St. Augustine Orchid Society NEWSLETTER
October 2015
Volume 10 Issue #10

Club News

October 6 Monthly SAOS Meeting

by Linda Stewart
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Welcome and Thanks. President Bob Schimmel opened the meeting at 7:15 pm with 48 attendees. Bob welcomed our three guests and reminded members that if you bring a first time visitor to the meeting, both of you will receive free raffle tickets. Bob also thanked Jeanette Smith and Dianne Batchelder for the refreshments and reminded all to enjoy the refreshments while dropping a dollar in the jar. Linda Stewart recognized our three guests for the evening and our October birthdays with free raffle tickets. Bob reminded all to vote for their favorite orchid on the show table.

Club Business: Please see a member of the Nominating Committee (Linda Stewart, Terry Bottom or Sue Bottom) if you wish to nominate someone for the 2016 Board of Directors. Nominations will be announced and voted on at the next meeting.

Library: SAOS Librarian Penny Halyburton talked about the variety of books in our library that are available to members for borrowing. Remember to email Penny ahead of time if you want to borrow a book (see our website) and she will bring your requested book(s) to the next meeting.

Keiki Club: Our next Keiki Club meeting will be a field trip to Orchtoberfest at EFG in DeLand on October 24. Please contact Mary Colee at keiki@staugorchidsociety.org if you would like to carpool to the event.

Ace Repotting: We will resume our first Saturday Ace repotting sessions in February.

Supplies: This is not repotting season, hence there were no supplies available on the side table this evening. If you need potting supplies, fertilizer, etc., please e-mail Sue at veep-programs@staugorchidsociety.org. We do have a variety of orchid T-shirts available in all sizes for sale.

Thanks: Our thanks to Wes Dean helping with the sales table and for filling in for our Treasurer, Bill Gourley this evening.

Orchid Events. There are lots of shows scheduled in October. There is Orchtoberfest, hosted by EFG in DeLand October 23-25, and the Gainesville Orchid Show on October 17-18, among several others. Please check the website for a complete list of events.

Show Table Review. There was a wide variety of orchids brought to the Show Table this month, including a number of heirloom and interesting hybrids and unusual species. Courtney Hackney reviewed the Show Table and discussed each orchid individually, giving some growing tips for each type. He talked about how bifoliate cattleyas love bright light, bulbophyllums and dendrochilums like plenty of water, dendrobiums don't like to be repotted, habenarias require good quality water (like rain water) and a dormant period to grow well and the catasetums that also require dormancy in winter in order to rebloom. So much information to absorb in such a short period!

SAOS Program: Sue Bottom introduced our speaker for the evening, Ron Midgett of New Earth Orchids, whose topic was "Green with Envy, Origin of the Green Hybrid Cattleyas." Ron Midgett began growing orchids in 1969 in the orchid rich environment of Southern California. Since then, he has grown orchids in many different regions of the US and in the Caribbean. Currently, he lives in Santa Fe, New Mexico where he continues his orchid breeding with an

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Club News

Upcoming Orchid Events

October

10-11 Fort Pierce Orchid Society Show
Fort Pierce Shrine Club
13 JOS Meeting, Topic TBA, 7 pm
Speaker TBA
16-18 East Everglades Orchid Society Show
RF Orchids, Homestead
17-18 Gainesville Orchid Society Show
Kanapaha Botanical Garden
23-25 Orchtoberbest at EFG Orchids
4265 Marsh Road, DeLand 32724
24 Keiki Club for Orchid Beginners, 11 am
Field Trip to EFG
Call Mary (669-8760) if Interested
30-1 Delray Beach Orchid Society Show
Old School Square Gymnasium
31 17th Annual Slipper Symposium
Sheraton Orlando North, Maitland

November

3 SAOS Meeting, 7 pm
Roots! It's All about the Roots!
John Salventi, Everything About Orchids
7 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
10 JOS Meeting, Topic TBA, 7 pm
Speaker TBA

December

1 SAOS Christmas Auction, 6 pm
We're meeting on our normal Tuesday night but at a different location and starting earlier!
Moultrie Trails Clubhouse
121 Crooked Tree Trail, St. Aug 32086
6 JOS Christmas Auction, 5:30 pm
Orange Park Country Club
2525 Country Club Blvd, Orange Park

January

2-3 Sarasota Orchid Society Show
Sarasota Municipal Auditorium
5 SAOS Meeting, 7 pm
How to Grow Orchids in St. Augustine
St. Aug Orchid Society Members
12 JOS Meeting, Topic TBA, 7 pm
Speaker TBA
15-17 Fort Lauderdale Orchid Society Show
War Memorial Auditorium
17 Keiki Club for Orchid Beginners, 1 pm
Bringing Home New Orchids
Charles and Kathy Young
160 West Genung St, St. Aug 32086
23-24 Tamiami International Orchid Festival
Dade County Fair Expo Center

