



## CLUB NEWS



Courtney Hackney

### October 3 Meeting

by Janis Croft

#### Welcome and Thanks.

Tom Sullivan opened the meeting at 6:50 pm with 57 attendees. He thanked Julie, Paul, Dottie, Charlie, Kym and Dianne for the treats and reminded all to remember to "Drop a Dollar" to cover the coffee and supplies. Tom announced that George Hausermann of EFG Orchids is having Orctoberfest for the entire month (Tuesday

through Sunday). He then stated that the Silent Auction plants would conclude before tonight's presentation begins.

**Club Business Welcome.** Membership VP Linda Stewart welcomed our visitors and introduced our newest members Connie Boyle, Laura Kisse, Julie The and Vivienne Oestergaard. She asked our October birthday people to raise their hands to receive their free raffle ticket. She asked that if you know of anyone in need of a cheering up or a get-well card, let her know by emailing her at [info@staugorchidsociety.org](mailto:info@staugorchidsociety.org).

**Virtual Show Table.** The Courtney Hackney show will be Wednesday Oct 11 at 7 pm. Email invitations will be sent out with a Zoom link. We won't be hosting a Virtual Show Table for November. If you can't bring blooming plants to the meeting, please send in your photos for our newsletter and website by the 26th.

**Repotting Clinic.** The last clinic for 2023 will be October 7th, the first Saturday of the month, from 10 am til noon at the Southeast Branch Library, 6670 US-1 N, St. Aug 32086. Supplies for growing orchids are available on the back table. You can request them by email at [info@staugorchidsociety.org](mailto:info@staugorchidsociety.org).



**Library.** Librarian Howard Cushnir brought in our speaker's book on Cattleyas. He also thanked Leslie for donating four reference books to the library. If you would like a book or magazine, send a request to [info@staugorchidsociety.org](mailto:info@staugorchidsociety.org) and he will bring the item(s) to the next meeting.



**Show Table Review** Courtney and Sue started the very full Show Table with an extremely well grown Hab. medusa. Habenarias are terrestrials that need acidic soil and pure water as well as special handling in the winter. Courtney then held up a summer blooming phalaenopsis and noted the gorgeous big leaves on this variety. A chocolatey smelling Sharry Baby was next and he said the one way to kill this plant is to let the medium go bad. Sue then gave him an equitant oncidium (aka Tolumnia) that was in a pot. These Caribbean orchids are often grown mounted because water can accumulate in the leaf axils. Some people turn the pots on their sides to prevent this. There was a blooming Den. farmeri on the Show Table, unusual because it normally blooms in the spring. Courtney looked it over and deduced that the plant had undergone droughty conditions, possibly the reason it is blooming out of season. He then held up a Bulbophyllum lilacium mounted on a large piece of wood. Leslie Brickell donated this plant to SAOS, so Courtney put on his auctioneer hat and Karen won it.

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## Upcoming Orchid Events

### October

- 7 SAOS Repotting Clinic, 10 am til 1 pm  
Southeast Branch Library  
6670 US-1 N, 32086
- 10 JOS Meeting, Topic Basic Orchid Culture  
Jose Exposito, Soroa Orchids
- 11 SAOS Virtual Show Table, 7:00 pm  
Courtney Zooms into Cyberspace  
An Invitation Will be Sent by Email
- 14 Florida North-Central AOS Judging, 10 am  
Clermont Judging Ctr, 849 West Ave
- 15 Keiki Club - Growing Area Tour, 1-3 pm  
Sherrie and Lester Jenkins' Home  
2150 Eventide Avenue, St. Johns 32259
- 21-22 Gainesville Orchid Society Show  
Kanapaha Gardens
- 21-22 Delray Beach Orchid Society Show  
Fieldhouse at Old School Square

### November

- 3-5 Fall Orchid Festival  
Krull Smith Orchids, Apopka
- 4-5 Vanda and Slipper Symposium  
NW Orange Cty Improvement Assoc  
4253 W. Ponkan Rd, Apopka 32798
- 7 SAOS Meeting, Judging Orchids, 6:30  
Alan Koch, Gold Country Orchids
- 11 Florida North-Central AOS Judging, 10 am  
Clermont Judging Ctr, 849 West Ave.
- 11-12 Deerfield Beach Orchid Society Show  
Safe Schools Institute
- 14 JOS Meeting, Winter Growing Tips, 6 pm  
Jax Orchid Society Members

