra Thompson as her Director and back up. The following slate of 2027 Officers and Directors was proposed: returning President Eric Milstrey; with Tom Sullivan as his back up returning VP Communications Janis Croft, with Karen Ford as her back up; returning VP Events Dianne Batchelder, with Laura Kissee as her back up; new VP Membership Rachel Biello, with new Director Sandra Thompson as her back up; returning VP Programs Sue Bottom, with Director Judie Armstrong as her back up; treasurer Cathy Mayo, with Director Kay Payne helping with financials.

*Xmas Party* - Dianne announced we're having a BBQ themed main course of pulled pork and chicken thighs for the Dec. 1st Holiday Party and Auction. Start time will be 6:30. She then passed around a Sign Up Sheet with suggested sides; please bring a dish to share even if you didn't sign up for anything specific. If you plan to donate plants for the auction, let Sue know so they can be added to the list.

M*embers Choice* – Christine reminded all to vote for their favorite orchid during the break after the Show Table.

*Library* – Our librarian Dolly brought in several books tonight along with the light meter for anyone to borrow. Dolly is also weeding the collection and brought in older materials for the raffle table. If you would like something from the Library list on the website, send a request to staugorchidsociety@gmail.com and she will bring the item(s) to the next meeting.



**Show Table.** Courtney started with Doritis pulcherrima in a coerulean form. It grows in sandy habitats among bushes and tall grasses which results in tall spikes and long lasting flowers. It likes higher light than other Phals. Ons. Jack McCully 'Bright Future' and Ons. Catatante 'Orange Kiss' both present the orangey yellow flat lipped flowers along branched inflorescences. Courtney stated that both could be potted in smaller pots. Bulb. Jim Clarkson was mounted on a wooden plaque requiring frequent watering, but doesn't like high light. Bulb. sanguineopunctatum was also mounted and had multiple ivory colored fan shaped umbels of flowers. Next was C. Nancy Off 'Lindwoo'. This

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# Club News



## Upcoming Orchid Events

**November**

10 JOS Meeting, Winterizing Your Plants
JOS Panel Discussion
14 Florida North-Central AOS Judging, 10 am
1400 Country Club Blvd., Mt. Dora 32757
14-15 Deerfield Beach Orchid Society Show
Safe Schools Institute
23 Send Pictures for Virtual Show Table

**December**

1 SAOS Christmas Auction, 6:30 pm
Memorial Lutheran Church
8 JOS Christmas Auction
Timaquana Country Club
12 Florida North-Central AOS Judging, 10 am
1400 Country Club Blvd., Mt. Dora 32757
12-13 Fort Pierce Orchid Society Show
Riverwalk Center
23 Send Pictures for Virtual Show Table

**January**

5 SAOS Meeting, Growing Orchids, 6:30 pm
Mark Walters, Orchid Trail
8-10 Fort Lauderdale Orchid Society Show
Charles Dodge City Ctr, Pembroke Pines
9 Florida North-Central AOS Judging, 10 am
Clermont Judging Ctr, 849 West Ave.
9 Sarasota Orchid Society Show
Sarasota Sahib Shrine
12 JOS Meeting, Topic TBA
Speaker TBA
15-17 Tamiami International Orchid Festival
Dade County Fair Expo Center
22-23 Apopka Int'l Winter Orchid Show ?
Krull Smith Nursery, Apopka
23 Send Pictures for Virtual Show Table
30-31 Florida West Coast Orchid Society Show
Seminole Recreation Division

**February**

2 SAOS Meeting, 6:30 pm
Sue Bottom & Courtney Hackney, SAOS
Water Quality and Orchids
6 SAOS Repotting Clinic, 10 am til noon
Southeast Branch Library
6670 US-1 N, 32086
6-7 Venice Area Orchid Society Show
Venice Community Center
9 JOS Meeting, Topic TBA
Speaker TBA
12-14 Greater Orlando Orchid Society Show ?
Orlando Garden Club
13 Florida North-Central AOS Judging, 10 am
Bob Foster Center, Mt. Dora 32757
13-14 Boca Raton Orchid Society Show

**St. Augustine Orchid Society Organization**

| | |
|---|---|
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hybrid was produced for the cut flower trade and has been around for a while. The size of this plant was spectacular. Another large plant was B. Little Stars with the small flowers encircling the pot. Courtney said one must have the pot hanging in a location where it gets full sun all around the pot in order to have the symmetry that this one had. Rlc. Memoria Robert Strait 'Islander's Delight' had splash on its petals the same color purple as the entire lip. Courtney ended with one of his crosses, C. Roy Field x Brunswick Gem, with its striking peachy color and flat petals. He said that different plants bloom with slightly different colors at which point Sue grabbed her plant from the sales table to show how the colors from the same cross can vary.

