



CLUB NEWS



Sue Bottom

July 3, 2018 Monthly Meeting by Janis Croft

Welcome and Thanks. Bob Schimmel opened the meeting at 7:00 pm sharp with 47 attendees. Carolyn Smith introduced our guest Karen and three new members Judy Corbett, Jim Soll and Lori King. Bob thanked Dottie, Annalee, Lucy, Shirley, and Dorianna for bringing in the treats and Jeanette and Shirley for organizing the refreshments.

He then reminded all to drop a dollar in the basket while enjoying their refreshments. Bob next informed all that the Best of Show voting would occur after the Show Table discussion and the silent auction would end before the presentation. He encouraged all to vote for their favorite orchid.

Club Business. The fall orchid shows will begin in September.

Ace Repotting Clinic will be July 7. The Keiki Club is on summer vacation, come to Ace Repotting Clinic with any questions or if you need help.

The last two yellow SAOS hats were available at the side table along with T-shirts, limited quantities of timed release fertilizer and potting mixes. Preorder your supplies by email info@staugorchidsociety.org and we will deliver to you at the meeting. There is a Purely Organic sign-up sheet for February 2019 delivery. \$25 for 25# bag and \$40 for a 50# bag. Prepay by December 2018 meeting.

You can request a book or DVD by emailing info@staugorchidsociety.org and Penny Halyburton, Club librarian, will bring the item(s) to the next meeting. The library collection is listed on our [SAOS website](http://staugorchidsociety.org).



Our Sunshine Coordinator and Membership VP, Linda Stewart delivered raffle tickets to the three people with birthdays in July. If you know of anyone in need of a cheering up or get well card, let Linda know by emailing her at info@staugorchidsociety.org.

Show Table. Courtney Hackney started the Show Table review by stating that he had expected more Vandaceous types to be present this month. We only had one, but it was a beauty, one of Marv's hybrids. A cross between a Paraphalaenopsis and Renanthera, Rnthps. Firebird 'MAJ' likes lower light than normal vandas and as it grows larger, the plants will hang down. Next was an unknown Stanhopea that can only be grown hanging in baskets since the flowers grow down from the bottom of the plant.

Courtney moved on to the intergeneric Oncidium orchids. First the Mtssa. Estrelita 'Sweet Senorita' that is both fragrant as well as floriferous. Another Miltassia often sold as a pot plant was the Shelob 'Okika' that is a mix of multiple genera to get a variety of colors variations. Miltassia Shelob 'Red Spider' has a notable waterfall effect on its lip. All of the Miltassia are from the Oncidium alliance and can grow in all types of medium. They like bright sun and if over fertilized, their leaf tips turn black from salt toxicity.

The color of the Phal. violacea var. Indigo orchid didn't exist 20 years ago according to Courtney. HP Norton from South Carolina got two Phal. violacea plants from the wild and started recombining them. He sold the resulting plants and then a buyer sent him a photo of a bloom that was indigo in color. He had not seen that yet and then a few months later, one of his plants bloomed with an indigo flower. He then recombined those plants and now we have the resulting fragrant plant on the Show Table.

Next, he moved to the Blc. Teri Anderson which had a beautiful deep yellow with a purple lip. He talked about how hybridizers needed to use the rupicolous laelias in order to get the bright yellow coloration. Hybridizers seek solid yellow in Cattleyas and the C. Lois Smith 'Omaha' on the table achieved the beautiful pure yellow color as well as being very fragrant.

Summer season is when the bifoliate Cattleyas bloom. They require special care when repotting. Only repot when new roots appear which is often before the plant flowers. If you repot any other time, the plant will generally fail to thrive and rebloom. With good light, bifoliate usually get speckles on their leaves. Courtney next pointed out a rare bifoliate species, C. schofieldiana that likes as bright as Vandas do. It is from Brazil and can grow as large as 40" with its yellow petals and purple lip. Another Brazilian orchid, JoLynn's White Wonder demonstrates the green hybridizers strive for in Cattleyas though these flowers

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Upcoming Orchid Events

July

- 7 Repotting at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
- 10 JOS Meeting, Miniatures, 7 pm
Ivan Portilla, Ecuagenera