### December

- 5 SAOS Christmas Auction, 6:30 pm  
Memorial Lutheran Church
- 9 Florida North-Central AOS Judging, 10 am  
Clermont Judging Ctr, 849 West Ave.
- 9-10 Fort Pierce Orchid Society Show  
Riverwalk Center

- 12 JOS Christmas Auction  
Enza's in Mandarin

### January

- 2 SAOS Meeting, C. walkeriana & nobilor  
Francisco Miranda, Miranda Orchids  
Memorial Lutheran Church
- 5-7 Fort Lauderdale Orchid Society Show  
Charles Dodge City Ctr, Pembroke Pines
- 6 Florida North-Central AOS Judging, 10 am  
Clermont Judging Ctr, 849 West Ave.
- 6-7 Sarasota Orchid Society Show  
Sarasota Municipal Auditorium
- 9 JOS Meeting, Topic TBA  
Speaker TBA
- 12-14 Tamiami International Orchid Festival  
Dade County Fair Expo Center

### St. Augustine Orchid Society Organization

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Vice President Events	Dianne Batchelder <a href="mailto:ladydi9907@aol.com">ladydi9907@aol.com</a>
Vice President Membership	Linda Stewart <a href="mailto:bindstew@hotmail.com">bindstew@hotmail.com</a>
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Exhibit Committee Chair	Janis Croft <a href="mailto:croftie1984@gmail.com">croftie1984@gmail.com</a>
Librarian	Howard Cushnir <a href="mailto:hscushnir@gmail.com">hscushnir@gmail.com</a>
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Next were the Cattleyas. A beautiful *B. nodosa* 'Hackneau' with many fragrant flowers was grown in a pot with hardly any media left inside. Courtney said that the roots growing outside and adhered to the pot is their typical growth pattern. Then he held up some *nodosa* progeny, including a Blc. Copper Queen and Epicat Don Herman. Courtney showed his primary hybrid, *C. Ivy's Blue Eyes* (named after his granddaughter), with great blue color and fragrance along with other beautiful cattleyas.

Courtney announced that at the November meeting, accredited orchid judge, Alan Koch, Gold Country Orchids, will discuss the Show Table explaining the criteria judges use for orchid judging. Bring your blooming orchids to the Show Table next month for an informal judging!

**SAOS Program** Sue introduced our favorite professor, Courtney Hackney, to present his talk on "Re-Blooming Your Orchids" The first question was "How does an orchid know when to bloom?" which led to a botany lesson. Orchids time their flowering to coincide with their pollinators activity and environmental conditions conducive to germination when the seed pod splits and seeds are dispersed. Orchid seeds have no starchy endosperm, so they require fungal partners to sprout and start growing. The seed pots contain hundreds of thousands of seeds with the hope that some few will land in a spot where the plant can grow.

There are environmental cues that start the orchid flowering process, such as lengthening or shortening hours of daylight, temperature changes, abundant rainfall or drought occurring, and combinations of these cues. In order to flower, a plant must have stored up enough excess energy, which usually means it has received enough bright light and cooler night temperatures. Orchids derive their energy from the sun, not fertilizer. He only uses 1/16 tsp per gallon when he does fertilize. Cooler nights allow an orchid to store energy. If there is enough stored energy then the plant hormones (auxins) signal the meristem cells to start flower development.

The primary reasons an orchid does not bloom as expected are 1) not given enough light, 2) environmental cues not provided, and 3) the plant is in decline, most likely because its root system died. Almost never is it because of a lack of fertilizer.

Another factor to consider in re-blooming is the parentage of the plant. Wild species can be difficult to grow and flower. Species and hybrids grown from seed in nurseries are easier to rebloom because they have been selected for vigor when growing in cultivation, with the subsequent generations being even easier to grow.

Courtney then began to discuss particular genera. There

are two types of *Phalaenopsis*, the winter and summer bloomers. Most phals prefer moderate temperatures, 70's - 85°, and like constant moisture around their roots which is why most box store Phals are potted in sphagnum. Winter bloomers require a 20° day night temperature change in the fall. Here in Florida, they like to be in the mid-50's at night for a few weeks before being brought indoors. This will trigger the inflorescence to start growing. The summer bloomers don't like cold temperatures and rebloom when days are bright, long and warm.

*Paphiopedilums* use the day's length as a blooming signal along with temperature to stimulate reblooming. After blooming, they need to rest in lower light levels with reduced watering and enjoy lime applied monthly.

Courtney talked about his favorite, Cattleyas, which are divided into groups by their blooming times—Fall (shorter days), Spring (longer days), and Summer (high light and temperature). Many enjoy a little cooler and drier conditions in winter. The summer blooming *Cattleya dowiana* requires a three-month almost dry spell in the winter to rebloom.