**SAOS Program.** Sue introduced our guest speaker Alek Zaslawski of AWZ Orchids in Brazil, whose talk is entitled beautiful Brazilian orchid habitats. AWZ has been line breeding to create some of the best varieties found within many species, especially those belonging to the Cattleya alliance. AWZ Orchids currently has around 20,000 plants in their collection, cultivating ccoler growing plants at an altitude of 3,600 feet and warm growing plants at an altitude of 990 feet.

Alek listed the four different species found in four distinct regions of Brazil: C. violacea, C. granulosa, C. guttata and L. briegeri. He showed a map of Brazil pointing out the separate and environmentally distinct areas where each type grow in nature. C. violacea is the most widely spread species and the only bifoliate that grows outside of Brazil. Alek explained that the species blooms in Amazonian summer or the "wet season" which runs from Nov.-May with very high humidity and temperatures 80-90 degrees all year. He showed two slides of the same location in the city Manaus during the dry and then the wet season. During the wet season, the low areas are completely submerged by over 30 ft of water, which floods the forests, so the violacea have to grow high in the tree canopy. To see violaceas in bloom, one needs to take boat rides in the flooded forest. The species prefers to grow on dead branches particularly in the Arapari tree under full sun, high heat with lots of humidity and air movement. He showed slides of other orchids in the same environment including B. martiana, Scuticaria steelei, and Galeandra devoniana.

In cultivation, they grow their plants in warm to hot temperatures all year (64 degrees and up). They fertilize weekly and back off soaking the plants when temps are cooler. C. violacea prefers to be mounted just like the in situ slides he showed us. Alek then showed slides of various color forms including a rare semi alba form with a purplish lip that's from the border area with Venezuela. He then showed var. carnea, a large white with striking pink-lipped flower, and said they were the first to make this cross.

Next Alek talked about C. granulosa, which grows in the farthest eastern section of the Brazilian coastline with the city of Touros at the upper edge. This area is near the equator and therefore is very warm. He visited the restinga area near Natal, which has lots of sand dunes and scrub brush. The plants are hidden in the brush where they get filtered light, grow on the branches and send their roots down to the ground. They get nutrients in the rotting leaves sitting on top of sand. It is very humid and windy.

C. guttata, the third group, has colorful flowers, which are fragrant during the day and bloom in March then require a rest. This species grows along the southeast edge of Brazil in the coastal area where summers range from 77-100 and winter temps range from 57-82. Alek showed photos of tall Epidendrums, Brassavolas and even Catasetums growing alongside the guttatas. The guttatas were always partially shaded by surrounding vegetation. You can repot when they are actively growing new roots; and make sue they have good drainage and are well staked.

The final species was L. briegeri, which grow in the mainland of the state of Minas Gerais in the southern part of Brazil. This is the more mountainous region with heights of 9100-9500 ft. The Espinhaço Mountains has the highest population of L. briegeri. This area has mounds of rocks resulting from the diamond mining previously done there. Alek would walk around the small mounds and outcrops and find L. briegeri growing near the cracks and lichen on the granite. This area has dryer winters than the other species. L. itambana, a miniature with yellow gold flowers, grows near the Itambe peak in its outcrops hence the name.

In closing, Alek said he hoped that seeing how these bifoliates grow in the wild would help us understand how "Growers should adapt to meet our orchids needs" instead of vice versa.



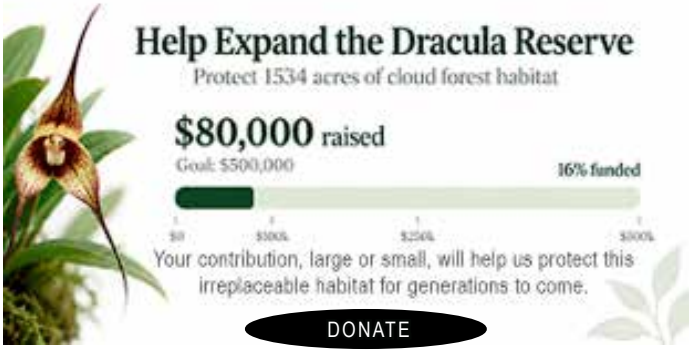
**Meeting Conclusion.** Christine announced that the Members Choice went to C. Nancy Off grown by Sue Bottom. Dianne and Laura then announced winning ticket numbers for the raffle table. Thanks to the helpful hands that stayed to help clean and store the tables, chairs and room.

