

## CLUB NEWS

### June 1, 2021 Monthly Meeting

by Janis Croft

**Welcome and Thanks.** President Tom Sullivan opened the meeting at 7:00 pm with 47 attendees. Tom thanked Dianne Batchelder, Dottie Sullivan and Shirley DePasquale for the treats and coffee and he reminded all to remember to Drop a Dollar for the treats. Tom informed all that the Silent Auction would end after the presentation.

**Club Business.** Membership VP Linda Stewart welcomed our three guests and new members, Ann Carlson from Jupiter and Barbara Jackson from Minnesota. Linda asked all with birthdays this month to raise their hands for their free raffle ticket. As our Sunshine Coordinator also, Linda announced that if you know of anyone in need of a cheering up or a get well card, let her know.

**Mentoring Program** – Linda then announced that we are restarting our Mentoring Program. If you are a new grower or new to St. Augustine, sign up for the mentoring program and we'll link you up with a Mentor that lives close to you. You'll be able to phone or email them with questions, visit each other's growing area and get general assistance. Sign up sheets at the Welcome Table.

**Repotting Clinic** — Next one is June 5th, from 9 til noon at the Memorial Lutheran Church Pavilion across from Back Parking Lot.

**Shows in Florida this Month** – [Central Florida Orchid Show](#) at Oviedo Mall in Orlando on June 5 and 6.

**Library** – Librarian Howard Cushnir brought in several Orchid Digest magazines for loan. He encouraged all to use the library collection listed on our [SAOS website](#). If you would like a book or magazine, send a request to [librarian@staugorchidsociety.org](mailto:librarian@staugorchidsociety.org) and he will bring the item(s) to the next meeting.

**Culture Table.** Members are welcome to bring in plants for discussion, with a focus on culture. We will continue conducting our Courtney Hackney led Virtual Show Table via Zoom. Send your photos by end of month so they can be included in the newsletter and provide Sue time to prepare the presentation. Each month's Virtual Show Table is recorded and posted on our website.



A spotted pink Cattleya Brabantiae, a primary hybrid between C. aclandiae and C. loddigesii, was in bloom. It was growing on the side of a 3 inch pot, with long roots hanging happily in the air. This orchid does not like to have its roots confined, so it is happier grown on rather than in the pot. A beautiful coerulea Lc. Canhamiana 'Azure Skies' had multiple flower spikes. This is another primary hybrid, this one between L. purpurata and C. mossiae. We are just beginning the purpurata blooming season with all their color forms, and the mossiae parent encourages floriferousness in its progeny. The final plant was a little minicatt. A picture had been sent in for the Virtual Show Table showing color break in the petals, although no discoloration was visible in person. Testing for virus is the only sure way to determine whether or not a plant is virused.



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# CLUB NEWS



## Upcoming Orchid Events

### June

- 5 Repotting & Plant Clinic, 9 am til noon  
Behind the Memorial Lutheran Church  
3375 US1 South, St. Aug 32086
- 5-6 Central Florida Orchid Society Show  
Oviedo Mall, Oviedo
- 8 SAOS Virtual Show Table, 7:00 pm  
Courtney Zooms into Cyberspace  
An Invitation Will be Sent by Email
- 8 JOS Meeting, Mounting Orchids, 7 pm  
Lorraine Conover, Lois Rasmussen
- 12 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.

### July

- 3 Repotting & Plant Clinic, 9 am til noon  
Behind the Memorial Lutheran Church  
3375 US1 South, St. Aug 32086
- 6 SAOS Meeting, 6:30 pm  
Giant World of Miniature Orchids  
Thanh Nguyen, Springwater Orchids
- 10 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.
- 13 SAOS Virtual Show Table, 7:00 pm  
Courtney Zooms into Cyberspace  
An Invitation Will be Sent by Email
- 13 JOS Meeting, Topic TBA  
Speaker TBA

### August

- 3 SAOS Meeting, Gadget Night, 6:30 pm  
Gadget Night  
SAOS Members Share Tips and Tricks
- 6-8 Int'l Phalaenopsis Alliance Symposium  
Highland Manor, Apopka
- 6-7 Annual Cattleya Symposium  
Indian River Research & Education Ctr  
Fort Pierce  
CANCELLED
- 7 Repotting & Plant Clinic, 9 am til noon  
Behind the Memorial Lutheran Church  
3375 US1 South, St. Aug 32086

- 10 JOS Meeting, Topic TBA  
Thanh Nguyen, Springwater Orchids
- 10 SAOS Virtual Show Table, 7:00 pm  
Courtney Zooms into Cyberspace  
An Invitation Will be Sent by Email
- 14 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.

