



CLUB NEWS



Tony Millet

July 7 SAOS Meeting

Welcome and Thanks.

We had our first meeting at the Church Hall in 4 months, and it sure felt good! Our President Tom Sullivan opened the meeting with about 3 dozen people in attendance. He welcomed new members Vickye Winters and Anna Whittaker, along with our members and guests. Our librarian Howard Cushnir brought some library books,

and suggested you check out the library resources on the website. Lots of great books that Howard will bring to the next meeting if you make a request.

Virtual Show Table. We did not have our traditional show table at the meeting where there is usually much oohing and aahing. Instead, members sent in pictures of their blooming orchids, some of which are included in this newsletter. We will have a virtual show table presentation on the 21st, the third Tuesday of the month, where Courtney will Zoom into Cyberspace and talk about all the different orchids our members grow, give us some tips on how to grow them and tell us some interesting stories about them. We'll send your invitation via email a few days before the meeting.

Repotting Clinics. We had to cancel the repotting clinics at Ace during the pandemic, but are hopeful that we can resume them on August 1st. If we are unable to have the clinics at Ace, we could possibly have them at the Pavilion at the Church. We are working through the issues, and once our plans are finalized, the details will be posted on the website. We do our best to keep the website updated, so check back on the home page for the most current information.



SAOS Program. Good-Time Tony Millet entertained us with his lively program on potting and mounting orchids. He talked about his Pound Cake mix, a basic potting mix containing about equal parts of aliflor,



sponge rock and tree fern. Then you can add caramel or chocolate chips to the basic mix, like a little chopped sphagnum for more moisture retention or charcoal to keep the mix fresh. He talked about how difficult it is to find high quality tree fern and even the long fibered New Zealand sphagnum moss is difficult to find presumably because imports are restricted. He advised against using coconut chips because they decompose so rapidly. He is not a fan of using bark in the mix because he finds it degrades too quickly in his growing conditions.

He told us about this store that he frequents where things only cost a dollar. He finds lots of nifty things there that orchid growers can use. He buys rubber bands that can be used to easily attach a plant to its mount, no muss no fuss. By the time the UV light breaks down the rubber band, the roots will have attached the plant to the mount. Bungie cords can be used similarly to attach orchid to trees or large mounts. He shared lots of his tricks with us.



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Upcoming Orchid Events

July

- 11 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave.
- 14 JOS Meeting, Oncidiums
Steve Hawkins, The Orchid Specialist
- 31-1 Annual Cattleya Symposium
CANCELLED

August

- 31-1 Annual Cattleya Symposium
CANCELLED
- 1 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 4 SAOS Meeting, Catasetums, 6:30 pm
Francisco Miranda, Miranda Orchids
- 8 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave.
- 11 JOS Meeting, Topic TBA, 7 pm
Thanh Nguyen, Springwater Orchids

September

- 1 SAOS Meeting, You Bred What?, 6:30 pm
Dave Off, Waldor Orchids
- 5 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 8 JOS Meeting, Topic TBA, 7 pm
Courtney Hackney
- 12 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave.
- 20 Keiki Club for Orchid Beginners, 1 pm
Growing Area Tour
Bob and Yvonne Schimmel's home
702 Wilkes Court, St. Aug 32086

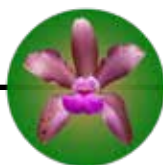
October

- 3 SAOS at Ace Hardware, 9 am til noon
3050 US 1 S in St. Augustine
Repotting and Plant Clinic

- 3-4 South Florida Orchid Society Show
CANCELLED
- 6 SAOS Meeting, 6:30 pm
Backyard Orchid Growing
Linda Stewart, St. Aug Orchid Society
- 10 Florida North-Central AOS Judging, 1 pm
Clermont Judging Ctr, 849 West Ave.
- 13 JOS Meeting, Program TBA, 7 pm
Art Chadwick, Chadwick Orchids
- 16-18? Field Trip to EFG Orctoberfest
4265 Marsh Road, Deland 32724
- 24-25 Gainesville Orchid Society Show
CANCELLED
- 31-1 Delray Beach Orchid Society Show
CANCELLED

St. Augustine Orchid Society Organization

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Meeting Conclusion. The evening concluded with the Raffle table, which Tony generously provided. Thanks to the helpful hands that stayed to reset the tables and chairs and clean up the room.