August

- 2-4 Eighth Annual Cattleya Symposium
Sponsored by Odom's Orchids
Indian River Research & Education Ctr
Fort Pierce
- 4 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 7 SAOS Meeting, 7 pm
Steve Hawkins, The Orchid Specialist
Cattleyas
- 14 JOS Meeting, Orchids from Brazil, 7 pm
Francisco Miranda, Miranda Orchids

September

- 1 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 4 SAOS Meeting, Fall Preparations, 7 pm
SAOS Members and Sue Bottom
- 11 JOS Meeting, Topic TBA, 7 pm
Phillip Hamilton, Bredren Orchids
- 22-23 Ridge Orchid Society Show
Lake Mirror Center, Lakeland
- 29-30? Breezy Hill Orchid Festival
Steve Arthur Orchids, Graniteville, SC
- 29-30 South Florida Orchid Society Show
University of Miami Watsco Center

October

- 2 SAOS Meeting, 6:30 pm
Unusual Species for the Cattleya Grower
Alan Koch, Gold Country Orchids

- 5-7 East Everglades Orchid Society Show
RF Orchids, Homestead
- 6 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 9 JOS Meeting, ABCs of Orchid Nutrition, 7 pm
Alan Koch, Gold Country Orchids
- 13-14 Gainesville Orchid Society Show
Knapaha Botanical Garden
- 14 Keiki Club for Orchid Beginners, 1 pm
Get the 'chids Ready for Winter
Bob and Yvonne Schimmel's Home
702 Wilkes Court, St. Aug 32086
- 19-21? Orchttoberbest at EFG Orchids
4265 Marsh Road, Deland 32724
- 26-28 Delray Beach Orchid Society Show

St. Augustine Orchid Society Organization

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looked almost pure white. There were many more orchids, e.g. Epidendrums that Courtney discussed.

At the end, he decided to show us how to make a hybrid. He took a coerulea plant, *C. Gaudii*, and showed us the stigma on the flower and removed the pollen from the flower. Then he pulled out of his shirt pocket, an envelope with pollen from a coerulea violacea that he had saved. Using the toothpick, he broke open the anther to expose the sticky pollenia that he put on the toothpick, and stuck into the stigma and pollinated the flower much like an insect would. Many questions arose as to how the pollen moves down the ovary to produce a seed pod and eventually creates a new hybrid. Courtney sends his seed pods to a lab in Hawaii who in sterile conditions, grow the seeds into plantlets and then a grower deflasks them and puts them into plug trays, ultimately sending them back to Courtney in 2 to 4 inch pots in 4 to 6 years or so. Quite an interesting way to end the Show Table discussion. Check out the photos of our show table examples at the end of the newsletter and on the SAOS website.

SAOS Program. Sue Bottom presented the program on Navigating the SAOS website, a topic many of our members have requested. The program focused on how to find specific information on a site that is chock full of valuable facts and is world-renowned. First, Sue showed the Home Page and noted that under the beautiful photo of orchids at the top are the main navigation buttons. This of course is assuming you are on a desktop or laptop. The rest of the demonstration made that assumption. However, if you are on a mobile device, e.g. either android or iOS phone, you will see a different screen setup. For example, a word list appears on the Home page instead of navigation buttons. All of the same information is available but the "look" is different because of the compact size of one's mobile device.

The Home page provides the most relevant information such as the speaker/topic of the next monthly meeting, the next date of the Ace Repotting Clinic, etc. and at the very bottom, a search feature that allows you to search for specific information within the SAOS website. This is a very valuable feature if you want to quickly find something specific, e.g. an image of a particular orchid. The next button provides a link to either join or renew your membership in the club.

The third button is SAOS Resources which is loaded with information the club provides its members including an index to orchid events, information on our Mentoring Program, a link to News and archive of Newsletters, our library catalog and borrowing information, link to forms and items to purchase, our organizational information and links to non-SAOS sites of orchid interest. Each of these

general links takes you to further detailed information.