Courtney stated that the *Dendrobium* genus has so many subgroups that there is no one size fits all answer for reblooming them. Each of them comes from different environments with varying wet/dry cycles. *Phalaenantha* and *Spatulata* section *dendrobiums* need no winter rest, like to be root bound and grow similarly to cattleyas. The *Latouria*, *Formosae* and *Pedilonum* section *dendrobiums* enjoy tropical summer conditions with a winter rest period of slightly cooler and drier conditions for two to six weeks depending on the variety. The *Nobile* and *Seminobile* *dendrobiums*, sometimes called the soft cane *dendrobiums*, enjoy tropical summer conditions with copious amounts of water and fertilizer. In the winter, they enjoy a long cool, dryish period and can withstand temperatures into the high 30's. The *Callista* section is similar although not quite as cold tolerant.

*Oncidiinae* intergenerics need good light but not direct midday sun. Hybridizers intended these for window growing with southern exposure. Fertilize and water heavily in summer and moderately in the winter. They like to dry out before next watering. They can tolerate lower temperatures if they are dry.

The Vandaceous group is also very diverse. Generally, they like the brightest light with copious watering. If they aren't getting enough water, the bottom leaves start to drop off. Courtney ended with a quote from his wife. When asked what is Courtney's favorite orchid, she replies whatever one he doesn't have.

**Meeting Conclusion.** The evening concluded with the Raffle table. Thanks to the helpful hands that stayed to help clean and store tables, chairs and room.



# CLUB NEWS

## Barbara Conrad, RIP 1944-2023

Barbara Conrad loved gardening and growing orchids. She was a long time member of the St. Augustine Orchid Society, joining in 2007. She started the repotting clinics at Ace hardware that we continue

to this day at the Southeast Branch library. She was a lively bidder at our auctions. She loved to cook and freely shared her creations with us. We'll miss Barbara.



## November 7 Meeting Judging Orchid Flower Quality

Alan Koch of Gold Country Orchids will do an informal judging of the plants brought to display on our Show Table. He will talk about the plants, their culture and evaluate their awardability from his AOS judging experience. Courtney Hackney and our AOS judges in attendance will also provide their assessments, lots of charisma there! Bring your blooming orchids in for this interactive and fun program!

Alan owns and operates Gold Country Orchids in Lincoln, California. He is an internationally known speaker, an expert in the Brazilian Cattleya alliance and a trend setter in miniature Cattleya breeding. Alan will have plants for sale and offers a 10% discount on preorders.

## Show Table – Virtual and At Meeting

Since the pandemic, Courtney has done a monthly Zoom program highlighting all the blooming orchid pics our members sent us. Our next Virtual Show Table is on October 11. There will be no Virtual Show Table in November or December due to scheduling conflicts. Give us your feedback on whether you want the Virtual Show Table to continue in the new year (email [info@StAugOrchidSociety.org](mailto:info@StAugOrchidSociety.org) or text 904-501-0805. Courtney will continue to talk about the different varieties of blooming orchids brought to the show table at our monthly meetings. Even if you can't attend the meeting, please send high res pics of your blooming beauties by the 26<sup>th</sup> of the month so the images can be included in the newsletter and on the website.

## October 15 Growing Area Tour Sherrie and Lester Jenkins' Growing Area

We'll be traveling up to Sherrie and Lester's in October to see their beautiful orchid growing area in a greenhouse attached to the house. Sherrie has been busy the last couple of years filling up the greenhouse with a nice variety of orchids. This is an opportunity to see how other SAOS members grow their orchids and learn some of their tricks.