Linda Stewart helps Walter Muller with his preorder.



Cathy Mayo mans the SAOS products Sales Table.



Librarian Howard Cushnir says just click the link for a book request.



Scott Campbell, Marv Ragan & Tom Sullivan discussing Tony plants.



Dianne Batchelder handles the plant raffle.



Tom Sullivan demonstrates some of his wire products making tricks.



Cleanup Time.



CLUB NEWS

Catasetinae Competition Grow

Catasetums are growing like mad this time of year, fueled by the bright light, long days, high temperatures and lots of food and water. Perhaps we'll be awarding the prize for the 'first to flower' catasetum this year! Take pictures of your blooms and send them over so we can start compiling the candidates for the 'best bloom' award. We're thinking of having Fred Clarke join us via Zoom to select the winner. Sometime in late summer, you'll bring your plants in for voting to see who gets the 'best grown plant' prize. Should be fun!



Beginners Culture Classes

At our August meeting, Bob Schimmel is going to explain how to build an orchid tree. This typically is a wooden post mounted on casters with pot clips to which you can attach clay orchid pots. The rollers allow you to easily move the tree in and out of the sun on your lanai, the garage in winter, etc. They are very handy!

American Orchid Society Corner

Webinars

July 14, 8:30-9:30 pm, Everyone Invited
Greenhouse Chat Orchid, Q&A - Ron McHatton
July 22, 8:30-9:30 pm, AOS Members Only
Digital Orchid Culture – Bill Bodei (SAOS member)

Orchids Magazine this month:

Soluble Salts, Sue Bottom
Rainwater Collection System, Linda Stewart
Reverse Osmosis System, James Arnold
Lepidhoriza Bulbophyllums, Charles Wilson

Photos of Latest AOS Awards



Keiki Club in Summer

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 is a great resource for our newer growers that would like to get one-on-one assistance and answers to their orchid questions.



August 4 Monthly Meeting

Brazilian Catasetums

Francisco Miranda, [Miranda Orchids](#)

Francisco Miranda is a world-renowned Brazilian taxonomist that will be talking to us about Brazilian Catasetum species. Their distribution and habitats will be discussed, many from the Amazon, to help us understand where and why the plants live where they do. He will also discuss flower dimorphism, a very interesting feature of the genus, showing both male and female flowers.

We will have our normal raffle at the end of the meeting. Friends and guests are always welcome!

When: Tuesday, August 4, 6:30 til 9 pm

Where: Memorial Lutheran Church
3375 US 1 South, St. Aug 32086



INSPIRATION



Cattleya schofieldiana

© Terry Botta



CULTIVATION



Orchid Questions & Answers

by Sue Bottom, sbottom15@gmail.com

Q1. I recently purchased some more orchids (a recurrent problem) and one was a blooming vanda that had questionable spots on the flowers. I wasn't going to buy it as I was worried about

Botrytis but I broke down and bought it anyway.



A1. I think what you are seeing is edema on the flowers, in which the spots are raised and look a little corky. Edema is like a blister when the plant absorbs more water than can be shed through transpiration, so it blisters. It happens more on leaves than flowers. It happens when you water late in the day and the nights turn cool or when you water on a gray rainy day. It doesn't really harm the plant.

Q2. This explains my dead Cattleya! And we aren't even in the rainy season! Lesson learned...just because the water is running out of the clay orchid pot, it doesn't mean that it's draining. I suppose the remedy is to use clay pellets or sponge rock in combo with the power plus?



A2. Looks like a nasty case of snow mold. The SAOS cattleya mix is something like 30% clay pellets, 30% coarse Orchidata bark, 30% sponge rock and 10% charcoal. Even so, occasionally you'll get snow mold after several years in the pot and it will smother the roots. Good that you found it, you can just remove all the bark from around the roots and repot.