### September

- 4 Repotting Clinic, 9 am til 1 pm  
Memorial Lutheran Church  
3375 US 1 S – by back parking lot
- 7 SAOS Meeting, You Bred What?, 6:30 pm  
Dave Off, Waldor Orchids
- 11 Florida North-Central AOS Judging, 1 pm  
Clermont Judging Ctr, 849 West Ave.
- 11-12 Fall JOS Show

## St. Augustine Orchid Society Organization

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Vice President Programs	Sue Bottom <a href="mailto:sbottom15@gmail.com">sbottom15@gmail.com</a>
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# CLUB NEWS

Continued from page 1

**SAOS Program.** This month's program was on "Water Quality and Orchids" presented by Sue Bottom and Courtney Hackney with real life examples presented by Janis Croft, Scott Campbell, and Sue Bottom. Before the program started, everyone who brought in water samples to be tested received their test results. Courtney started the program by asking what are the three most important aspects of growing orchids with the answers being water, water and then water. Early in their evolutionary history, orchids left the nutrient and moisture rich soil behind moving up into the tree canopy in search of more light. They had to adapt to life in trees with water conserving pseudobulbs, fleshy leaves and velamentous roots. They receive moisture from rainwater, mist and dew. The orchids receive their nutrients from "throughfall" and "stemflow", and are remarkably adept at scavenging for nutrients.

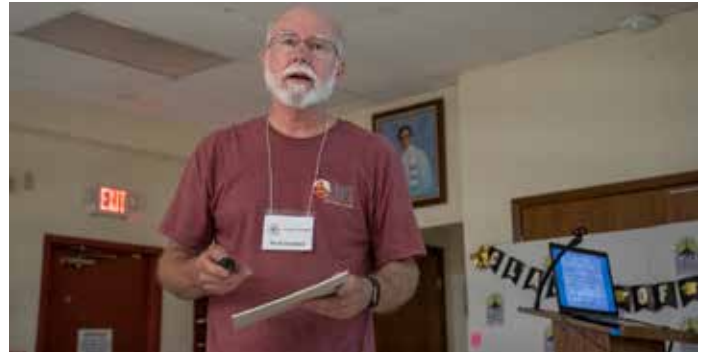
Rainwater contains few dissolved nutrients. Surface and ground waters accumulate salts, which can be benign, beneficial or toxic. Some substances like calcium and magnesium are essential plant nutrients, while others like sodium and chlorides can be toxic if present in too high a concentration. High bicarbonate levels are reflected in the alkalinity content. In excess, high alkalinity levels can make nutrients less absorbable by your orchids' roots.

Sue then discussed two charts showing the different salt concentrations in the various water sources in our area, highlighting the areas of concern. She went through the various qualities of water—best, good, questionable and unsuitable, and detailed fertilizers to use for each and which orchids are best to grow with each quality of water.

Janis Croft shared slides of her watering solution. After growing orchids for a few years and watching them deteriorate in quality, she had her water tested at QAL Labs and learned she had unsuitable water from an artesian well in a gypsum deposit section of the Florida Aquifer near the St. Johns River. Her solution was to build a rainwater collection system following the example of Linda Stewart's article (reprinted in this newsletter). Janis also had installed a programmable watering system in her shade house and

showed slides of how it was set up. She finished by sharing a slide of a basic rain barrel hooked up to the home's gutter downspout. This is the simplest way to collect rainwater to use for a smaller collection of orchids.

Scott Campbell showed his system to collect water by reverse osmosis as his alternative to JEA's water. With a large plastic garbage container, he hooked up a small package reverse osmosis system capable of making 300



gallons per day. He reminded all that the water condensate dripping out of one's air conditioner can also be collected and used to water your plants.

The last example was Sue Bottom's whole house reverse osmosis installation. First she had tried using the pond in her backyard as her source but soon discovered bacterial and fungal spores were introducing diseases into her green houses. She tried to neutralize the alkalinity of her well water by adding Citric Acid but that didn't remove any of the toxic salts like sodium and chloride. So, she bit the bullet and went all in for an entire house reverse osmosis system which is working quite well.