**Where:** Sherrie and Lester Jenkins' Home  
[2150 Eventide Avenue, St. Johns 32259](#)

**When:** Sunday, October 15, 1 - 3 pm

## American Orchid Society Corner

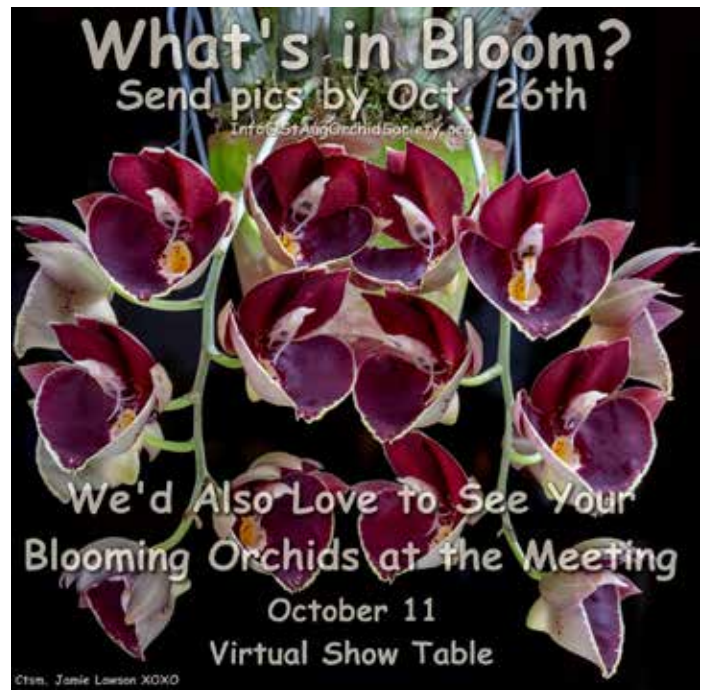
### Webinars

October 13, 8:30 pm, AOS Members Only  
Lycaste Breeding & Judging – Tim Culberston  
October 17, 8:30 pm, Everyone Invited  
Greenhouse Chat - Ron McHatton  
October 25, 8:30 pm, AOS Members Only  
Judging Minicatts – Peter T. Lin

### Orchids Magazine this Month

Growing for Perfection – David Rosenfeld  
Bulb. makoyanum–Judith Rapacz-Hasler  
First Lady Cattleyas: Eisenhower–A.E. Chadwick  
Spray vs. Drench – Sue Bottom

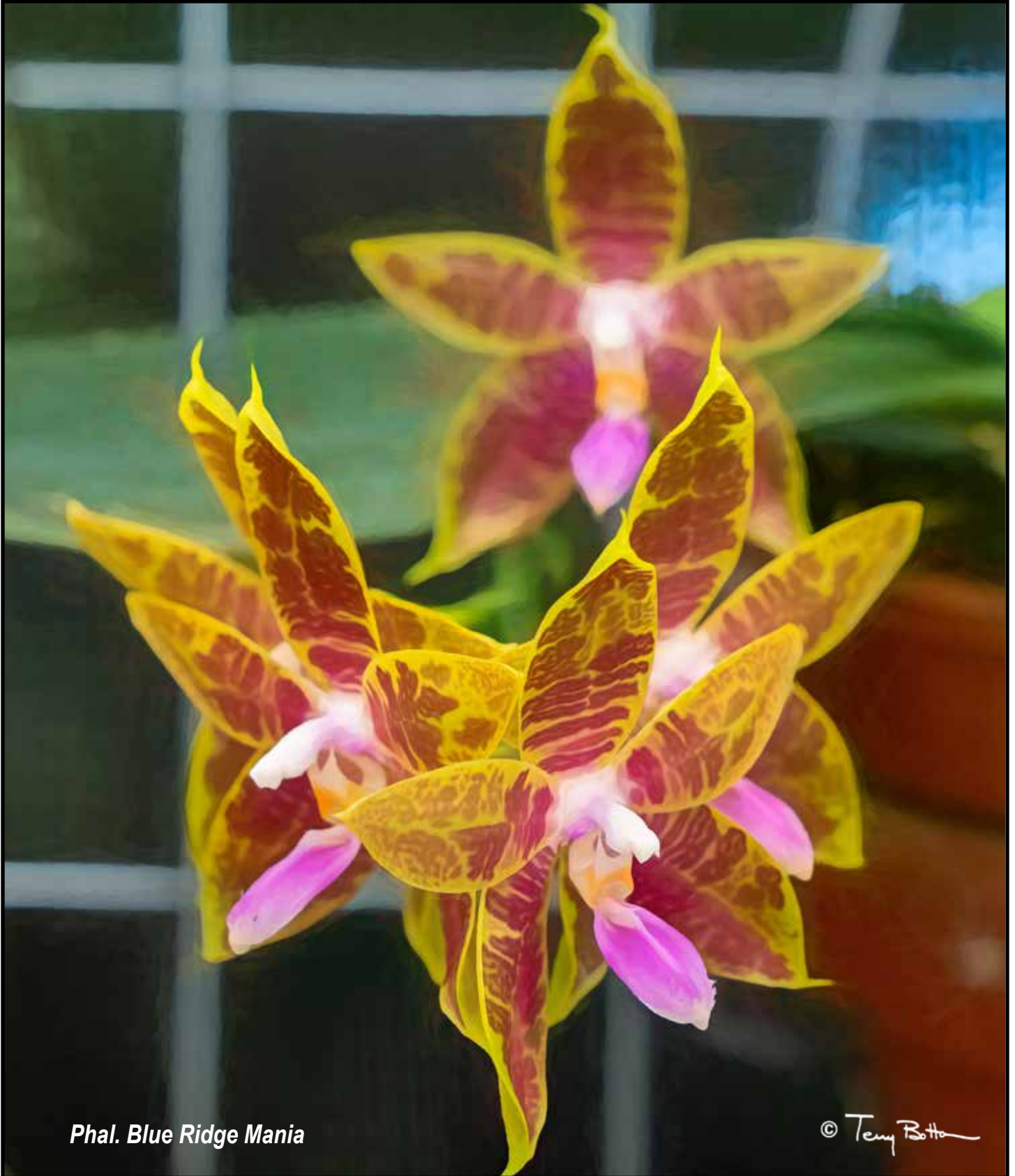
[Photos of Latest AOS Awards](#)