## Bernie Wacholder

1946 - 2026



Bernie Wacholder departed this earth at the age of 79 after a bout with cancer. He and his wife Susan split their time between Florida and New York City He loved his orchids, growing outside and in a greenhouse at his Florida home just north of Vilano Beach. Susan has donated his plants to SAOS and we'll be having an orchid sale later this month. Stay tuned. Rest in Peace Bernie.




## Culture Notes

Short days and cold nights necessitate adjustments for both plants and growers. Reduce water and fertilizer gradually until you reach your winter target, about half that of the summer levels. Don't fertilize winter dormant orchids (Catasetinae, Callista and Dendrobium section Dendrobiums, Calanthes, etc.) after Thanksgiving. Prepare your plants for their winter home. Inspect them, remove dead leaves and sheaths with a sterile tool, and spray for pests if necessary. Protect them when temperatures are projected to drop below their winter minimum acceptable temperature.

### American Orchid Society Corner

*Webinars*

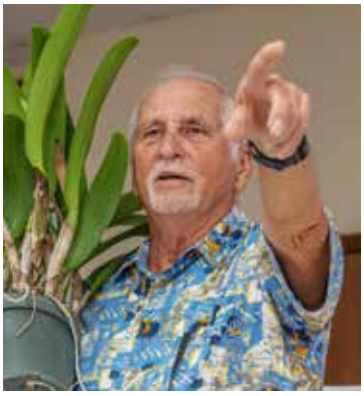
November 10, 8:30 pm, Everyone Invited
Greenhouse Chat - Ron McHatton
November 5, 8:30 pm, AOS Members Only
New Zealand Potting Media – Graham Ramsey

*Orchids Magazine this Month*

The Epiphytic Orchid Enthusiast – Fred Clarke
Growing without a Greenhouse – Cam Mackey
The Orchid Hybridizer's Mind – Graham Guest

## December 1 Meeting

Christmas Party and Auction



We are looking forward to our Christmas party and auction where we get to kick back, have fun and spread holiday cheer with our orchid friends... and come home with orchids. Hope to see you there!

Our Christmas orchid auction is on our normal first Tuesday meeting night. We'll be setting up around 5:30 and start our social hour at 6:30 pm. This will give us a chance to exchange holiday cheer before we hit the vittles. Bring your beverage of choice. The club will provide the low octane water and coffee, but if you enjoy an adult beverage with your meal, feel free!

One thing you can always count on is all the good food. We'll have a BBQ themed dinner with pulled pork and smoked/grilled chicken thighs provided by the Smash Stack. Bring a dish to round out the meal. Salads, pasta and vegetable side dishes and desserts have been big favorites in years gone by.

We'll have 2027 calendars and orchid plants available. We'll finish up the evening with an orchid auction where you can bid on a nice variety of different types of orchids. Let us know if you plant to donate any orchids to the auction so we can include them in the slideshow.

When: Tuesday, December 1, 6:30 til 9 pm
Where: Memorial Lutheran Church
3375 US 1 South, St. Aug 32086



# Inspiration





## Orchid Questions & Answers

by Sue Bottom,
sbottom15@hotmail.com

**Q1.** I have these curved striations on the leaves of my Phalaenopsis. Is this from a virus, bug damage or some deficiency in fertilizer?



**A1.** It looks like the damage occurred to the leaf when it was just forming and then, as it grew, it expanded from the point/line of damage. Perhaps there was rainwater which was trapped in the crown and caused a localized rot that ultimately turned black. If all the phals are getting rained on, perhaps you could hang them so they tilt and water drains from the crown so the inevitable bacteria won't damage the tender new leaves.

**Q2.** My huge Den. Kiilian Stripe fell out of the tree and the main cane heavy with flowers is broken about six inches up from the bottom. Can I save this plant? Should I cut the canes back?

**A2.** Well, that's a heartbreaker, but dendrobiums are tough. That one is mostly a phalaenopsis type dendrobium that is very sensitive to cold. This may not be the best time to disrupt the root system, though in the spring you can transfer it into a basket so you can support the growths with fall flowers by securing them to the hanging wires.



For now, get two clay pots, one that you can drop the plant into, and a second larger one that you can drop the pot into. Then get a bunch of long zip ties (if you have to make them longer you can always tie two together) and plan on adding zip ties at three levels. Starting about 6




inches from the media, prop up the new growths with the zip ties. Then go up another 12 inches and do it again, and then repeat til you have the plant mostly upright.