St. Augustine Orchid Society Organization

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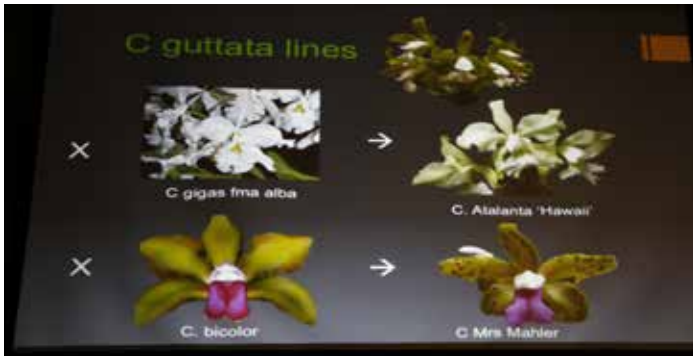
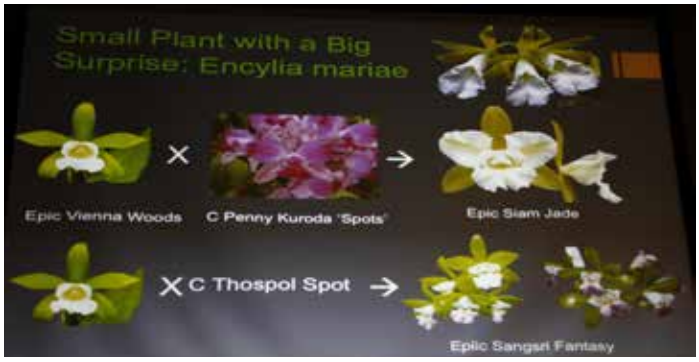
emphasis on Cattleyas, Paphiopedilums, and Oncidiinae. He is also an AOS Judge in the Rocky Mountain Region. Santa Fe rests at an altitude of approximately 7,000 ft. above sea level, and has a higher humidity than most of New Mexico, including a monsoon season that runs from July through October, when the humidity can run between 45% and 100% at times. The water supply there is quite good and comes from rain and snow reservoirs.

Ron began by asking the audience if anyone could identify the only "true" green cattleya alliance orchid with a green or white lip. Many guessed, but no one was able to identify Encyclia mariae, which is frequently used in hybridizing because of its color and fragrance. There are two different reasons for an orchid to have green coloration. The first is the presence of chlorophyll in the flowers, which gives the green color. The second is the absence of anthocyanin pigments in the flower. There are also two basic types of green coloration in the flowers: green fading to yellow, and green fading to white.

Ron named the most important species that are used in hybridizing in the hopes of achieving green blooms: Cattleya guttata fma alba, Cattleya bicolor, Cattleya granulosa, Encyclia mariae, and Brassavola digbyana, along with two supporting actors Cattleya xanthina and Cattleya forbesii.





Ron then showed pictures of some beautiful primary hybrids as well as more complex hybrids that have been developed using different combinations of these species in the pursuit of the perfect green cattleya.

It's always interesting to try to understand what the hybridizer is trying to achieve when selecting cultivars to interbreed, as well as to find out what percentage of the cross met or exceeded expectations. If you purchase plants when not in bloom, this information helps the hobbyist make a decision as to whether to take a chance on unbloomed seedlings that will exhibit some qualities of both parents or select only mericlones with a known flower.

Meeting Conclusion: The Member's Choice Award for October was Cymbidium England's Rose 'Camila' x Gordon Gibbs 'Dashing' HCC/AOS, brought in by Harry and Celia McElroy. The raffle table was the final event of the evening with Dianne Batchelder and Christie Peppard presiding. Thanks to all of those that volunteered to stay and clean up the room.

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

September 20 Keiki Club

Fall Preparations

Almost 20 folks had the pleasure of meeting at Eric and Carolyn Smith's home for the September Keiki Club. Sue Bottom talked about getting your orchids ready to be brought into their winter homes.

Expose Phals During First Cold Snap. We usually get our first cold snap around Halloween. Either leave your phals outdoors or place them next to an open window during this cool weather Phalaenopsis require a significant day to night temperature change to initiate spikes. It usually takes a couple of weeks of these conditions to get all of the phals to put their energy into growing spikes instead of leaves. Phals will be fine exposed to the cool weather even after nights are in the upper 50s F as long as the day temperature rises above 80F. Once daytime high temperatures are below 78-80F, phals need to be kept no lower than 60F at night. Your phals will be on schedule to be spiking by Christmas and in bloom by Valentine's Day.