# INSPIRATION

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*Phal. Blue Ridge Mania*

© Terry Botta



# CULTIVATION



## Orchid Questions & Answers

by Sue Bottom,  
sbottom15@hotmail.com

**Q1.** The leaves of this *Dendrobium farmeri* look suspicious, is it a virus?

**A1.** I would suspect a cercosporoid fungus or bacterial infection rather than virus. If it happened very quickly in a matter of days, it's likely bacterial, but if it developed over a period of weeks to get to this point, it's likely a fungal infection. You'll probably have to remove all the severely damaged leaves in order to stop the spread. If you can find a place for it with more air movement, perhaps the leaves will dry more quickly and be less prone to infection. Your choice of fungicides with *Dendrobiums* is limited. Daconil would be a good choice and it is widely available in nursery centers.



**Q2.** Any idea what is causing the chlorotic mottling on this cattleya?



**A2.** I asked whether Susan was using Epsom salts or CalMag fertilizer and wanted a picture of the leaf underside. She is using First Ray's KLite fertilizer with a 12-1-1-10-3 formulation along with MaxKelp. There were no spores evident on the leaf underside so the problem probably isn't fungal. I wouldn't think she has a magnesium deficiency given the fertilizer contains 3% magnesium, but perhaps the answer is to increase the fertilization rate by say 25%. My leaf mottling problem all but went away after adding lots of magnesium to my fertilizer regime.

**Q3.** I read that *Miltonia moreliana* grow well in baskets but I don't seem to be growing this one very well. I've had it 2.5 years and no blooms. I was thinking of taking it out of the basket but thought I'd check with the experts first. I've been trying to water with rainwater and I'm sure it would like more food. I could put one of those tiny baskets in the middle with some slow release Dynamite in it. Thoughts on basket vs pot? It looks awfully yellow to me.



**A3.** I think you're growing it very well. It should do better in a basket than in a pot. It really likes to grow around the outside of a pot rather than in a pot, so the basket should work well for you. Don't disturb it while it is growing so well. I think it's just got to get a little older. It is a fall bloomer, so maybe you'll get a bud or three this year. It looks like it's getting plenty of light, no problem there. You can always add time release fertilizer to your plants in the spring if you don't have the time or inclination to use water soluble fertilizers. Be patient, you will be rewarded soon.



# CULTIVATION



## Fall Orchid Care

by Dr. Courtney Hackney

Whether you are an indoor grower or grow in a greenhouse, fall is the time to review your current culture and make appropriate adjustments. Depending on where you live, air conditioning will soon be replaced by open windows inside and cool breezes in the greenhouse.

These changing conditions provide many different signals to your orchids, which may require some changes in your culture.

It is, or soon will be, time to move the cool-loving cymbidiums into more light. Southern growers of cymbidiums often keep their cymbidiums in dense shade during the heat of summer, moving them into increasing light levels as the days get shorter and nights get cooler. If cooled gradually, this group of orchid can even handle frost. Many cymbidium lovers claim that they get the best flowers when there was frost on leaves earlier in the season. Depending on location, cymbidiums may be left outside most of the winter and only protected when temperatures dip below freezing. Be sure, however, that you do not include the tropical cymbidiums in this frosty exposure as they require temperatures more similar to phals.