The fourth button, Learning To Grow, provides information for beginning growers. The first link, Your First Orchid, is a compilation of very useful articles by Stephen R. Batchelor from the American Orchid Society. The second link has the AOS Beginner's Newsletters. The next two links, Backyard Orchid Growing and My Favorite Orchid, are provided by SAOS members describing their personal growing areas and favorite orchids.

The fifth navigation button, Growing Orchids, has a multitude of information ranging from the Basics to Sue Bottom answering your questions in the Q&A. In between there are seasonal tips, water and fertilizing information, repotting details and culture by genus links.

The sixth navigation button, Pests and Diseases, has the most frequently accessed information. Sue created useful charts detailing the application rates for Insecticides, Pesticides and Fungicides. The illustrations/photos of insect pests, diseases and viruses are extremely helpful when trying to resolve your plant's issues.

The seventh navigation button is on Monthly Advice with one section particularly relevant for St. Augustine growers. Bob Scully, Courtney Hackney and Martin Motes have written on monthly growing so they each have links to their articles as well as Sue's link to her growing articles.

The last navigation button leads one to a treasure trove of photographs of all the flowers brought into the Show Table, SAOS events, Orchid shows over the years, Terry Bottom's inspirational artwork as well as instructional videos of orchid interest.

The SAOS website is a result of many hours of collecting information, organizing it and consistently updating it with new information and the membership gave Sue a hearty round of applause for her presentation and hard work in creating it for our education and use.

Meeting Conclusion. Sue Bottom announced the Member's Choice Award as Steve Hawkins' Blc. Teri Anderson 'Teri'. Dianne conducted the raffle with Susan's able assistance. Thanks to all the helpful hands that stayed to reset the tables and chairs and clean up the room.



Thanks to Watson Realty and
Jeanette Smith for the use of their
meeting space at
3505 US 1 South



CLUB NEWS



The Keiki Club is on summer vacation. Keep watering and fertilizing your plants and watch for pest and disease issues. SAOS members will be available at the repotting clinics at Ace Hardware on the first Saturday of the month all summer long if you have any questions or problems. For those of you in the mentoring program, your mentor is just a phone call or email away. For those of you that would like to join the mentoring program, send an email to Mentoring Coordinator Susan Smith at info@staugorchidsociety.org. It's a great resource for our newer grower that would like to get one-on-one assistance and answers to their orchid questions.



<https://www.youtube.com/watch?v=x8zAyVbfyZA&feature=youtu.be>

American Orchid Society Corner

Upcoming Webinars:

July 12, 8:30-9:30 pm, Everyone Invited
[Greenhouse Chat Orchid, Q&A - Ron McHatton](#)
July 19, 8:30-9:30 pm, Members Only
[The Ghost Orchid Demystified](#), Lawrence Zettler

Photos of Latest AOS Awards

Orchids Magazine: request free issue!
Genus of the Month: *Macroclinium*
Cypripediums Part 3
Sarcochilus falcatus and its hybrids
Sustainably Harvested Tree Fern
Novice: Hot Humid Summers & Tropical Storms

August 7 Monthly SAOS Meeting Growing Cattleyas

St. Augustine Orchid Society members love their cattleyas. Steve Hawkins, the Orchid Specialist, will talk about their watering, fertilizing, light, air and repotting. He will also answer any questions you may have about growing cattleyas.

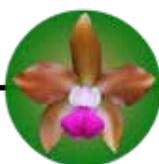
Steve's career began with a few orchids on a windowsill in a Kansas farmhouse at the age of 15. After graduating college with a degree in horticulture, Steve started at Rod McLellan in San Francisco, first as a grower and later as hybridizer and sales manager. He opened his own nursery, The Orchid Specialist, in Apopka, until relocating to St. Aug earlier this year.

Members are invited to bring plants for sale at the meeting. Bring your flowering orchids to exhibit on the Show Table. We will have our normal raffle at the end of the meeting. Friends and guests are always welcome!



Want to Hire Some Professional Help? Steve Hawkins, [The Orchid Specialist](#)

Steve Hawkins, the Orchid Specialist, is offering a fee based service for orchid repotting and consultations in your home. Steve operated a commercial nursery in Apopka for many years and recently relocated to our area and joined the St. Aug Orchid Society. For details, visit orchid-specialist.com or call Steve Hawkins at 321-279-3003 (afternoons).