If that one cane is broken, cut it away unless you can splint it. If you do cut it, you might consider trying to propagate seedlings. Strip away the leaves and flowers from the cane, and bury it about half way lengthwise in a thin layer of sphagnum moss to see if it will sprout seedlings from the nodes. I'm sure next fall you'll be sending me beautiful pics of this in bloom!

**Q3**. My Epi. nocturnum came in a small net basket, which I dropped into a larger one and backfilled with media. The leaves keep turning yellow. I sprayed with hydrogen peroxide and copper and recently cut it out of the original net pot and put in plastic. The leaves are still turning yellow.



**A3.** The pseudobulbs on the Epidendrum grow very closely together, suggesting a small container should be used, particularly if media is placed around the roots. The pot looks to be too large for the plant, so knock it out of the pot and look at the roots. The roots were suffocating in the pot, so the suggestion was made to remove the rotted roots and drop the plant into an empty clay pot and mist it every other day until new roots begin to form. At that point, the plant can be mounted or dropped into an empty basket with little or no media.



## Orchids in Fall

by Dr. Courtney Hackney

Winter in the temperate zone is alien to most tropical Orchids. For the most part, tropical Orchids experience nearly 12-hour days and nights with only slight differences in day length and or temperature. With the exception of species at the end of the tropical zones or those from high elevations, the most likely seasonal variation many species will experience is that of a wet/dry variation during the year. Remember, for tropical species, dry may simply mean less wet, while in other cases there may be little or no moisture for months in their natural habitat. Failure to recognize this aspect in both species and hybrids leads to either poor growth or death in many Orchids.

If you have graduated to species or have primary hybrids (those made by combining two species), you may find that a little research can lead to much improved growth and flowering in these plants. If you find that the natural habitat offers clear days during winter, take this as a hint that the species requires bright light and less water during that time of the year. Some species are more forgiving than others and so are more common in cultivation, while hybrids have been selected that withstand conditions in greenhouses. There are some common groups of Orchids that respond to simulated, pronounced seasonal change and that give many growers, novice and experienced alike, difficulty.

In Paphs, the diminutive Brachypetalum group (concolor, niveum, etc.) grows in limestone outcrops subject to dry periods and rapid drying. In winter, when day length is short and light intensity low, members of the Brachy group must be watered less. This group has thickened leaves that store water. If the root system is intact, let the leaves shrink a little before watering. The same is true of most of the Parvisepalum group; water them less in winter and watch the leaves for a sign that they need water.

Many Cattleyas, including hybrids, need to be drier in winter. Increasing light intensity in greenhouses will assist in drying the plant and simulates aspects of their natural environment. Encyclias and other Caribbean species are in the hurricane zone with heavy summer rain ending in late November or early December. For the next six months there is little rain, but high humidity. Sunlight remains relatively intense and days near 12 hours long. Failure to limit water leads to the loss of many Caribbean Orchids in temperate greenhouses each winter.



*These six plants illustrate the progression of Catasetinae into dormancy, from left to right: 1) leaf tip yellowing, 2) leaf yellowing, browning and abscission, 3) more yellow leaves, tip die back and leaf drop, 4) obvious missing leaves at base, 5) two leaves remaining, 6) leafless plant. Photo and information courtesy of Fred Clarke, Sunset Valley Orchids.*

Under-lights growers have an advantage this time of year as they can more effectively control both day length and light intensity. If you grow hybrid Orchids inside, do not try to replicate the day length here in the Carolinas. Eleven hours of light is a short enough day to convince your plants that they are at home. Depending on the heating system in your home there may even be a need to add humidity to your growing area. Orchids prefer the kind of humidity that people like, about 60%.

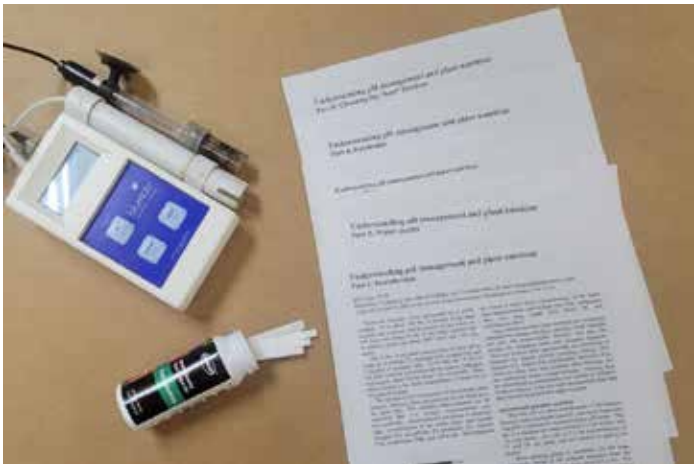
Some Orchids grow in habitats that experience little seasonal change. Vandas and Phals will grow great under the same conditions year-round, 65 F at night and 90 F during the day. Both of these groups like long days with Phals preferring lower light levels. Remember that standard Phals need a large day/night temperature change, and/or lower night temperatures to initiate flowering. After that period of flower spike initiation, these Orchid groups need conditions similar to the warm tropics.