Many tropical orchids respond to lower night temperatures by switching from a growth cycle to a blooming cycle. Phals need a week or so below 65 F to initiate spikes and cymbidiums like it even cooler for a longer period. If they receive warm sunny days and drier growing conditions, these warm loving orchids can tolerate lower temperatures than suggested by the literature. As a general rule, tropical orchids can handle lower minimum temperatures than suggested.

Seedlings are an exception to the rule in that we want to get the maximum growth from them each year. Seedlings of all genera should be kept warmer now than mature orchids if you want to keep them in the growth mode. The exceptions are species and hybrids that require a dormant period, e.g. catasetumes, mormodes, etc. Fertilizers may also be used on seedlings if the orchid does not require a dormant stage. Be sure to reduce watering, even for seedlings, as there will be less drying because of the lower temperatures and light levels.

Indoor growers may have a difficult time providing the proper stimulation to initiate flowering if your home is maintained at a constant temperature. The most frequent



question from indoor growers is how to get their orchids to bloom. Often the lack of flowering is caused by interior lights making day length too long or lack of temperature change with the season. Successful indoor growers often leave windows open or move orchids to a porch as the seasons change to provide the proper stimulus and initiate a seasonal response to get flowers.

In the Deep South, vandas and their kin have been grown under trees all summer. When should they be moved and protected? There are a few species and even hybrids that enjoy nights in the 50s, but not many in this group. Most vandaceous species and hybrids need to be kept warm to keep them in a growth mode. Ascocendas, if they are relatively small, can be moved into south facing windows and bloomed successfully. The same can also be accomplished in an enclosed, sunny porch. If the porch is unheated, but enclosed, a small electric oil heater placed under vandas on a porch will work well to keep orchids warm on cool nights.

Be sure any orchids brought in from the outside are examined for bugs and disease. Pots are great hiding places for roaches, slugs and a variety of other pests that should stay outside.



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 October 2011.



# CULTIVATION

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*The plant on the left has received enough light to produce flowers while the one on the right has not. Note the difference in leaf color.*

## Light, the Key to Successful Blooming

Courtesy of the AOS

While there are many factors that can trigger blooming in orchids; a drop in night temperature, increase or decrease in day length and even sharp restriction in water availability, none of these will be successful unless your orchids have been grown with adequate light. For most hobbyists, this factor is almost always at the heart of the question “Why won’t my orchids rebloom?” You can’t work magic or miracles and without adequate light during the growing season, no amount of cajoling with decreased nitrogen, abusive cold nights, dehydration or similar abuse will result in flowering. If you have noticed a general decline in the number of your plants that flower, it’s highly likely that the amount of light you have reaching your growing area has decreased. Don’t forget that trees and landscaping grow as well and can eventually shade windows. I was once asked at a basic orchid culture class why one of the attendee’s vandas no longer flowered. She explained to me that the first year she had amazing results, somewhat less the following year, last season only those on the outside

edges bloomed and in the present season virtually none had flowered. My answer was she didn’t have enough light. This prompted her to re-ask the question and insist there was plenty of light as the arbor had been especially constructed for her vandas. The second time she rejected my answer I asked if she’d trimmed the vines growing on the arbor. When she asked me how I knew she had planted vines, I said “you don’t have enough light.”

So what is adequate light? While the actual levels vary with the genus, in general orchid foliage should be a light yellow-green rather than a lush sort of grass green. In addition, the leaves of your plants should be firm and stand upright. Even Phalaenopsis which need relatively low light will, depending on the genetic background of the plant, hold their foliage horizontally or somewhat upright and plants that produce very long, floppy leaves are being grown under insufficient light. Think of the leaves being the plant-equivalent of solar collectors. The lower the light, the bigger the leaves need to be to gather the same amount of light; the heavier the leaves the harder it will be to hold them firm and upright.





# CULTIVATION



*Ideally, most orchids should have light green foliage*

There are several ways to gauge the light your plants are receiving and you can't really trust your eyes. Our eyes are designed to effectively adjust to the light they receive. Your local supermarket may appear to be very brightly lit when, in fact, the actual light level is less than 500 foot-candles (Phalaenopsis need at least 2-3 times that level for adequate growth and flowering) and your office environment is typically about 1/5 of that level. While the most accurate way to measure light levels is to purchase a light meter you can get a pretty good estimate using just your hand. On a clear day, position yourself so that your hand is between your plants and the light source and about 12 inches from the leaves and observe the shadow, if any, your hand casts. If you can see no shadow, you probably do not have enough light for any orchids with the exception of the jewel orchids which are grown more for their leaves than flowers. If the shadow is fuzzy and faint to moderate your light level should be sufficient for Phalaenopsis and Paphiopedilum which require less light than most orchids. If the shadow you see is sharp (below right), you most likely have sufficient light for all but the highest light-requiring orchids like cymbidiums, vandas and ascocendas.