The program ended with advice from Sue and Courtney on what to do if you have questionable water. This included don't mist or have overhead watering, use plastic containers that will not absorb salts, and use dilute fertilizer solutions. Also water more frequently so the medium doesn't completely dry out and concentrate the bad salts. When you water, water copiously. Get in the habit of watering and fertilizing and then water a second time an hour or so later. Flush salts from pots with fresh water regularly. You can move plants outdoors in the summer so they can be flushed naturally with rainwater.

If you have unsuitable or questionable water, then a rainwater collection solution is probably the cheapest alternative water source with reverse osmosis as a more expensive alternative. Otherwise, grow tough orchids and adjust your cultural practices

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





# CLUB NEWS



## 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 on the first Saturday of the month all summer long if you have any questions or problems.



## Mentoring Program

We are restarting our mentoring program. If you are a new grower or new to St. Augustine, sign up for the mentoring program and we will link you up with a Mentor that lives close to you. You will be able to phone or email them with questions, visit each other's growing area and get general assistance. Email us if you are interested, or sign up at the Welcome Table.

### American Orchid Society Corner

#### Webinars

June 8, 8:30 pm, AOS Members Only

Orchid Exhibits – Marc Burchette

June 17, 8:30 pm, Everyone Invited

Greenhouse Chat Orchid, Q&A - Ron McHatton

#### Orchids Magazine this month:

Attached Greenhouses – Art Chadwick

Aeranthus – Tom Mirenda

Forest Protection in Madagascar

#### Photos of Latest AOS Awards



## July 6 Monthly Meeting

Miniature Orchids

Thanh Nguyen, Springwater Orchids

Thanh is returning to St. Augustine to talk to us about miniature orchids. Mini orchids are growing in popularity as their diminutive size makes them ideal for the space-conscious home grower. Thanh will talk about some that are suitable for our climate, along with how to care for them.

**When:** Tuesday, July 6, 6:30 til 9 pm

**Where:** Memorial Lutheran Church

3375 US 1 South, St. Aug 32086

## Shop Smile.Amazon

Click this [Smile.Amazon link](#) to select the St. Augustine Orchid Society as your charity. The AmazonSmile Foundation will donate 0.5% of the purchase price to SAOS. They just sent us around \$30 for the first quarter of the year!

**Support  
St. Augustine Orchid  
Society.**

When you shop at **smile.amazon.com**,  
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# INSPIRATION

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# CULTIVATION



## Orchid Questions & Answers

by Sue Bottom,  
sbottom15@gmail.com

**Q1.** I pride myself in having clean leaves but some *Cattleya* species like *violacea* or *tigrina* (and others) seem to get black stains on the undersides of their leaves. Am I doing something wrong? If

not, can it be prevented or is just Mother Nature?



**A1.** That sure looks like fungal spores on the leaf underside. The upper surface of the leaf has chlorotic blotching matching the location of spotting underneath. There are several leaf spotting fungi that infect cattleyas. When you repot/remount, you can cut away infected tissue. In the meantime, you can spray fungicides like Pageant, Thiomyl/Banrot or Daconil to help prevent the spores from spreading the disease.

**Q2.** Can you tell me how to put this dendrobium keiki in another pot?

**A2.** You can cut the cane an inch away from the keikis on either side, soak the roots to soften them and then situate the keiki roots in the pot. You can backfill with potting mix around the roots immediately, or better yet, just add a handful each week so the aerial roots will branch and become acclimated to the mix. It looks like you might have mites on the upper keiki, and the lower keiki may have succumbed to mites, so you'll have to treat for



that. The keikis are probably the future of that plant, the mother plant is probably not going to survive.

**Q3.** This is one of my favorite orchids, Blc. Volcano Spring. I want to divide it when it's finished blooming. It has about 30 pseudobulbs. How many divisions should I try to realize?



**A3.** You could probably get many divisions if you wanted to, but the cattleya has such a short internode distance that you can have many pseudobulbs close together in the pot. You should think about growing it up to specimen size. Select a pot that is an inch or two bigger all around to drop the plant into, once you remove all the decaying old media. If the older leaves were blighted, I'd say cut away the older growths, but those leaves all look pretty good. Unless you want to separate it, think about putting it into a larger pot with fresh potting mix.





## Scale

by Dr. Courtney Hackney

A friend once told me that “crow” did not taste too bad if it was just prepared properly. She was, of course, referring to the literal version of “crow”. As a consequence, I have been very cautious in making broad statements about success with respect to orchids. Recently, I was reminded of why that is a good policy. After experiencing just about every disease and bug known to the orchid

growing world, it seemed that I had seen it all. Apparently not!