Clean Up your Plants. Use the delightful fall months to spend some time with your plants: clean them up, remove dead flower spikes, etc.

- *Check for Critters.* You want to make sure that you are only bringing in your plants, and not critters that abound in Florida. Spray them with a hose end sprayer set to flat to give them a bath and remove any spider webs, etc. Clean off leaves with lemon juice, white vinegar or Sprite to remove all that messy build up of fertilizer or minerals on the leaves.
- *Ants, Snails and Cockroaches in Pots.* You don't want to introduce ants and roaches into your porch or home for the winter. Mix up a jug of liquid Sevin and water (1 tsp/gal) and pour through all your pots to eliminate these pests.
- *Check for Sucking Insects.* Remove sheaths to reduce the number of places that insects have to hide. Watch for signs of scale and mealy bugs, any kind of white fuzzy mass. If you do find any pesky critters, you can treat small spots with rubbing alcohol or spray all the plant surfaces with an insecticide. Better yet, add 6 tsp of Bayer Tree and Shrub (1.47% imidacloprid) to your Sevin jug and pour through the potting mix. The systemic imidacloprid will be absorbed through the roots and kill scale and mealybugs from within without your having to spray.
- *Check for Fungus.* Keep an eye out for any kind of moldy looking areas. Molds may show up as dark areas usually on the lower surface of the leaf. If found, spray with Physan or pool algaecide.

Temperatures. Have a plan to protect your plant during the winter months.

- *Minimum Temperatures.* Protect your phals, vandas and phalaenopsis type dendrobiums when temperatures drop to 50 to 60F and your other plants at 40 to 50F. Get projected hourly night time low temperatures for your area.
- *Temperature Differential.* Make sure that your orchids are getting some solar heat to get the day time temperature at least in the 80s. They will not grow well for you in a constant 65 to 70 degree environment. You may have to move your plants to a window with more direct sun to accomplish this. If you have installed artificial lighting to increase light, this may provide enough warmth for your plants.

Isolate those Plants that Need a Rest. Winter is a good time to group plants together that need similar winter conditions.

- *Dendrobiums.* Group your deep winter resting dendrobiums (nobile, seminobile and Callista sections) together. Restrict all fertilizer after Thanksgiving, water sparingly and provide high light during the winter months. Keep these and similar plants together so that you will know that they need only once a month watering and no fertilizer.
- *The Catasetinae.* Catasetums, clowesias, cycnoches and mormodes as well as a few others like calanthe and habenaria are dormant during the winter months. They need no water at all until the new growth starts in the spring. Find a place to group these together where you know you will not water them. Some people turn the pots on their sides to remind themselves.