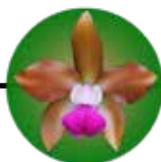


INSPIRATION



Vanda July 4th

© Terry Botto



CULTIVATION



Orchid Questions & Answers

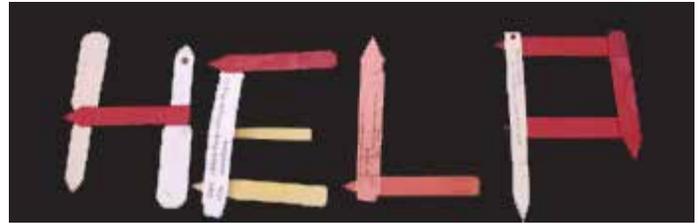
by Sue Bottom,
sbottom15@gmail.com

Q1. I received this orchid for Christmas 2017. The ivory and purplish flowers dried up and fell off about late February/early March. I water sparingly and have it just inside of an east facing window. I fertilize every 2 weeks. No direct sun and medium does not feel wet. Now I have a yellow leaf?

A1. I wonder if your phalaenopsis orchid is getting enough moisture. They should be watered thoroughly when you water, so water runs out the bottom of the pot and water it some more, to make sure everything gets good and wet. Then, you don't water again until it approaches dryness, but you don't want it to become dry. You can stick a pencil or bamboo skewer into the pot about 2 inches down, and if it comes back wet, you're good; if it comes back dry, you waited too long to water. If you can, you should summer outdoors too, in some protected spot where it won't get rained on to prevent the water from accumulating in the crown of the plant and rotting. It loves the breezes and cooler night temperatures and will really thrive if given a summer vacation from the house, an eastern exposure would be great!



Q2. Is this black rot on my orchid? I'm afraid it has spread to the point that the whole plant should be destroyed. It looks like it has spread to new growth. I'm a novice at growing orchids, what I have I inherited when we bought our house.



A2. I'm guessing the plant was left out in the rain and the excess leaf wetness allowed bacteria to proliferate. Remove the damaged leaf immediately as well as the portion of the other leaf to about 1 inch below the discoloration. When you're done cutting, pour some hydrogen peroxide over the entire plant and move it under cover when we have rainy weather. The black at the base of the new growth is pretty normal, that is just the papery sheath dying off.

That bark the cattleya is planted in looks to have broken down and when the media rots, the roots rot. I would knock it out of the pot and wash all the broken down media away from the roots. You can then drop the plant into the empty pot while you are contemplating how to repot it. Do you have anyone that can help you find the proper mix and repot? A friend, a nursery that grows orchids or the local orchid society would be good resources, just spray the roots every day until you get it repotted.

Q3. I have "blisters" on the stems and leaves of my phal that are easily brushed off the leaves. The leaves seem to be limp in spite of normal watering. I don't see pics of orchid diseases like this online.

A3. That sure looks like one of the soft scales. Get a Q tip and some isopropyl alcohol and rub away any scale you see. Then get a spray bottle with alcohol and spray every place they could be hiding, like between the leaves. And the flower is about finished, so cut it off and repot the orchid in fresh mix because that scale can live on the roots in the potting mix too.





Summer Humidity Courtney's Orchid Growing Tips

Most of us have noticed the change in humidity that comes with summertime heat. What is significant to your orchids outside or in a greenhouse is that your plants lose less water each day than they did when the humidity and temperature were lower. Most plants

open their cells to the outside through microscopic structures (stomates) on the underside of leaves that both cool and allow gas exchange. When the outside humidity is much lower than the 100% humidity inside the leaf, a leaf can lose more water than it can get. This causes stress and may cause stomates to close, thus limiting growth and causing the leaf to overheat. Thus, your orchids may not require as much water as they did in April and May.