Late this winter, a few ascocenda flowers appeared to dry prematurely around the edges. It was, after all, very dry during that time with heaters running most nights. The problem became more widespread a month or so later and seemed to coincide with water quality problems. By April, cattleya flowers were showing the same problem and finally in May summer blooming phals exhibited the same symptoms. Under a magnifying glass the reason for ruined flower was obvious, a tiny weevil-like insect that I have never seen before. The only good that came out of this was a great introduction to a “Tips” column on insects and a good portion of crow humility.

Most new bugs that turn up in orchid collections are easily controlled because they have not been exposed to insecticides before and so have little resistance. This weevil was extremely vulnerable to a simple spray of light (Sunspray) oil. The trick with a new pest is to totally eradicate it before it builds up pesticide resistance as has cattleya scale. Over many years, it has become almost totally resistant to conventional pesticides such as Malathion. Even Orthene and more potent pesticides are not 100% effective.

Most scale insects have life cycles that include pesticide resistant eggs and/or life stages. That is why most treatments for scale require several, usually three treatments 7-10 days apart. Each treatment kills life stages susceptible to the toxin and over three treatments gets every single insect in some vulnerable stage. Timing is important as once the scale matures it can lay pesticide resistant eggs. If temperatures are warm then the life cycle takes less time, because scale insects are cold-blooded creatures.

Most scale insects can also reproduce without sex. They just pop out little copies of themselves and infest your orchid. Besides cattleya or boisduval scale, several other scales can be found on orchids including a soft brown scale that likes to infest phals. Take a look at the latest issue of the AOS book on orchid diseases and pests and it will be clear which scale is on your orchids. All scale insects have a motile or crawling stage so they can go from one plant to the next. They will also fall from hanging plants onto your orchids below. If just one scale survives your treatment, it will eventually multiply and reinfest your collection. This is why all orchid collections include scale.

There is a range of treatments available including the examination and removal of individual scales, if you have just a plant or two, to wholesale spraying for large collections. Attempts to use natural means in greenhouses, such as insect predators, do not work because predatory insects require large numbers of prey to maintain their populations and seldom reproduce as fast as their prey. Pesticides by definition kill. That is what they were designed to do and so they should all be treated with caution. Just because a pesticide is “natural” does not mean it should be treated lightly. Natural pesticides are some of the most toxic to people and their pets, while those made in factories are designed to be toxic to insects and less toxic to people. In all cases, carefully read the label that comes with every pesticide.

The simplest pesticide, such as light oils, kill by smothering. Insects get oxygen through small openings in their bodies and oils clog these pores. Some products including those made from ingredients, such as hot peppers, deter feeding by insects. This is less effective on scale as they suck juices from the plant and so do not fully “appreciate” the active ingredient. Unless the pesticide can penetrate the hard external shell of the insect or get inside the plant it will not affect the pest. Insecticidal soaps act by removing the waxy coating on the outside of the insect so that it dries up, while more toxic pesticides enter an insect through the small pores that allow gas exchange.

One of the most effective, and some say the safest, is a product that interferes with an insect hormone that regulates molting. Insects have discrete life stages and discard their exoskeleton after each stage until adulthood. One expensive product, now sold as Enstar II, prevents insects including scale, from molting thus interrupting their life cycle. Making sure that every single scale comes in contact with the spray is the difficult part of insect control unless the pesticide is a systemic.

Systemic pesticides are taken up by the plant so that every pest feeding on the plant gets dosed with the pesticide. Most systemic pesticides have some negative effect on the plant. To be effective, these poisons must be taken up by the orchid. An orchid plant with few roots will take up less than a healthy plant. This makes application difficult because one plant with a good root system may be damaged by the same dosage that has little effect on scale inhabiting another plant with few roots.

Effective scale control can be obtained by orchid hobbyists with small collections. Simply follow these steps. Inspect each plant when repotting. Remove all dead tissues so that all plant surfaces can be observed, especially along the rhizome and under leaves. Scales hide in small places. Use a fine jet of water to remove any scale and dirt from all surface of the plant when you repot. Let the plant dry and then spray all surfaces with Sunspray oil that can be stored pre-mixed in a small spray bottle. Be sure to spray under the rhizome on cattleyas. Let the plant dry again and put in a new pot. Keep all newly repotted orchids away from those that have not been inspected.