Q3. A couple of spikes are growing, but she dropped two leaves last few days. I repotted her about 2 to 3 weeks ago after I noticed that one of the leaves was turning yellow and the sphagnum moss was turning black. If the stem is rotting, I wonder if I should cut portion of the stem and/or spikes to save this orchid. Please advise.



A3. Phalaenopsis are monopodial, which means that they grow up on a vertical stem, getting new leaves at the top and losing leaves at the bottom. With the new leaves and stem, come new roots growing from the new stem. With the losing leaves at the bottom, the stem becomes woody and the bottom stem and roots ultimately die. Some repot phals every year, some every 2nd or 3rd year, depending on the condition of the potting mix and how far out of the pot the plant has grown.

If it were my plant, I would get some root stimulator, some long fibered New Zealand sphagnum moss and an empty pot. Cut the stem below the last aerial root and also cut the two flower spikes off. Spray the stem and the roots with the root stimulator. Then, wrap the stem with some good sphagnum moss, and drop the plant into the pot, placing an inch or two of styrofoam peanuts at the bottom and leave the rest of the aerial roots open to the air in the pot. You can mist, water the plant every other day or so while you are waiting for new roots to branch from the aerial roots and new roots to form from the upper part of the stem. You can then start backfilling the pot, a handful at a time, with your phal mix of choice.



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Cypress Mulch

by Courtney Hackney

Your repotting should be almost complete for most orchids now. Potting is the time when you learn how good your culture has been the past year or so. For me, it is also a time when I evaluate different media and the many experiments always ongoing in my greenhouse. I often have orchids that must be repotted that were purchased growing in different media. These orchids are examined more carefully than those in my medium because I am always interested in better ways to grow orchids. What type of medium was it? Was it in a clay or plastic pot? How many roots does the orchid have? Are there lots of dead roots? These are just some of the things I look at.

One medium that periodically surfaces in various forms is cypress mulch. This is the same stuff that can be purchased at Lowes, Home Depot or any of the large hardware/lumber stores that carry garden supplies. It is usually from Florida and made entirely of chopped pond and bald cypress. Some of the most accomplished orchid growers use this medium and their plants are reported to grow extremely well. Beginners and sometimes commercial growers often fail miserably with this product, usually, because they do not use it properly. Also, beware of products labeled as cypress mulch that are cypress mixed with other kinds of bark. Several hobbyists and commercial growers have shown me plants potted in cypress mulch that were near death because the roots had rotted. In one case, a commercial grower had planted several genera (phals, cattleyas, and oncidiums) in cypress mulch with disastrous results.

Epiphytic orchids growing in the wild use their roots for more than just getting nutrients and water. Roots are also used to attach the orchid to the bark of a tree or a rock. Roots squeeze between ridges in the bark and even under bark, if possible, to better hold the orchid in place during strong winds. While there are also occasionally roots hanging free in the air, most roots seek out a hard surface to grow into.

That is a key point that the early 19th Century European growers finally figured out. Unfortunately, the importance of this has been lost on most orchid growers today. Now, the emphasis is on fast growing genera, and media that are designed to be easy to use. Easy to use does not mean best when it comes to flower quality or growth.



The best growers of the 19th Century used osmunda fiber, the dense fibrous root mats of common European and American ferns. Most growers today that try to use this product are very disappointed. While finding quality osmunda is a problem today, that is usually not the main problem. The problem is in how the plant is placed in osmunda. It must be packed so densely that it resembles a solid piece of tree fern. This is difficult to do. Experienced 19th Century orchid potters could pot only 6 or 7 cattleyas in an hour and used heavy potting sticks to pack chunks of osmunda around the roots. The orchid had to be so tightly packed that one could pick the orchid plant up and the pot would remain attached. New roots emerging from new growths would quickly force their way into this dense environment.

The hard-packed osmunda had few spaces that could fill with water. Any water remaining in the osmunda after watering was bound directly to fibers where orchid roots could absorb them. The acidity of the osmunda fiber limited bacteria and fungal growth even if it remained moist. After repotting, orchids in osmunda do not need to be watered as frequently, at least until new roots grow into the medium. Cattleyas potted this way rarely send roots outside the pot.