High humidity also provides ideal conditions for both fungal and bacterial rots. Higher humidity means that plants do not dry as quickly. Reducing watering, coupled with increased air movement will minimize rot problems. If you have a small number of plants check for water in the crowns of phalaenopsis and for water in developing leaves of cattleyas. Remove any water that is still on plants at the end of the day by either dumping it out or blotting with a paper towel. Growing inside is also affected by increased humidity because air conditioners run more. Besides cooling the air in your home, these systems also remove water from the air. Thus, plants inside may need increased water and you may need to increase the humidity around your indoor orchids with trays of water, ferns placed alongside, or by some other means. Several hobbyists have asked if they could use the water that runs from an air conditioning compressor to water orchids. This is the water removed from the air in your house and is essentially the same quality as rainwater.

High heat and humidity provides the ideal conditions for one of the most frustrating pests, slugs. These shell-less snails seem to appear out of nowhere just before the buds you have watched for the last 3 weeks open leaving just a little nub. Slugs are hard to keep out of the greenhouse and even harder to get rid of outside. They are amazingly quick and will disappear in a minute or two after you turn on the lights. You may not notice them during most of the year as they contentedly consume dead leaves and algae at night. Even if they consume a few new roots you are not likely to spot them. In the summer's heat and humidity they can

move six or feet or more in a matter of minutes, finding your most prized and carefully tended buds.

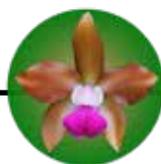
My strategy is to look for slugs before they do any damage. On warm rainy nights I check the inside walls of the greenhouse. Often I know where to look because I see their slime trails in the early morning before I water. Typically there will be one or two that are relocated far from the greenhouse. They are not poisonous, only slimy. My daughter kept one as a pet for a couple of weeks. They are interesting beasts as long as they are not in the greenhouse. Shallow plates containing stale beer (any brand) will also attract slugs that can then be removed. This may or may not be toxic to slugs unless they drown. They generally refuse to leave the beer on their own.

Just to be sure my prize buds do not become snacks for slugs I use small quantities of a product called Deadline. I put a few drops of this black gooey liquid at the base of the pot or on the bench nearby. This is more attractive than buds and kills slugs quickly. Rarely do I find dead slugs as the removal techniques listed above seem to be very effective at humanely removing them.

Those small bush snails, however, are another problem not as easily managed. They tend to be attracted to moist media such as sphagnum and do their damage on new growths and new roots. Each one by itself is not a serious problem, but there may be a dozen or more in an individual pot. There are several bait products available that work well, but the limited mobility of these small creatures and the number of very tiny juveniles that are always present makes it impossible to eliminate them without covering the surface of every pot and surface with bait.

As with all pest control products, be sure you follow the application recommendations. This is especially important if you have pets with access to your growing area. Many of these products are tasty to your pets and can injure or kill them. Even products now deemed non-toxic may be found to have some toxicity someday. Use pesticides only when you have no other choice. Try other methods first. Be sure that you have a problem and have identified the pest. Consult local experts or your county extension agent.

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 July 2007.



CULTIVATION

Summer in South Florida

by Andy Easton, reprinted with permission



These are a few things, in no particular order, that you might wish to consider that could help your plants through what is often a very difficult growing season in South Florida.

It's hot and the plants are growing like crazy so we need to fertilize more, right? Wrong! The two periods of most rapid growth in our area are Spring and Fall. When the days and nights get uncomfortably hot for us, they are too hot for many of our orchids too. The respiration rate will exceed the photosynthate storage rate for much of the 24 hour period and consequently, just like when we go on a diet and exercise more to lose weight, our plants will actually struggle to hold their own or may even go backwards. In the months of July, August and September, it is prudent to actually feed at a lower concentration and also to make sure you are feeding a formulation that is at least even concentrations of Nitrogen and Potassium and preferably with a Potassium level around 25% higher than Nitrogen. Don't skip feeds however as the higher temperatures mean that fertilizer is quickly metabolized by media microflora. Now if you just grow Vandaceous types these comments are less applicable but anything in the Cattleya Alliance will benefit from the above regime.