Don't let anyone tell you that you can't grow a mixed collection of orchids. Hobbyists do it all the time. They just take advantage of the variation in conditions throughout their growing areas. As far as light levels are concerned, direct sunlight entering an unshaded window can be as high as 4,000 to 8,000 footcandles measured directly at the glass while it may only be as low as 500 footcandles just inside the shade off to the side of the same window. Lower light plants like Paphiopedilum and Phalaenopsis can be staged in these shady areas while higher light plants like oncidiums and cattleyas can be arranged closer to the center and nearer the glass. It just takes a little experimentation.

*Quality versus Quantity.* Plants need red and blue light and they reflect green. Light from the red end of the spectrum is critical for flowering while that from the blue end is used in growth. This is usually not a problem when plants are grown out-of-doors or in a greenhouse unless the greenhouse skin is very old and has yellowed to the point that the spectral quality is poor. However, for plants grown under lights, this can be an important factor and is the reason that many books recommend a mixture of 50:50 cool-white and warm-white fluorescent tubes in the light rack. Spectral quality can also be an issue if you are growing your plants in a sunroom glazed with bronze or other colored glass since these glazing materials may filter out much of the spectrum used by plants.



*Position yourself so that your hand is between your plants and the light source and about 12 inches from the leaves and observe the shadow*

*Duration.* Longer is not always better. First, plants need a night just as we do. They are adapted to the daily cycle of the sun and different parts of their metabolic cycle are accomplished during light and dark periods. In addition, many orchids, especially species, are adapted to changes in day length. This is called photoperiodicity. Fall-blooming cattleyas flower as day length shortens while spring-blooming ones as day length increases. If these plants are grown under conditions of constant day length they may never flower. The old cattleya cut-flower growers used this

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knowledge to time flowering for important holidays and it's used today by Poinsettia growers for the Christmas market. Why is this important to the hobby grower? It's really quite simple. While a street light outside your greenhouse or living room window will produce such little light that being on all night won't matter that's not the case for lights in your growing area. If your only choice for a growing area is one that is lit late into the night, it would be best to concentrate on those plants like Phalaenopsis that flower without regard to day length.



*Too much sunlight will burn an orchid's leaves.*

**Too Much Light.** Unlike too little light whose effects are often insidious, the opposite can be true of too much light. Too much light, especially if it's a sudden change usually results in dramatic damage (sunburn) in very little time. The first sign of too much light is often yellow foliage. If

left alone, this yellow foliage will eventually turn white and then dark brown and dry as the sunburned area dries out. Plants chronically exposed to too much light but not enough to cause sunburn will be stunted with yellow, hard foliage. If the problem is caught before the chlorophyll has been completely destroyed it is often possible to reverse the damage. Once white spots or sunken areas have appeared, the damage is irreversible and the best thing one can do is stop further progression with more shade.

This is one area of orchid culture where you want to make changes SLOWLY. Orchids are easily sunburned if light levels rise too fast. When moving plants around, especially when bringing them outdoors after winter, err on the side of excess shade. Make changes when you are going to be home and can watch the plants. Feel the leaves. The palm of your hand is about 93F. If they are hot to the touch, the leaf temperature is well about 95F and serious damage can occur in very little time.

*This unattributed article was accessed on the AOS website on September 10, 2023. Photos by Greg Allikas.  
<https://www.aos.org/orchids/additional-resources/light-the-key-to-successful-blooming.aspx>*



**October 7**  
**Repotting Clinic**  
Southeast Branch Library  
6670 US 1 North, St. Aug 32086  
First Saturday of the Month  
February through October  
10 am til Noon



# CULTIVATION

## Tetraploid Orchids

by Sue Bottom

Have you ever wondered what 4n on your plant tag means? It means the plant is a tetraploid, with four sets of chromosomes, as compared to the more common diploid that contains two sets of chromosomes or the less fertile triploid that contains three sets of chromosomes. Most orchid plants are diploids, which means they contain two complete sets of chromosomes, one from each of two parents. Plants that possess chromosome numbers that are multiples of the basic set are called polyploids.