Keiki Club on October 24
Field Trip to Orchtoberfest at EFG in DeLand

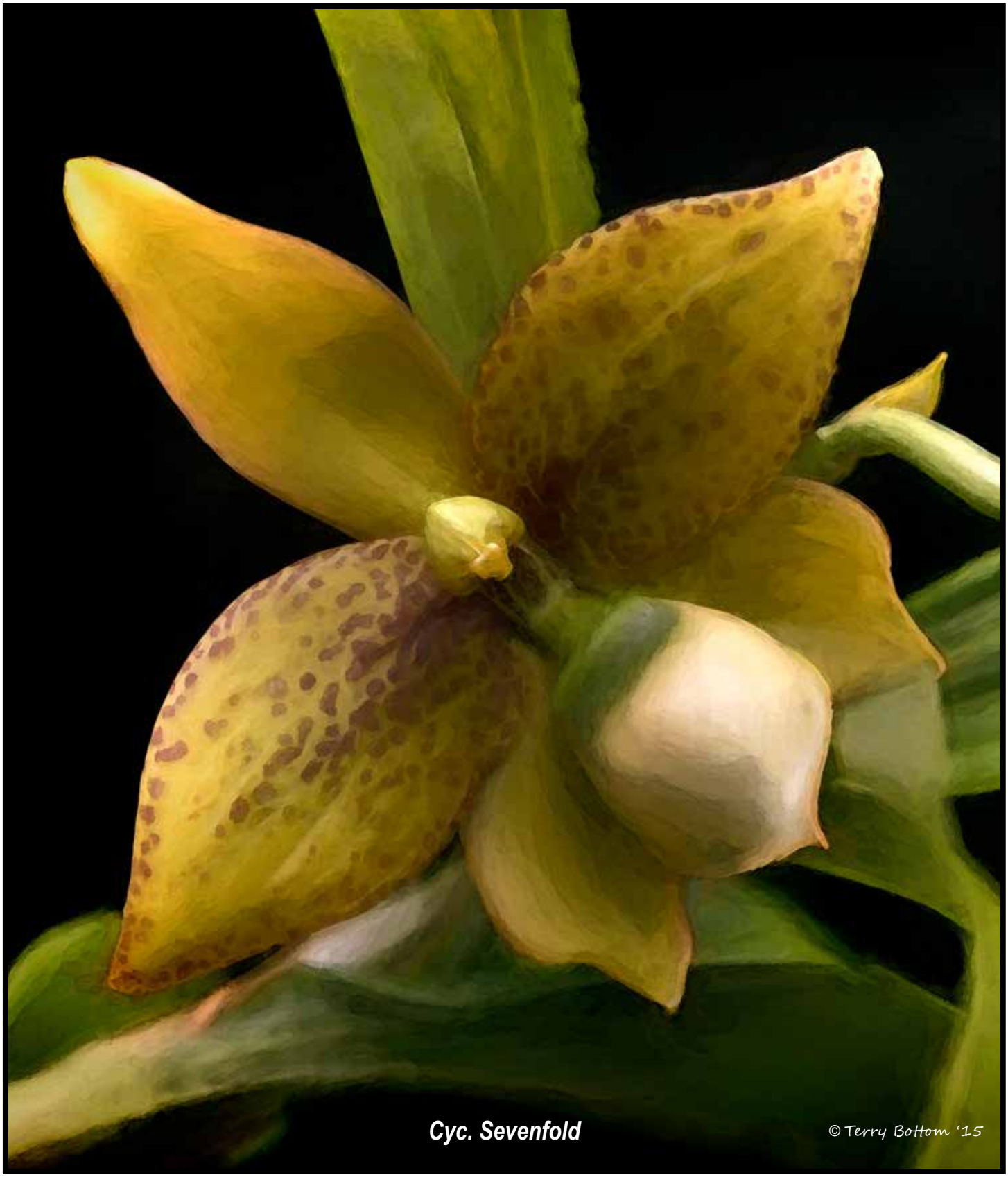
We're planning a field trip to EFG Orchids in Deland for their Orchtoberfest on Saturday October 24. EFG Orchids is owned by George Hausermann Jr., originally of Chicago and fourth generation orchid grower. Orchids and tropical plants will be offered for sale by EFG and the vendors participating in the event. The Hausermann clan will be busy preparing all the German food they will have for sale, like brats, German potato salad and more, including German beer! For those that want to carpool, contact Keiki Club Coordinator Mary Colee by phone at 669-8760 or via email at keiki@staugorchidsociety.org.

November 3 Monthly SAOS Meeting

Roots! It's All About the Roots!

Please join John Salventi as he presents a topic near and dear to every orchid grower: how to take care of those precious roots! Roots are the lifeblood of our orchids. He will discuss all the methodologies for taking care of our orchid root systems. One of the founders and owners of Parkside Orchid Nursery in Pennsylvania, John began as a hobbyist in 1986 and entered the commercial orchid world. John is now part of Salventi-Purviance Enterprises, LLC which provides orchid consultation, lectures and teaching, and sales of greenhouses.

Inspiration



Your Orchids in October

based on Robert Scully, Ned Nash & James Rose checklists, courtesy of the AOS

General Growing Tips. We usually receive our first cold snap around Halloween, so if you are growing outdoors, this is the time for you to make your winter preparations. Check your winter structure, test fire your heaters and start cleaning your plants. The shortening day length and cooler nights initiate all sorts of changes in your orchids. Your plants require less water and fertilizer now. Observe the rate at which your plants dry out after watering and make adjustments, gradually adding days in between your normally watering cycle. Consider removing shading from the greenhouse to allow more light during the winter months.

Cattleyas. Many fall blooming cattleyas are getting ready to bloom and buds are swelling in their sheaths. C. labiata, C. bowringiana and the fall blooming form of C. skinneri, and their hybrids typically have double sheaths. Sophronitis coccinea enjoys a peak flowering season this month. Some of its hybrids should also be blooming, particularly those with summer-fall flowering parents. While the plants are usually small, the show of color makes them conspicuous. Also blooming now is Enc. cochleata, Epi. ciliare and Epi. pseudepidendrum.