One final warning before winter officially arrives. If you have discovered a few more critters missed before moving plants inside or into the greenhouse, there is still time to spot-treat them on a nice warm afternoon. Some pesticides are not approved for inside the greenhouse and some that simply stink. Move affected plants outside in an area away from pets, children and bright light and treat following directions. The low humidity will help the plant dry and lose at least some of the smell that often accompanies these pesticides. After plants have passed the “no contact period” (see pesticide directions) move them back inside or in the greenhouse and place them where you can watch them during the winter in case some of the beasts survive.

*Note: Dr. Courtney Hackney wrote a monthly column of his orchid growing tips for about 20 years; we are reprinting some you might have missed, this one from November 2001.*

## Evolving Thoughts on Fertilizing your Orchids

by Eric Milstrey, St. Augustine Orchid Society



We all know that fertilizing our orchids is essential to getting them to grow well, stay healthy and provide us with flowers. What the grower rarely knows is what type and how much to use to optimize our plants.

In the early days, orchid growers would water the plants before and after fertilizing. With today's water soluble fertilizers, we no longer have to worry how 'hot' our fertilizers are compared to the organic manure based fertilizers of yesteryear. The admonition to water first and then fertilize still makes sense if your orchid's media is bone dry. Watering a day or two after several fertilizer applications will flush out any excess salts.

There are four things to consider when fertilizing: the soluble fertilizer we use, the water we dissolve it in, the potting media that delivers the nutrients to the roots and the needs of the plant. Here in Florida water comes in three varieties, well, tap and purified water (rainwater or reverse osmosis treated water).

- *Well water*, in our area, is largely untreated and generally high in calcium and bicarbonates, may contain sulfur in the form of sulfides and sulfates and possibly be low in magnesium. Some ground water is unsuitable both for plants and people due to high alkalinity and potentially toxic levels of sodium and chlorides. Even if it is acceptable from a drinking water standard, it may not be suitable for use on your plants.

- If your water is from a *public water supply*, it has undergone some treatment so the pH may have been adjusted, and the alkalinity lowered, but it can have potentially excessive levels of sodium and chlorides, which can be toxic to the plant's health. So, the first task it to know what you have coming out of the tap. City water is tested by the health department to be sure to keep people safe but their reports are useless to a plant grower. Only a report from a water testing lab with parameters listed for plant nutrients, alkalinity, trace anions/cations, pH and electrical conductivity as well as calculated values like water hardness are needed. Fortunately, the soil lab within IFAS in Gainesville will do the basics for your irrigating water for $20. You provide them a full water bottle, their form and a check and you can get the report in a few days. Commercial labs will do it as well for a lot more parameters but at more expense.

- *Reverse osmosis* treated water or *rainwate*r has no appreciable minerals, a neutral pH and little alkalinity; a blank slate so you have to add all the nutrients your plants require.

Knowing the pH of the root zone tells us whether the potting media is either acidic or basic, which is important both in fertilizer selection and more importantly in improving the absorption of the critical minerals by the roots. Most of our epiphytic orchids need the media to be a little acidic to get better absorption. If there is no substrate at all, such as with many Vandas, the water should be a little acidic. Bill Argo's article on pH shows that most soils tend to be acidic with a pH range from 4 to 8. Across this range, nitrogen, potassium, calcium, and copper are absorbed at about the same rate. Below 6.5 the rate of absorption increases for phosphorus, iron, manganese, boron and zinc. With alkaline substrates having a pH greater than 7, only magnesium absorption increases.

The pH can be measured using pH strips in the 4-8 range, which are inexpensive and available from the internet or pool or agriculture stores. For those using a Dosatron or Hozon siphonex, you have to test the water at the hose end rather the fertilizer solution. Look at the water analyses report on your alkalinity, the higher the number, the more acid may be required to counteract it and buffer the solution. My well has a moderately high alkalinity, over 150 ppm, and it is not uncommon for other wells in the county to have alkalinities over 300 ppm, so we water with "liquid rocks" and readily see salts accumulate on the clay pots and orchid leaves. Very high alkalinity water (300-500) may contain so many soluble salts that an alternative water source should be investigated, in addition to other cultural adjustments to flush salts from the root zone.