Be sure too that you water and fertilize in the early or late hours, I personally prefer morning but the orchid leaf stomata are open at either time. It is not necessary to get into a debate about foliar feeding here but I am sure the elevated bacterial leaf presence in warmer months greatly assists in plant nutrition by converting fertilizer into gaseous ammonia which is then readily taken up through the leaf stomata. Research has shown that Phalaenopsis stomata are open at night but be careful watering them in the evening as crown rot will be a problem. People say to me that if Phalaenopsis can survive in their natural environment where it rains

every day in Summer and often in the evening, why can't they behave the same in cultivation? There are two main reasons why we run into problems with cultivated plants. Firstly. The plant orientation is all wrong. Phalaenopsis in nature develop so that the leaves drain water away from the crown. We place them in pots and all the water essentially runs backwards and accumulates in the crown, just where we don't want it at nighttime. Secondly rainwater is a different "cat" to well or city water with added fertilizer and it is much less likely to support pathogen growth.

Plant disease researchers have found that elevated levels of certain nutritional elements like Magnesium will contribute to a plant's ability to resist fungal and bacterial infection. Epsom Salts (Magnesium Sulfate) is a cheap and effective source of this critical plant nutritional element. Once a month in Summer, instead of watering and feeding, water and feed Epsom Salts. It doesn't mix well with fertilizers so should be used on its own and even if you don't have the capacity to liquid feed it, you can even apply it as a top-dressing without any risk of injury to your plants. Feed at the rate of a level teaspoon per gallon or top-dress at the rate of a level teaspoon per six inch pot.

There are oils and oils. Some people have done major damage to their plants by using the wrong oil at the wrong time of day or year! But, the paraffinic oils like Ultra-Fine which can be purchased for around \$11.00 a quart at Home Depot are wonderful for home growers. I spray all my plants in the greenhouse at home with Ultra-Fine every month, year round. You have no toxicity issues to worry about so you can spray in your swimsuit if you wish and these paraffinic oils will really keep mites, scale, thrips and mealy bug on the back foot. If your water is high in Calcium, they will also help keep your plant leaves shiny. I tend to spray in the early hours because it is more pleasant for me but even if the sun is higher in the sky, only the thinnest leaves and most sensitive plants would be likely to be affected, if at all. Caution: with any spray it is always better in terms of efficacy and for systemic uptake, to spray when the stomata are open, i.e. in the cooler hours.



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Although summer is not the most pleasant time to be in your greenhouse, make some time each week to do a slow walkthrough. For people who hand water this is not a problem but if you have overhead watering capacity, don't just water and run!

Things can go bad very quickly in the summer months and a small spot of bacterial infection can become a sorry mess in hours rather than days. Spacing plants and a good fan for night air movement is critical to the prevention of most fungal and bacterial problems. Never let your plant roots come within 18 inches of the soil. The ubiquitous *Fusarium* wilt fungus is just waiting to attack your prize orchid and it is essentially, incurable. Just a splash of water which hits the soil under your bench and then bounces up onto a healthy *Vanda* root can spell disaster. Whenever I see people placing plants on the ground for easy watering, I just shudder. It is one of the most dangerous and unhygienic practices for your orchid plants.

Good growing! Make it through summer and be ready for the pleasures of the Florida Fall with a group of robust and healthy orchids.

Note: Andy has been a professional orchid grower and hybridizer since 1973. He is the former owner of Geyslerland Orchids in New Zealand and the former Director of Education for the American Orchid Society. Currently, Andy is the proprietor of New Horizon Orchids that breeds orchids for The Netherlands and other world markets. This article from May 2009 is available on the [South Florida Orchid Society website](#).



Hot Humid Summers

by Sue Bottom, sbottom15@gmail.com



It is summertime and the growing is easy. As the spring days lengthened and warmed, you ramped up your watering and fertilizing schedule to match the growth rates of your orchids. As new roots appeared, you were busy repotting orchids in need of a new home. Now your orchids are summering outdoors, loving the buoyant air movement and bright shade. There are some things to watch out for during the carefree days of summer.

Light. Summer days are long and the light intense. As long as the leaves do not get too hot, this light is great because the high photosynthetic rate allows the plant to store excess reserves for flowering. Feel the leaves during the hottest part of the day. If they feel hot to you, consider what options you have to cool the leaves to prevent heat stress. Shading and improved air movement will help cool the leaves, as will wetting under benches and outside the pots.