As explained by Kamemoto et al:

*An increase in ploidy in orchids is often accompanied by an increase in size of plant parts. Plants are stockier; leaves are darker green, wider, and thicker; and flowers are of improved form. Due to the increase in width and substance of sepals and petals, the flowers are often erect, sturdy, and compact, characteristics that are desired for exhibition purposes.*



*The typical diploid version of C. Leoloddiglossa 'Exotic Orchids' AM/AOS, photos courtesy of Fred Clarke*

Fred Clarke posted a picture of C. Leoloddiglossa 'Exotic Orchids' AM/AOS on Facebook, describing it as a 4n form. He had purchased ten mericlone seedlings, so they were theoretically all genetically identical. As he bloomed them out, he found one that exhibited tetraploid characteristics: the flowers had better form and color, the petals and sepals were wider and had better substance and the column was so wide that it caused the side lobes to open around it.

Tetraploids grow more slowly than diploids because they must make extra sets of chromosomes each time a cell divides, requiring the plants to expend more energy and nutrients to grow. Roy Tokunaga has talked about his trick for selecting tetraploids from trays of seedlings. He looks for the runts with wide leaves, in other words, plants that grow more slowly than the others but exhibit the vegetative characteristic of wider leaves. These may bloom a year or so after the rest of the plants in the cross, but he has

often been rewarded with finding tetraploids amidst a large population of diploid seedlings.

Tetraploids are highly valued by hybridizers, particularly when tetraploids are bred with tetraploids to produce tetraploid offspring that tend to be very uniform, with larger flower size and enhanced fertility. Fred proved that the chance tetraploid converted Leoloddiglossa seedling was a tetraploid by selfing it. The cross was very fertile and produced a seedling batch of tetraploid Leoloddiglossas that looked so similar they might have been clones.



*The tetraploid version of C. Leoloddiglossa 'Exotic Orchids' AM/AOS, containing an the extra set of chromosomes added during the cloning process*

Hybridizers sometimes say that tetraploids are more stable than their diploid equivalents because they have received a double set of chromosomes from each parent, so any errors in transcription can be self corrected from the duplicate genome. Of course, genes are the ultimate determiners of heredity, so a poor set of genes in a tetraploid will accentuate those inferior qualities. Assuming the hybridizer has selected good tetraploid parents, he can produce a large crop of uniform plants well suited to a mass market. This type of breeding is of less interest to those hybridizers that are trying to tease out recessive colors or produce a crop of plants with varying colors or other attributes.

References:

*Kamemoto, Haruyuki, Tanaka, R. and Kosaki, K, Chromosome numbers of orchids in Hawaii, University of Hawaii, College of Tropical Agriculture, Hawaii Agricultural Experiment Station, 1961*

*Kamemoto, Haruyuki, Amore, T. and Kuehnle, A. Breeding Dendrobium Orchids in Hawaii. Honolulu :University of Hawaii Press, 1999.*



# ORCHID ADVENTURES



**JOS Fall Orchid Plant Sale**

The Jacksonville Orchid Society hosts an orchid and plant sale in September with a variety of orchid vendors as well as vendors selling pots and artwork. The weather was perfect and there were plenty of orchids to ooh and aah over. Some of our favorite vendors were there so we got to catch up on all the news. Phillip and Liz Hamilton of Bredren Orchids just got back from their trip to South Africa, selling at AfriOrchids along with dad Claude Hamilton. They say it should be on everyone's bucket list!



# SHOW TABLE



**Grower Suzanne Susko**  
**Tolu. Jairak Firm 'Bloody Bird'**



**Grower Jeff Milkins**  
**Lc. Terry Bottom**



**Grower Courtney Hackney**  
**Blc. Norman's Bay 'Low' FCC/AOS**



**Grower Suzanne Susko**  
**Tolu. Jairak Firm 'Red Devil'**



**Grower Shelia Nathanson**  
**Ctsm. (Melana Davison x Diana's Dots)**



**Grower Sue Broussard**  
**C. Stephen Oliver Fouraker**



**Grower Courtney Hackney**  
**Ascda. Fuch's Mandarin 'Robert' AM/AOS**



# SHOW TABLE



**Grower Suzanne Susko**  
*Neof. falcata var. Kousaikou*



**Grower Sue Bottom**  
*Mtssa. Dark Star 'Darth Vader' AM/AOS*



**Grower Sue Bottom**  
*Zygolum Louisendorf grex*



**Grower Steve Dorsey**  
*Stanhopea Ronsard*



**Grower Steve Dorsey**  
*Paph. Jewel Pink*



**Grower Sue Bottom**  
*Phal. KS Super Zebra 'Pylo' AM/AOS*

Link to all Submissions: <https://flic.kr/s/aHBqjAXosh>