It seems that the big change in day to night temperatures can cause moisture to accumulate between the inner and outer sheaths causing buds to rot. Watch these orchids carefully and be sure there is lots of air movement around these orchids. If you observe any moisture accumulating, carefully open the outer sheath and allow air movement into the space between sheaths. That usually solves the problem.

Paphiopedlums. Paphs and phrags really seem to love the cool nights too. Mature growths, especially in the multifloral paphs will prepare to flower. Usually development of new growths is the first sign that a flower spike will soon emerge.

Phalaenopsis. Phalaenopsis require a significant day to night temperature change to initiate spikes. It usually takes a couple of weeks of these conditions to get phals to put their energy into growing spikes instead of leaves. Phals will be fine on a porch or in a greenhouse even after nights are in the upper 50s F as long as the day temperature rises above 80°F. Once daytime high temperatures are below 78-80°F, phals need to be kept no lower than 60°F at night.

Vandas. Autumn marks the end of the vanda growing season. Vandas are known as heat-loving orchids, but seem to bloom better in the fall and winter as long as temperatures do not get below 60°F and there is enough light. Colors are always brighter when nights are a little cooler. This is especially true for any vanda or ascocenda with Vanda coerulea in the parentage.

Other Genera. Catasetum Relatives. You should be seeing flowers on catasetums and their relatives now. Handle catasetums with care when the blooms are open because a minor jarring of the plant can cause the flowers to eject their pollen-carrying anther caps, resulting in a much shortened flower life. This interesting and unique method of natural pollen dissemination is always a stimulating topic of conversation for those seeing it occur for the first time.

Orchid Questions & Answers

by Sue Bottom,
sbottom15@hotmail.com

Q1. My Cattleya has started turning brown from the roots upwards. Yesterday it seemed that only two were affected today it has spread. What is wrong with it? I only water once a week. My other orchid is fine. Is it dying?

A1. That is the evil black rot, the bane of the Florida cattleya grower during our hot humid summers. Black rot is caused by one of the water molds, it is very fast moving and very deadly. Are the pseudo bulbs soft, watery and smelly? I think the rot has traveled too fast and too far for you to save the plant. I stopped repotting cattleyas in the hot humid months of July and August because inevitably some of the transplants would get rot. Letting the plants go to a hard dry in July and August can also help prevent infections. If you catch it quick enough you can cut out the infected tissue and pour some peroxide or better yet one of the specialty chemicals through the plant and keep it on the dry side.

Q2. I'm trying to revive a phalaenopsis for a friend. It was in old, decomposed potting mix and most of the roots were rotten. I trimmed off at least 3/4 of the roots, put it in new mix (bark, lava rock, perlite) and in a new clay pot. It lost all the original adult leaves, which I expected, but now it is continuing to lose leaves. Each one goes through the same process, the surface of the leaf looks withered, then it droops, and then dies. There is no evidence of lesions, spotting, etc. I have the plant on my table in the pool cage where it gets indirect light. I have been watering it every 3-4 days and I make sure the mix is dry before rewatering. I use filtered water, also fertilizer and epsom salts every 3

weeks or so. It had a small new leaf when I got it. That leaf has grown and it has a second new leaf. It is regrowing roots and has beautiful healthy green root tips. I suspect it is getting too much or too little water, but I don't know which.

A2. You are making all the right moves. Your plant is just recovering from the transplant shock and returning to health, regrowing roots and beautiful green root tips. Sometimes bark is hard to hydrate when you first use it so you have to water a little more frequently than you otherwise would, and a shot of seaweed/kelp or any of the root stimulators will encourage root growth after repotting, but the fact is the plant looks like it is returning to health and starting to grow again. We'll have a second growth spurt in the fall after the temperature and humidity mediate so you have another few weeks of growing before it will start thinking about blooming. It looks great and is recovering very nicely. Keep up the good work!

A3. We bought this orchid last March and after all the flowers fell off it started this slightly amazing growth pattern. What is happening?

Q3. It looks like twins! Looks like this soft cane dendrobium has produced two keikis for you. You can gently twist or cut the new plantlets from the mother plant cause the roots are long enough to sustain the plant.

Some Orchids with Predominantly Green Flowers

by Greg Allikas, American Orchid Society, Reprinted with Permission

Although lavender, pink, orange and red orchids rate high in the marketplace, growers with large or mixed collections usually have one or a few green-flowered orchids. There is something fresh about a lettuce-green flower that appeals to our nature. Although most commonly cultivated genera have green species, they are certainly not common. Below we present a sampling of favorite green orchids. Try a few, they are certain to make your fellow growers green with envy!