Watering. If you are growing under cover, you determine the watering schedule; otherwise, Mother Nature is in charge. Rainwater does wonderful things for orchids, gentle rains allow your plants to take up water over an extended period and help flush salts from the pot. If it rains often or you are subject to extended rainy periods with lots of gray days, your plants may get too much of a good thing. A sphagnum or pure bark based mix may be too water retentive to grow successfully outdoors when you cannot control when and how much rain the plant will receive. Roots can become waterlogged in a soggy mix, so you might elect to grow on mounts or in open baskets with no media. Of course, winter follows summer and orchids grown without potting media can be high maintenance indoors during cold weather. A coarse, freely draining potting mix may be a good compromise. When we get frequent showers, the pot will drain and the roots will have the air they love so much around them. The coarser the mix, the more it has to be watered so if it does not rain, you will have to water every third or fourth day during the summer and perhaps weekly to biweekly in winter.

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Fertilizing. Your fertilizer addition rate should match your plant's growth rate. In most areas, the summer is the main growth season so you should be using higher fertilizer rates so the increased light levels can be converted into more roots and leaves. High fertilizer rates will tend to form lush, softer growths more prone to disease and pests, particularly with high ammonia nitrogen forms. Lower fertilizer rates will result in slower growth, but this growth is stronger and less prone to damage from pests and diseases, particularly if sufficient calcium and magnesium are supplied. You will see recommendations ranging from using one-eighth strength with each watering to using full strength once a month. The fact is that fertilizer is much less important to your orchids than is the proper light, humidity, watering, air movement and temperature. Our studies of local water quality suggest that those using well water should select an acidic reaction fertilizer like 20-20-20 or 20-10-20 with Epsom salts, while those on municipal water supplies should use a Cal Mag fertilizer. If you are not sure how much water-soluble fertilizer to add, be cautious and start with a quarter-strength application. For those without a system to apply water-soluble fertilizers, top dressing with time-release fertilizer is an option.

Repotting. Hopefully, the bulk of your repotting is complete. Even if you have a few flowers left on your spring blooming phal, you should consider removing the spike and repotting so it can gather its strength for next year's bloom cycle. You may find an orchid requiring emergency repotting or a bifoliate cattleya throwing off new roots; otherwise avoid repotting during the heat and humidity of summer. The open wounds created during the repotting process together with disease pressure inherent to the season can combine with disastrous results for your plant. If you do repot in summer, consider using a protective fungicidal drench and keeping the plant dry for a week or two after repotting to help prevent disease.

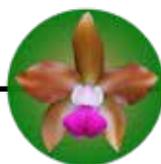
Water Pocketing. Do not allow water to accumulate in or around the aerial parts of your plants. The bacteria ubiquitous in our environment will thrive in this environment and cause plant tissue to rot. On sympodial orchids with pseudobulbs, a papery sheath known as a cataphyll protects the new growth from the sun and chewing insects. As the pseudobulb matures, sometimes a space develops between the pseudobulb and the sheath where water can pocket. Gently peel the sheath down so water can drain freely. On monopodial orchids, water can accumulate in the crown of the plant and rot the growing crown. If Phalaenopsis are not grown in an area protected from rainfall, consider angling the pots so water can freely drain from the crown.

Sprays. With the increased temperature comes an increase in pest populations. Scale seems to love cattleyas; mealybugs often appear on tender new plant tissue, mites on thin leaved orchids and thrips on buds and flowers. Keep a spray bottle handy, filled with isopropyl alcohol or one of the other home remedies used to kill on contact. You can follow up with a systemic product that is absorbed into the plant so it can provide more long lasting control. There are also insect growth regulators that can prevent the pest from completing its life cycle. Except for spraying the insect growth regulator Distance twice a year, I usually spray or drench only in response to a pest that has appeared in the growing area. Thrips are my nemesis, but a drench with Orthene at the first sign of damage seems to last for 6 to 8 weeks. Spider mites attack some of the catasetums each year as well as some of the thin leaved epidendrums and dendrobiums growing in the upper and drier section of the greenhouse. Avid controls them, but usually there is substantial leaf damage by the time their presence is known.