Growers successfully using cypress mulch follow almost the same principle, i.e., dense packing of the cypress mulch around roots. Initially, plants may be watered only once every 3 or 4 weeks until roots penetrate the medium. The key is that new roots must encounter a dense medium. The acidity of the cypress also inhibits bacteria and fungi just as osmunda does. Reportedly, cypress is far easier to use and pack than the sponge-like osmunda.

If you decide to try cypress mulch remember that the frequency of watering must be reduced or altered to fit the new medium. The real lesson is not to switch to a new medium until you have learned how to use it. Second is to understand the necessity of being sure the medium you use appears to be dense to new roots so they will grow into it, rather than away. Many growers interpret roots that grow away from the pot as an indication that there is not enough water or fertilizer or that the medium has soured. It can also be that the medium does not offer the proper surface for new roots.

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 2006.



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Lessons from the Roots

Plants Offer Clues to Their Repotting Needs

by Ken Slump, reprinted with permission

At repotting time, orchid growers can learn much from their plants that can help them evaluate the success or failure of their growing techniques. Careful observation of the plant, particularly its root system, is the key.

In general, the best time to repot an orchid is when its root system is actively growing and producing new roots. Please note that this may also correspond with the orchid's flowering season, in which case you need to be particularly careful of the developing flower stem, or perhaps even its buds or flowers, as you embark on the repotting process.

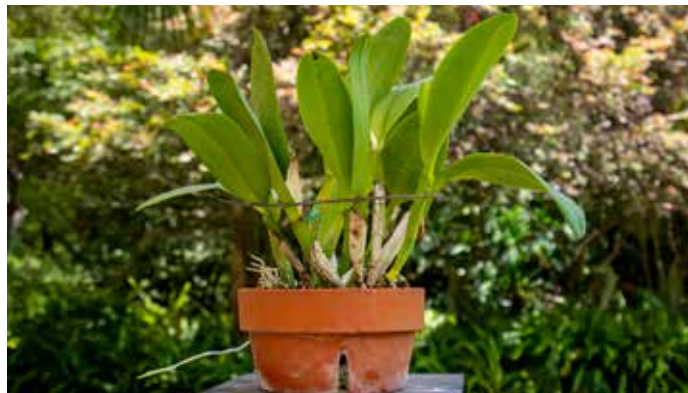
Of course, simply growing the plant for a sufficient period of time that repotting becomes necessary is, to a degree, a testament of the grower's skill. Still, it is not unusual to find some surprises once the plant is removed from its container.

If the timing is right, it is also wise to repot new orchid plants soon after they come into your collection. You will have the advantage of checking the condition of the root system, but will also then have them growing in your own mix and know exactly how long they have been in it. While we are on the subject, to verify the presence of healthy roots it is not a bad idea to either poke gently around the growing medium of prospective orchid purchases or give them a gentle tug. More than once I've purchased an apparently healthy orchid plant only to discover when I got it home that its root system was trashed.

DECANTING THE PLANT When the root system is healthy, you may have a difficult time extricating the plant from its pot. In such cases, soaking the pot and growing medium in a container of lukewarm water for a few minutes will sometimes enable removal of the plant with a maximum of the root system intact. Not infrequently, it becomes necessary to destroy the pot to free the plant.

Healthy orchid roots are generally a light tan or whitish color and should be firm to the touch. Hopefully, the plant you have just pulled from the pot has many of these. If you find roots that are brown, soft and mushy, they are no longer viable and should be removed. Certainly, as the plant produces new roots, the oldest ones cease to function and die, so finding some of those is of little concern.

If, however, you discover that most or all of the roots are in a deteriorated condition, it is time to reevaluate your cultural scheme. Even if you should find that all of your orchid's roots are rotten, as long as new ones are emerging you might still save the plant, but you will have to change some aspect of your growing technique or history will surely repeat itself and the plant is doomed.



Selecting the best container and medium is part of a successful health regime for any orchid.

The cause of root rot is simply having too much moisture in the root zone for too long a period. Roots of epiphytic orchids are accustomed to rapid drying in open air after they become wet, so air in their root zone is essential. Constant moisture around the roots is a sure recipe for disaster.