Bonatea speciosa 'Green Egret' FCC/AOS - Interesting African terrestrial, requires a defined rest period during which the plant will lose most of its foliage. © 2005 Greg Allikas

Cycnoches chlorochilon - Cynoches appreciate a dry winter rest with little water and no fertilizer. This species has an intoxicating fragrance. Warm to intermediate. © 2009 Greg Allikas

Coelogyne Burfordiense 'Bessey Creek' HCC/AOS –Plants of this species get big but reward the grower with impressive long inflorescences of large green flowers with a black-marked lip. © 2009 Greg Allikas

Dendrobium epidendropsis - Interesting species from the Calcarifera section of the genus. Best grown mounted or in a basket to accommodate the pendant canes. Intermediate to cool-intermediate. © 2009 Greg Allikas

Epidendrum difforme - Heavy succulent leaves tend to cause lax growth that is suited to a mount or basket. Plants from Honduras have the best color. Warm to intermediate. © 2009 Greg Allikas

Rhyncholaelia digbyana - Formerly known as *Brassavola nodosa*, this is the orchid that added the 'B' to Blc. This species is from dry regions of Mesoamerica. It has an unmistakable citrus fragrance at night. Intermediate to warm. © 2009 Greg Allikas -

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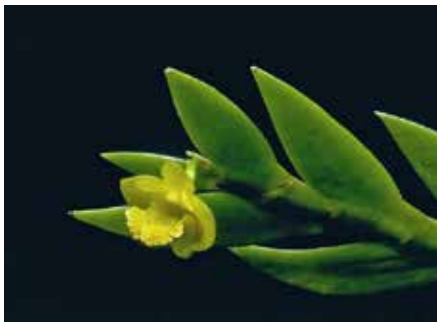
Paphiopedilum malipoense - Desirable species from China described in 1984. Intermediate to warm. © 2009 Greg Allikas



Dendrobium anceps - This small-flowered species is often grown just for its interesting 'rick rack' foliage. Best grown mounted. Intermediate to warm. © 2009 Greg Allikas

Cymbidium goeringii 'Janet' AM/AOS - Very tolerant of cold during winter and heat and humidity in summer. © 2009 Charles Rowden

Catasetum integerrimum - Catasetums require a dry rest in the winter. Give them water sparingly and no fertilizer until growth appears in spring. Warm to intermediate. © 2009 Greg Allikas

Ida locusta - Beautiful large orchid formerly known as *Lycaste locusta*. This species from the mountains of Peru requires cool temperatures. © 2009 Greg Allikas

Paphiopedilum tonsum 'Chiico' HCC/AOS

Bacterial and Fungal Infections

by Sue Bottom, sbottom15@hotmail.com

If you've grown orchids for a while, you have noticed different blemishes on them and wondered what caused the problem. Some genera of orchids just seem prone to certain diseases, like Thai crud on vandas, and orchids seem to come under disease pressure during certain times of the year, like botrytis flower blighting during cool weather. You learn, sometimes by the School of Hard Knocks, how to recognize disease symptoms in the types of orchids you grow. Then you have to figure out how to eliminate the disease from your growing area and prevent it from recurring in the future.

Healthy Plants are More Resistant to Disease. With orchid diseases, your primary directive is to prevent disease from occurring. First and foremost, you strive to fine tune your culture to grow the healthiest orchids because vigorously growing plants are more capable of resisting disease via natural defense mechanisms. Cultural controls go a long way in preventing conditions that favor disease: proper watering to minimize excess leaf wetness, buoyant air movement to keep spores from settling on plant surfaces, well drained potting mixes that are refreshed if organic matter degrades and strict attention to sanitation. Cutting tools and pots should be sterilized between uses, benches and under bench spaces should be disinfected regularly, decaying flowers and vegetation should be removed promptly to sealed containers and any diseased plant tissue should be cut from the plant to eliminate the pathogen from the growing area.

Disease vs. Cultural Problems. The first step in diagnosing a problem is determining whether the problem is cultural in origin or the result of a disease pathogen. There are many physiological problems that new growers chalk up to disease that are in fact the result of some environmental factor, perhaps water is pooling in the crown of a phalaenopsis causing crown rot, or water pockets in the cataphyll around a new cattleya pseudobulb causing localized rot, or the changing sun angle causes rapid cell collapse from sunburn. During the course of your orchid growing career, you will damage or lose plants as a result of watering or other cultural errors. It happens to all orchid growers with all levels of experience. Take solace in the fact that the experience will help you recognize the signs of this or that environmental misadventure, so you can adjust your cultural practice and become a better grower as a result.