The increased humidity of summer encourages the growth of fungal and bacterial pathogens. Your best natural defense is buoyant air movement that helps keep leaf surfaces dry and prevent fungal spores from settling on leaves. Airflow can also be enhanced by choosing a location where the breezes are unobstructed and maintaining ample spacing between plants. If you find you continue to get disease outbreaks despite your best efforts, you can consider some precautionary sprays. Before you invest in one of these products, be sure you understand the disease causing the problem, whether cultural controls might prevent its occurrence, and how effective a given product is for that disease.

- For the leaf spotting fungi, you can use products with the active ingredients chlorothalonil (Daconil) or thiophanate methyl (Cleary's 3336, Banrot, Thiomyl).
- For bacterial diseases, household hydrogen peroxide is very effective, as are copper products but dendrobiums and some thin leaved orchids are sensitive to copper. Fungicides generally are not effective on bacteria.
- For black rot caused by the water molds, the pricey fungicides containing fosetyl aluminum (Aliette) and the more expensive metalaxyl (Subdue) are considered the most effective.
- Some broad-spectrum fungicides are effective on a wide variety of pathogens, including Banrot, Pageant, Heritage and Medallion.

Continued on page 11



CULTIVATION

Continued from page 10



1. The greenhouse is covered with 50% shade cloth. An additional layer 30% layer is added inside at the spring equinox and taken down at the fall equinox.



2. The shade structure is covered with 50% shade cloth; a second layer is not required because of the buoyant air movement. Styrofoam fills the bottom half of the pots for improved drainage during tropical storms.



3. Experienced growers at your local orchid society can help you select the fertilizers and supplements that will work best with your water quality.



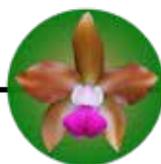
4. Complete the bulk of your repotting before Independence Day. You can finish last minute repotting when the temperatures mediate in the fall.



5. Keep spray bottles of hydrogen peroxide and isopropyl alcohol in your growing area so you can respond immediately to any problem you see.



6. During the rainy season, the activated peroxide product ZeroTol is sprayed on leaves in the breaks between storms to help prevent rots.



ORCHID ADVENTURES



Atlas Greenhouse Manufacturing Alapaha, Georgia

Courtney and Terry made the three hour ride up to Atlas Greenhouse a few weeks ago to pick up custom made benches for their greenhouses. Except for the ride around Jacksonville on 295 all of the roads are four lane scenic rural roads, which makes for a pleasant ride. Atlas has an incredible display of their structures from the smallest hobby kit to large scale commercial structures. The great thing about Atlas is that they manufacture their greenhouses and can customize them to fit your needs. Add friendly, and knowledgeable customer service and you've got a winning combination for your greenhouse needs. Oh yes, they are very prompt on delivery.



SHOW TABLE



Terry Bottom

Grower Courtney Hackney
Epi. cristatum



Terry Bottom

Grower Sue Bottom
Ctsm. Sheriff Frank Drew



Terry Bottom

Grower Jan Kesnikoski
Broughtonia sanguinea v. albescens



Terry Bottom

Grower Seve Hawkins
C. Peckhaviensis



Terry Bottom

Grower Sue Bottom
C. Gaudii



Terry Bottom

Grower Courtney Hackney
Rnthps. Firebird 'MAJ' HCC/AOS



Terry Bottom

Grower Linda Stewart
Dtps. Jia Ho Summer Love



SHOW TABLE



Grower Tom & Dottie Sullivan
Stanhopea



Grower Steve Hawkins
Blc. Teri Anderson 'Teri'



Grower Sue Bottom
Laelia tenebrosa



Grower Bob & Yvonne Schimmel
Mtssa. Shelob 'Red Spider'



Grower Courtney Hackney
Blc. Lois Smith 'Omaha'



Grower Linda Stewart
Bulb. Joyce Krym-Ingalls

Link to all Pictures. <https://flic.kr/s/aHskDXRaiY>