For most hobbyists, the goal is to keep the roots sufficiently moist so that daily watering is not required, but to avoid an excess of moisture that can lead to problems. This is a tricky balance to achieve. If you are having root rot problems, your goal is to find a way to dry the root zone faster, and there are several ways you can achieve this.

Perhaps the first consideration is to reevaluate the growing medium. Most of us grow in mixes that contain fir bark or coconut husk chips as the main, if not total, ingredient. It is important to realize that coconut husk chips are much spongier and more water-retentive than chunks of fir bark but they have the advantage of deteriorating more slowly. If you find that coconut husk chips are too moisture-retentive for you, a change to fir bark chips might solve the problem.

MEDIA Also, make sure that the size of the bark or coconut husk pieces is appropriate for the orchids you are potting in them. Both are available in fine, medium and coarse pieces. You'll have plenty of big air spaces if you use the coarse chunks, but they are often too large for orchids with fine roots. When in doubt, try the medium size of either fir bark or coconut husk chips and switch to a finer grade if you later decide you need more moisture around the roots or try the coarse grade if the reverse is true.

Alternately, you can add ingredients, or larger percentages of them to either fir bark chunks or coconut husk chips to help increase the air spaces in the medium and decrease the medium's water retentiveness too. Coarse perlite and horticultural-grade charcoal are the most common additives. Both need to be rinsed with water before mixing them with bark or coconut chips. For starters,

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try mixing six parts bark or coconut chips with two parts perlite and one part charcoal. If the mix continues to be too moist, increase the percentages of perlite and charcoal.

Orchid growers who are able to enjoy the luxury of cultivating their plants outdoors for all or part of the year in climates that happen to be rainy or excessively humid sometimes find fir bark or coconut husk chips too moisture retentive, even in mixes. Lava rock and Aliflor are quick draining, but careful attention to adequate nutrition for the plants becomes particularly important with these inorganic alternatives.

CONTAINERS Another consideration is the type of container you choose. Plastic containers are popular, inexpensive and lightweight, but they help retain moisture. I use clay pots for most of my orchids. I like their extra weight for counterbalancing top-heavy orchid plants; clay pots' ability to "breathe," thereby drawing excess moisture away from the growing medium, provides an insurance policy against its becoming too soggy. I use regular clay pots when I want longer moisture retention, and orchid pots (those inordinately expensive clay pots that have slits or holes in their sides) when I want the medium to dry more quickly.

In fact, the selection of pot type is one of my favorite techniques for varying the drying rate of the growing medium among the orchids in my collection. I use regular clay pots for many phalaenopsis, as well as juvenile, terrestrial and miniature orchids. I prefer clay orchid pots for many cattleyas and their relatives; and I even employ a few plastic pots for orchids that like to stay wet, such as Phragmipedium species and hybrids. When I find a plant is not growing a healthy root system I first try a different type of pot in hope of improving the situation.

Of course, it is important to note that watering frequency has a major impact on the opportunity that the growing medium has to dry out. Sometimes decreasing the watering frequency is all that is needed to ensure a healthy environment for the root system. Do not forget that orchids, just like all cultivated plants, more frequently die from overwatering than from any other cause.

Be sure not to overpot orchids. Generally, the pot size should be just large enough to contain the root mass, regardless of the plant size. Environmental adjustments that can help avoid soggy roots include providing additional air movement, slightly higher temperatures and avoiding extremely high humidity levels. As the roots grow so grows the plant. Producing a healthy root system should be the first goal of every orchid grower.

This article appeared in the American Orchid Society Orchids magazine in April 2004 (Vol. 73:04, pp. 252-254).

Summer Rots

by Sue Bottom



Black rot travels quickly through your plant destroying it in a matter of days.

It is summer. The days of low humidity are gone and each day seems hotter and more humid than the last. The water molds (also known as oomycetes) thrive in this environment. Different organisms in this group of devastating plant pathogens are responsible for the Irish potato famine, sudden oak death syndrome and downy mildew. In orchids, Black Rot is caused by *Phytophthora* and *Pythium*.