Responding to Disease Symptoms. To control diseases with fungicides, applications must be made before the fungus enters plant tissue. This is very different to the way you respond to pests in your growing area, where you treat with pesticides to kill the interloper. Most fungicides prevent diseases rather than curing them. Once you notice the symptoms of disease in your growing area, the pathogen is inside the plant and beyond the reach of most chemicals. Your first response to noticing a disease symptom is to sanitize the plant, which means physical removing the

Common Bacterial Diseases in Orchids

Bacterial Soft Rot caused by *Erwinia cartovora* or *chrysanthemi* on an oncidium

Brown Rot caused by *Erwinia cypripedii* on a paphiopedilum

Bacterial Brown Spot caused by *Acidovorax* (syn. *Pseudomonas) cattleya* on a nodosa hybrid

Bacterial infections are highly contagious, spread easily by plant exudations and splashing water. The pathogens favor warm and wet conditions. If found, quickly remove any diseased tissue and treat with an appropriate chemical to prevent spread of the disease. Keep a spray bottle of hydrogen peroxide handy in your growing area as a topical disinfectant. During hot, humid weather, consider preventative sprays, reducing leaf wetness and increasing air movement to prevent occurrence.

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infected tissue by using a sterile double edged razor blade or cutting tool. Chemicals can be applied after sanitizing to prevent the spread of disease to other parts of your plant or nearby plants. Keep notes to yourself when disease occurs in your growing area. It may help you anticipate time periods when your plants are subject to increased disease pressure and would benefit from a prophylactic fungicidal treatment.

Orchid Diseases. The diseases that befall orchids can be divided into a five basic groups, bacterial diseases, bulb, root and stem fungal rots, rots caused by water molds, leaf spotting fungi and the flower blights.

Bacterial Infections. Bacterial infections move quickly, much more quickly than fungal infections. Bacteria can enter the plant through wounds or natural plant openings like stomata. They release enzymes that dissolve plant cells producing large populations quickly, which then can be exuded from rotting tissue and easily spread to adjacent plants. Bacterial infections often have a water soaked appearance and the infected area may be sunken or surrounded by yellow halo. Sterilants like the household chemical hydrogen peroxide (and the more powerful specialty chemical Zerotol), Physan 20 or pool algaecide (and the more powerful specialty chemical Kleengrow) and the old standby for bacteria, copper fungicides like Kocide or liquid copper (and the more powerful specialty chemical Phyton 27 or 35), can be used as a precaution prior to infection or after sanitizing the leaf to prevent spread of the disease. Just remember not to use copper on dendrobiums.

Fungal Bulb, Root and Stem Rots. Bulb, root and stem rots arise from several soil borne fungal pathogens that cause rots. Fungal infections move much more slowly than bacterial infections but they will ultimately kill the plant if unchecked. Fusarium enters the water conducting vascular system and the spores germinate and carry the fungus through the xylem ultimately plugging it. Rhizoctonia enters the roots and the fungus progresses through the rhizome and lower part of the pseudobulb. Sclerotium enters the stem near the medium surface and spreads down to the roots and up to the leaves, ultimately producing overwintering bodies called sclerotia that propagate the fungus. These diseases are best controlled by a preventative drench program because they are very difficult to treat even with the pricey specialty fungicides. The infected tissue must be removed and the plant treated with one of the progressively more expensive chemical drenches like Daconil (chlorothalonil), Pageant (pyraclostrobin and boscalid) and Heritage (azoxystrobinor).

Fungal Root, Stem and Bulb Rots in Orchids

Fusarium Wilt caused by *Fusarium oxysporum* in a cattleya. Fusarium is spread largely by the use of unsterilized cutting tools and pots.

Root Rot caused by *Rhizoctonia solani* in a cattleya. Populations of this fungus can reach high levels in degraded potting mix.

Southern Blight or Collar Rot caused by *Sclerotium rolfsii* in a phalaenopsis. If the infection reaches the crown of the plant, it will die.

Fungal rots are slow growing diseases that infect roots, stems and bulbs on orchids, ultimately killing them. After sanitizing the plant by cutting away infected tissue, help prevent spread of the disease by applying drench applications of the relatively affordable Daconil or one of the more specialized and expensive chemicals labeled for these diseases, including Pageant and Heritage.