In most cases the higher pH of our well water can be adjusted down safely by adding common vinegar or citric acid. There is no magic level, but I aim for 6-6.5 pH. If you use an injection system, hozon siphonex or use a hose end sprayer, you will need to add more acid to the reservoir to compensate for the dilution water as you feed. The pH of your water/fertilizer mix may differ from the raw water as well as the actual pH in the root zone because fertilizers produce either an acidic or basic reaction depending on the types of nitrogen salts used. The best way to check the root

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zone pH is to pour a small amount of distilled water through the pot an hour after fertilizing and check the pH.

Fertilizers add the major nutrients not in the water and in the case of rainwater, the fertilizer has to supply all the nutrients. Be sure to select a balanced fertilizer with the micronutrients needed. Quoting the June 2003 Orchids article that introduced the MSU fertilizers to the orchid growing community: "Balance does not necessarily mean equal (i.e., 20-20-20). A balanced fertilizer supplies a correct ratio of all nutrients in adequate amounts for normal growth. Once a sufficient amount has been supplied to the plant there is no benefit in adding extra." There is a "Goldilocks" zone of just right for all the needed nutrients; too little and no growth or too much can be toxic. Remember that the more frequently you fertilize the less fertilizer you need to use with each irrigation.

Deciding how much fertilizer to put in the mix is the first decision. All concentration calculations start with the target nitrogen expressed as parts per million (ppm = mg/l). If you fertilize at every watering (continuous feeding) use 60-100 ppm. Weekly or semi-weekly waterers can use more, perhaps up to the 100-150 ppm N range. Going over 200 ppm N can cause weak floppy plants from too rapid growth and the potential for toxic concentrations of the micronutrients. Calculating how much fertilizer to measure out is a math problem that is best done using the fertilizer manufacturers website.

If you have rainwater, reverse osmosis water or municipal tap water go back to that Orchids article. Their standard recommendation is MSU RO Water Special 13-5-15 Cal Mag. MSU fertilizer is named for Michigan State University where the formula was developed, and is basically synonymous with Cal Mag fertilizer that has calcium and magnesium in addition to the standard nitrogen, phosphorus and potassium formulations. GreenCare makes these fertilizers under the brand name Tezula with a green label and is available on the internet. However, several companies make 15-5-15 Cal Mag formulations too (Jack's and Peter's). Whatever fertilizer you use, please read the label to be sure that your nitrogen is nitrate nitrogen and ammoniacal nitrogen rather than urea nitrogen that can't be absorbed by orchids directly. Urea formulations are cheaper but are only ok for plant in soils with bacteria to convert it.

If you have well water in St. Johns County, you need to balance out the high alkalinity present in your water as well as variable levels of magnesium. This is a similar problem found in MSU's wells so the formula they recommend is 19-4-23. Because of the high alkalinity of this water, a greater proportion of ammoniacal nitrogen is used to buffer the alkalinity. Again, this MSU formulation is made by GreenCare also using the brand name Tezula but with purple packaging. Other close options are also available, like Peter's Excel multi-purpose (21-5-20) supplemented with Epson salts (at about 25 ppm or ¼ teaspoons per gallon). Alternately, you can go with a chemist's approach recommended by Martin Motes using a 20-20-20 formulation alternating the following watering with potassium nitrate (13-0-44). This reduces nitrogen and phosphorus but increases potassium.

The MSU fertilizer formulations ruled until Rick Lockwood wrote the "What do Orchids Eat?" article in March 2013 in Orchids. In it he outlined the work of tropical ecologists that analyzed mineral content in forest orchid's mature and older leaves and tropical leaf litter. The results showed that orchids are greedy in absorbing nutrients from their substrate and recycle about half of the nutrients from old leaves, but not so for calcium and magnesium. In comparing this data to tropical leaf litter, he noted that potassium is rare in the environment especially in calcareous environments so it is actively taken up by orchids and retained by recycling it. Based in these lower requirements for phosphorus and potassium (K), he lowered them from the MSU formulations. Testing his collection, he reported great success especially for those plants that were languishing. In coordination with GreenCare they released a product call MSU K-lite (12-1-1) which is also available as a brand named Tezula K-lite with black packaging. Another option is from First Rays K-lite plus (14-1-1 8Ca 3Mg). Many growers report great success with these formulations. Also, available at your hardware store are organic fish emulsions that often have a similar nutrient profile albeit at much lower levels and with no Ca/Mg component.