As Janna Beckerman of Purdue University wrote in *Greenhouse Management* magazine:

Water molds are quite possibly one of the most destructive groups of plant pathogens. At first glance, they seem very similar to fungi, and they share a lot of traits in common. Both are barely visible, spreading by fine threads called hyphae, and both produce unbelievable numbers of spores. But that is where their likeness ends. Water molds are more like algae than fungi, so the fungicides that control them aren't the same as what you would use for Fusarium wilt or powdery mildews. The key take-home here is that many fungicides that work great on true fungi, like Cleary's 3336 or Systhane, don't work on water molds...

Understanding what these disease-causing organisms are and how they live is essential to managing them and limiting their destructive potential:

All of the water molds have a similar lifecycle: Upon germination from thick-walled oospores, hyphae emerge to directly infect or develop into a zoosporangium, a big word that describes a swollen sac that develops at the end of a hyphal thread and

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releases tiny, swimming zoospores in the presence of water. These zoospores then swim to and infect plants. The zoosporangium can also germinate and infect plants directly. Upon infection, new hyphae grow into and throughout the plant, absorbing nutrients as a food source and breaking down plant tissues. These water molds then form new zoosporangia or oospores to repeat the cycle.

Symptoms. In cattleyas, the infection usually starts on the roots or basal portion of the pseudobulb, though all plant parts are susceptible. The first signs are a cream-colored discoloration that starts at the base of the pseudobulb and moves upward, followed by a dark brown to black often sharply delineated discoloration. As the infection moves up the pseudobulb, the leaves begin to yellow at the leaf axil moving toward the leaf tip, very different from the yellowing that occurs as a result of normal aging that usually begins at the leaf tip. The leaf falls from the plant with a slight jarring. The infection moves quickly along the rhizome from growth to growth. The entire plant can be consumed in a matter of days, so quick action is required.

The aerial portion of the plant can also be affected, particularly during periods of extended leaf wetness during the tropical storm season. The damage caused by water molds is difficult to distinguish from the damage caused by bacterial organisms like *Erwinia*. Both types of organisms produce black, water-soaked lesions that spread rapidly, though the ooze produced by bacterial infections is quite offensive.

The water molds also cause damping off in seedlings and community pots. Small water soaked spots may start on the seedling, and plant after plant rots and dies.



If you see leaf yellowing, it's time to investigate, inspect the plant to find the problem.

Treatment. Unless the plant is valuable, the best approach is to discard it, as the disease is highly contagious and will spread from plant to plant from splashing water. If you cannot part with the plant, isolate it from your other plants, remove infected tissue with a sterile tool, and drench with a suitable fungicide like Aliette, Subdue or Banrot following label instructions. Act quickly, sanitize the plant immediately upon diagnosis to prevent the disease from spreading.

Prevention. You may be able to avoid radical surgery if you alter your cultural practices so as to avoid the conditions that favor the growth of the water molds. Prevention requires managing water, in that the motile spores require free water to move around and infect new plant tissue. Some suggestions:

Watering Practices – Let your plants dry completely throughout the root zone between waterings, sometimes referred to as going to a “hard dry”. This means you will be watering less frequently than you did during the low humidity spring and fall when the pots dry out so quickly. Avoid watering late in the day, better to have everything watered before noon so the leaves can dry by evening. Don't use overhead watering systems, especially for cooling.

Repotting – Avoid repotting during the high humidity summer months. Repot through the spring months, and then wait until the humidity breaks in the fall to do any last minute repotting. If you have a bifoliate cattleya in need of repotting that is throwing out new roots and you can't simply drop into a larger pot, repot it dry. Don't wet the plant or the roots before repotting, dust any cut surfaces with Banrot and then repot it, but do not water for a week or two. Let all the wounds seal



See the creamy discoloration on the pseudobulb with the leaf yellowing in the first picture?



The rot on this plant is fairly advanced, time for radical surgery to remove infected tissue.

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over before watering. This will also encourage new root growth.