Water Molds. There is a very fast moving rot caused by water molds (fungal-like parasites called oomycetes) that results in pseudobulb rots and damping off of seedlings. This group of pathogens causes sudden oak death, downy mildew and the disease that caused the 19th century great potato famine. This organism requires water to proliferate and is more prevalent in the South during the hot humid summer months. Precautionary sprays before hot, wet weather together with steps during the danger period like avoiding repotting so as not to have pathogen entry points via open wounds and allowing plants to dry thoroughly before rewatering help. If you find Black Rot, act quickly to cut away infected tissue and then treat with hydrogen

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peroxide or better yet one of the specialty expensive chemicals like Subdue (metalaxyl), Aliette (fosetyl aluminum), Truban (etridiazole) or the dual action Banrot that contains etridazole.

Leaf Spotting Fungi. Fungi propagate from spores and fruiting bodies in the infected part of the leaf, so sanitizing the plant by removing the sporing bodies is a critical part of controlling the disease. The leaf and flower fungal blights are unsightly perhaps, but not life threatening to your plants like many other diseases. There are quite a few leaf spotting fungi, and it is less important to be able to identify the name of each fungus as it is to recognize that it is a fungal infection, because the chemicals used to prevent the spread of these leaf spotting fungi are the same. Precautionary sprays with one of the quaternary ammonium compounds like Physan 20 or 20% pool algaecide (and the specialty and more expensive KleenGrow), copper fungicides or thiophanate methyl fungicides can be used, or the chemicals can be sprayed after an infection is noticed to prevent it from spreading further, although the leaves will remain blighted.

Water Molds in Orchids

Black Rot caused by *Pythium ultimum* and *Phytophthora cactorum* on a cattleya. Avoid repotting and excessive wetness during the hot humid weather in which these pathogens proliferate.

Anthracnose and Leaf Spotting Fungi in Orchids

Leaf spotting caused by *Cercospora* species on a cattleya. The leaf spot continues to enlarge and can kill the entire leaf.

Thai Crude caused by *Guignardia on* a cattleya. Spores are present on the raised diamond shaped lesions that feel like sandpaper. These spores spread the disease.

Leaf dieback or Anthracnose, *by Gleosporium* and *Colletotrichum species* in an oncidium. Fruiting bodies develop on blackened leaves spreading the disease.

Leaf spotting fungi penetrate plant openings particularly during periods of warm temperature and leaf wetness. The fungi produce toxins that kill the host cell and the lesion is sometimes surrounded by a yellow halo. The disease is spread from spores on the discolored part of the leaf. Treat affected leaves with copper, quaternary ammonium compounds or other specialty chemicals like thiophanate methyl. If the infection is serious or continues to enlarge, remove the infected leaf to an inch below any discoloration.

Flower Blights. The fungus Botrytis, also called Gray Mold, can quickly ruin the flowers you have been waiting for all year. The fungus requires cool moist conditions to proliferate, spreading spores quickly to other flowers via air movement or water, and overwinters in decaying vegetative material. Remove infected tissue including afflicted flowers, lessen humidity and increase air movement. Flowers can be sprayed once or twice a week as a precaution with Daconil (chlorothalonil) or some of the pricier fungicides. Plant surfaces and bench surfaces can be sprayed with Kocide (copper) or quaternary ammonium compounds (Physan, pool algaecide).

Observe your plants each time you water. If you have a plant exhibiting the symptoms of disease, remove the infected tissue and treat the remainder of the plant and any close by plants with an appropriate fungicide. Spend some time considering what environmental conditions might have contributed to the growth of the disease and what precautionary actions might have prevented the disease from gaining a stronghold in your growing area. A healthy, vigorously growing plant is your best defense against orchid diseases.

Flower Blight - Botrytis

Show Table

Grower Sue Bottom
Aerangis biloba

Grower Maria Yessian
Den. Sena Red

Grower Harry & Celia McElroy
Habenaria Jiaho Yellow Bird

Grower Sue Bottom
Dendrochilum magnum

Grower Penny Halyburton
Blc. Amy Wakasugi

Grower Dick Roth
Blc. Marg Putnam

Grower Sue Bottom
Lc. Acker's Spotlight 'Pink Jewel' HCC/AOS

SHOW TABLE

Grower Suzanne Susko
Ctsm. Frilly Doris 'SVO II' AM/AOS x
Ctsm. Orchidglade 'Davie Ranches' AM/AOS

Grower Harry & Celia McElroy
Cym. England's Rose 'Camila' x Gordons Gibbs
'Dashing' HCC/AOS

Grower Linda Stewart
Blc. Copper Queen

Grower Sue Bottom
Zygoneria (Zga.) Adelaide Meadows x
Propetalum (Pptm.) Mathina

Grower Suzanne Susko
Neof. falcata 'Setsuzan'
(which means Snow Mountain)

Grower Yvonne & Bob Schimmel
Mtssa. Dennis Kleinbach 'Crowhurst' AM/AOS