For years, in the market there has been an orchid fertilizer option designed to make your plant bloom better. These high-phosphorus plant foods (such as 15-30-15 or 10-30-20 NPK ratios) are marketed to encourage heavier flowering and fruiting. Based upon what we know now about these formulations, their advantages are generally discounted. Some sources still recommend bloom boosters in the fall to prepare plants for their winter rest, more to reduce nitrogen than provide excess phosphorus, but I question the rationale.

So, in conclusion, I recommend MSU RO Water formulations for those that use tap water, rainwater or reverse osmosis treated water. If you have well water, use the MSU well water formulations and if needed add more magnesium. If you have mature plants that are languishing, try a MSU K-lite formulation. Please also consider looking at other articles on the SAOS website that discuss additives to perhaps enhance your success further.



## Rupicolous Laelia Culture

by Greg Allikas

If you ask just a few orchid growers how to grow Brazil's rupicolous laelias, you're sure to hear stories of failure. This is ironic, because, compared with other small-growing orchids such as pleurothallids, these orchids are remarkably rugged. Their space-saving stature and colorful flowers make them worth growing. Like all orchid culture, it's easy once you know what the plants need. Although experimentation may be required for your own personal growing conditions, it helps to have a starting point.

The most common cultural requirement you'll hear regarding these laelias is, "They need plenty of light to flower, and while they may grow under normal cattleya conditions, you might never see a flower." This is probably due to the harsh environment in which they grow in nature; often on rock outcrops in full sun with nothing more than grasses and detritus to protect the plants, and nightly mist as the main source of moisture.

**Light** But we are trying to give our orchids the best of culture, and, as with other genera, it is not always necessary (or advisable) to duplicate nature. In the May 1990 AOS Bulletin. James Nickou reported, "I have found that they (rupicolous laelias) will bloom with light levels adequate for most standard Cattleya hybrids. If grown in full sun they will eventually die." He goes on to say that under-light growers should place them close to the tubes for maximum exposure. I know of growers reliably flowering these species in cloudy Oregon. In South Florida, we hang them high and bright but not in direct sun, and they do not receive bright light all day. They grow vigorously and flower reliably for us despite having high night temperatures as a disadvantage. These orchids come from mountainous areas and benefit from a drop in temperature at night.
Rupicolous laelias are often shy root producers and imported bare-root plants are slow to reestablish. If you repeatedly have problems getting these laelias going, look for artificially propagated seedlings rather than mature plants. Seedlings' constant growth is often a solution to establishing species that may otherwise be marginal growers for us. Because these plants resent being disturbed, avoid repotting them every year. When you do have to repot them, be gentle with the root pruning, cutting away only those roots that are dead.

**Media** Although I have seen people successfully growing rupicolous laelias on driftwood (watered every day) and in organic media such as tree fern, fir bark, and even sphagnum moss, the inorganic media are the best choice by a wide margin. Nickou suggested graded aquarium gravel about the size of a pea. Other expanded clay



***L. (syn. C.) harpohylla***
***Grown by Sue Bottom, photographed by Terry Bottom***

products, Aliflor, Turface, sponge rock, Step Capture rock, and fine charcoal, etc. are good choices. In the past. I have tried gravel and gravel mixed with tree fern and had only moderate success; the plants grew, but slowly. I have now settled on a combination of red lava rock and srnall-grade Aliflor and have had wonderful results.

The coarser lava rock is placed in the bottom of the pot and the topping off is done with the finer Aliflor. The more even size of the Aliflor top dressing allows the orchids to be seated more easily. Larger plants (L. cinnabarina, L. rupestris, L. angereri, etc.) get more lava rock, whereas the smaller plants (L. esalqueana, L. reginae, L. lilliputiana. etc.) receive more of the finer Aliflor.

The fact that these orchids do not like being disturbed does not mean that you should overpot; rarely is more than a 5-inch pot necessary, with 3 inches being just about right for most of the smaller species. Clay seems preferable to plastic: it allows more air to the roots and the evaporation of moisture from the clay provides a cooler environment for the roots during the hot summer. You will need to make this decision based upon your growing style and watering habits. It's okay if the plants are up to the edge of the pot, as the short rhizomes make for compact growth. A major advantage of using the inorganic media is that they do not break down. When repotting time comes, it is not necessary to remove every piece of the old medium, allow any bits of material that cling to the roots to stay. Indeed, some growers move the whole plant, lava rock and all, into the new pot and simply fill in with fresh medium. The best rule of thumb for these orchids is to repot only when necessary and do it in such a way as to cause minimal trauma to the plant.