Protective Drenches – If your plants tend to get black rot every year, you might consider a monthly drench with the active ingredients Fosetyl Aluminum (trade name Aliette), Metalaxyl (trade name Subdue) or Etridiazole (trade names Banrot, Terrazole and Truban). To help prevent the disease from getting a foothold, start in June and continue through September.

Don't Overpot - Whatever mix works for your watering habits, remember that as the mix ages, salts accumulate and organic matter degrades. The mix tends to hold much more water after two or three years than it did when it was fresh. Ideally, your plant will outgrow both the mix and the pot before the time the mix is degraded and starts to hold too much moisture.

Tropical Storm Season – Extended periods of leaf wetness can result in bacterial rots on the aerial portions of your plants. Protective sprays with hydrogen peroxide (and the stronger Zeritol) and quaternary ammonium compounds (Consan, Physan, pool algaecide) before and after storms can help protect your plants. Copper is an excellent fungicide and bactericide, but can accumulate to toxic levels in sensitive plants, particularly dendrobiums and thin leaved orchids, so caution is advised in its use.



It doesn't just move up the pseudobulb, it is also moving through the rhizome looking for its next target.

Proper Nutrition - Use dilute fertilizer solutions, say 1/8 to 1/4 strength, to help the plant grow, without growing too quickly. The form of nitrogen in the fertilizer makes a difference, ammonium and urea nitrogen tend to produce lush, soft growths while nitrogen in the nitrate form tends to form harder growths. Understand your water quality so you can select the right fertilizer, and use calcium and silicon supplements, if required.

One of the best preventatives against black rot and other diseases is growing plants with strong, hard cell walls that are more impenetrable to pathogenic organisms. This requires you to grow the healthiest and strongest plants you can, with the proper balance of light, water, air, and all the other essentials. As you maximize your culture, you will enjoy your plants more, even when not in bloom. When you are watering, really look at your plants. If you notice something is not quite right, stop what you are doing and investigate. Early intervention can prevent you from administering their last rites during the summer rot season.

Citations and Additional Reading

Beckerman, Janna, Minding Water Molds, *Greenhouse Management*, February 5, 2013. Accessed June 26, 2020: <https://www.greenhousemag.com/article/gm0213-disease-water-molds-control/>



The rot moves up the pseudobulb, dissolving the plant tissue. Adjacent healthy growths are next!



ORCHID ADVENTURES



June Growing Area Tour at the Bottom's

About 2 dozen intrepid souls went to Sue and Terry's for the annual growing tour and repotting party. We walked through the different growing areas, talking about how the different genera are grown. The soft cane dendrobiums grow in the shade house year round, which is protected only by 50% shade cloth. The Stanhopeas, Angraecoids, Catasetinae and Schomburgkias all summer outdoors, and are moved to the heated house in winter. The phals and most cattleyas stay in the greenhouse year round. We had lots of keikis and divisions to share, not to mention all those tillandsias and bromeliads that seem to multiply in the dark!



SHOW TABLE



Grower Marv Ragan
Bulb. Wilbur Chang



Grower Leslie Brickell
Bulb. Meen Poison Raspberry



Grower Penny Haliburton
Cym. Autumn Sun 'Fireplace' x
Golden Rule 'Geyserland'



Grower Courtney Hackney
C. Princess Margaret 'Balonia' FCC/RHS



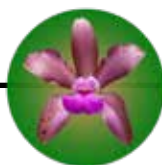
Grower Jerry Fowler
V. tessellata



Grower Lucinda Winn
Sobralia Mirabilis 'Luna Nueva'



Grower Bea Orendorff
Ascocenda Kulwadee Fragrance



SHOW TABLE



Grower Janis Croft
Blc. Waianae Leopard 'Ching Hua' HCC/AOS



Grower Sue Bottom
Eria hyacinthoides



Grower Courtney Hackney
Paravanda Poetic License 'Hackneau' HCC/AOS



Grower Glo MacDonald
Ascocenda Kulwadee Fragrance 'Big Spot'



Grower Sue Bottom
Blc. Adeline Ghiz 'Worcester's Pride'



Grower Suzanne Susko
Doritaenopsis Tying Shin Blue Jay

Link to all Pictures. <https://flic.kr/s/aHsmPgHc3f>