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***L. (syn. C.) sincorana var. coerulea 'SVO'***
***Grown and photographed by Leslie Brickell***

**Watering** Although in nature these plants may go for rnonths with no other moisture than nightly dew frorn the clouds rolling down the mountains, in cultivation they need an ample supply of water. Do not make the mistake of treating them as xerophytes. Under most situations, you will probably need to water rupicolous laelias two or three times a week. Cool spells, lower light or artificial light, and plastic pots will require less water. Growing them in an open shade house in South Florida in 3- to 5- inch pots using lava rock and Aliflor, we usually water three times a week and fertilize a fourth day during growth. They receive high temperatures, bright light and lots of air movement. We have fans going in the shade house 24 hours a day during the warm months. Most of us will water these plants along with everything else. However, Francisco Miranda. an expert on Brazilian-native orchids, suggests watering them late in the afternoon as an attempt to mimic their evening watering in nature. At least one grower I have spoken with has had improved results with this technique. Be sure to provide adequate air movement to prevent rot and attempt nightly watering only on a trial basis.

**Fertilizer** Fertilizer seems to be less of a consideration than with other orchids: rupicolous laelias will grow and flower without it. Actually, too much fertilizer can be more harmful than too little. One reason some growers prefer smooth gravel to pitted lava rock is to avoid fertilizer salt build-up, to which these laelias seem to be sensitive. If using a semi porous medium, be sure to flush monthly with copious clean water to prevent potential problems.

This group of orchids is adaptable to a wide temperature and humidity range and will happily grow in the same conditions as the rest of your cattleyas and oncidiums. A significant day-night temperature differential may produce flowers more reliably but this has not yet been proven. Ours do well in steamy South Florida. The sturdy nature of these little laelias makes them undesirable to most pests, with scale, mealybugs and occasional spider mites being the biggest threats. Like encyclias, the tightly clustered pseudobulbs of rupicolous laelias make an excellent hiding place for these menaces and they may be difficult to eradicate when they are finally noticed. If you are prone to outbreaks of insect pests, routinely look between the pseudobulbs for the tell-tale signs of whitish fuzzy stuff (mealybugs) or the shell-like armored scales, and treat with an appropriate pesticide.

The Brazilian rupicolous laelias are not difficult subjects. As for any orchid, growing is just a matter of providing acceptable conditions. Now that you know what those conditions are, try a few. Their compact growth habit and colorful flowers make them a worthy addition to any orchid collection.



***L. (syn. C.) milleri***
***Grown by Sue Bottom, photographed by Terry Bottom***

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## Orchtoberfest Sale at EFG Orchids

When you visit EFG Orchids in DeLand, you're not quite sure if you're walking through a botanical garden or an art gallery. George has got quirky artwork scattered all throughout the greenhouse, creating interesting and beautiful designs. He says he wonders sometimes if he's artistic or autistic, ha ha! He is also very creative with the mounts and baskets he makes. Every time we visit the immaculate greenhouse we see something new, this time all the Easter Island carvings he has installed around the property. We'll be going back soon to get some plants for the Christmas auction. Stay tuned!











# Show Table



*Grower Sheila Nathanson*
*C. Portia var. coerulea*



*Grower Keith Davis*
*C. guttata 'Bo Derek'*



*Grower Eric Milstrey*
*Blc. George King 'Southern Cross' AM/AOS*



*Grower Suzanne Susko*
*Blc. Erin Kobayashi 'Lahaina Gold' AM/AOS*



*Grower Janis Croft*
*Bc. Nakornpathome Silver*



*Grower Ellen Fay*
*Ascda. Yellow Butterfly*



*Grower Sue Bottom*
*Phal. GW Green World 'Snake Skin'*

# SHOW TABLE



***Grower Sue Bottom***
***Pot. Hint of Autumn***




***Grower Suznne Susko***
***Pot. Kristy Manmoto 'Volcano Queen'***



***Grower Sheila Nathanson***
***E. radiata***



***Grower Janis Croft***
***Ascda. Wilas***



***Grower Courtney Hackney***
***Blc. Jack Stalker 'Majestic'***



***Grower Ellen Fay***
***Blc. Phinyophan Boy***

Link to all Submissions:https://flic.kr/s/aHBqjD8D5c