*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 June 2003.*





# CULTIVATION

## Rainwater Collection - A Solution for Poor Water Quality

by Linda Stewart, lindstew@hotmail.com



*Rainwater collection tank ties into roof downspout*

My orchids and I moved late last summer, from living in the country with a small greenhouse to a home in town. Upon examining the City's most recent water quality report, it became clear that the local city water was no better than what I had experienced with well water impacted by salt water intrusion in an agricultural area. Since a rainwater collection system was the answer for my orchid collection there, the decision to duplicate it on a smaller scale here in town was an easy one.

**Collection System.** There was a gutter system in place across the back of the house. The back yard is quite small and there was just no place to hide or disguise the rainwater collection tank, so it was placed at the far end of the gutter. I obtained a 330-gallon rectangular high density polyethylene container, also known as an IBC tank, that had previously been used for rain water collection. It was so full of algae that it had to be thoroughly cleaned and disinfected prior to being put into service. A strong pool algaecide was used, and once it was mounted on a cinder block platform, the container was filled and left to soak for about a week, after which it was drained and pressure washed on the inside. Once dry, it was painted to blend in with the house, using a paint that adheres to plastic. Painting not only helps to blend into the landscape, it will



*Flexible downspout tubing with debris catcher from gutter to tank*

keep out sunlight and prevent algae buildup in the tank. Then the tank was connected to the downspout, using flexible downspout tubing and a debris catcher to prevent debris and oak leaves from entering the tank. A piece from a roll of downspout filter was placed in both ends of the gutter, right over the downspout connection to further inhibit the intrusion of debris and leaf litter.

If the water container is left unpainted and/or is not completely enclosed, you may experience problems with algae, particularly during the hot summer months. This can be prevented by the addition of an algaecide such as GreenShield, Physan 20, or pool algaecide, all of which contain quaternary ammonium compounds. The Physan label recommends 1 teaspoon per 52 gallons of water for controlling algae in birdbaths, fountains, etc. Since the container is enclosed, algae issues are minimal, so I tend to use less and then only once or twice per year. Please bear in mind that this algaecide is not recommended to be used on food crops or with fish.



*Downspout filter placed in both ends of gutter to catch debris*

**Delivery System.** The next step was to get the rainwater to the orchids with enough water pressure to utilize a Hozon siphon system to automatically add fertilizer when watering. The IBC tank comes equipped with a gate valve at the bottom, so with the use of PVC reduction couplings, a PVC line was installed from the IBC tank, first to a filter to trap any sediment and then on to the pump. To prevent the pump from cycling too frequently, a 2 gallon pressure tank was added between the pump and the homemade faucet. Because the small filter and the connection at the



*Pump to move water from storage with a bladder tank to help prevent pump from cycling.*

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# CULTIVATION

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*Siphonex bucket is full of concentrate ready to fertilize the orchids.*

pump are both 1/2" in diameter, 1/2" PVC was used from the tank to the pump inlet valve. After the pump, the PVC diameter was increased to 3/4" for better water pressure and Siphonex function. The Shurflo pump is a 3.0 gpm, 45 psi, 1/2 npsm, 115 vac with electrical cord. The pump was mounted on a piece of wood to minimize vibration when the pump is running, and attached to the PVC with flexible connectors. The pump is housed under a large plastic bin with an opening cut into the side for ventilation. Please note that hose length for best utilization of the Siphonex system should not exceed 35 ft. Use a water breaker like a Damm 170.

I also have a 55 gallon rain barrel to use for hand watering that was brought from the old house. It was repainted to



*Rain barrel used for hand watering orchids*

blend in with the house, and placed on a cinder block platform at the opposite end of the gutter system. Although there are a number of brands and types of downspout converters available on the market today, a *DIY Downspout Diverter* was selected. The kit comes complete with a spigot, rubber grommets, hole saws, diverter, connection hose and a downspout cover for freezing weather. The diverter is inserted into a small hole drilled into the side of the downspout. Completed, the system is very unobtrusive and only requires 1/2" of rain to fill the drum. Once full, the rain diverts back to the downspout so the rain barrel never overflows.

Although my orchids are still adjusting to their new home, they have successfully survived their first winter. The addition of a rainwater collection and watering system has definitely minimized the impact of the environment change from a semi-automated greenhouse to backyard growing.

*This article appeared in the American Orchid Society Orchids magazine, in July 2020 (Vol. 89:7, pp 510-512).*



*The pergola is home to many orchids, covered with a retractable clear tarp during the winter months.*



## Repotting Overgrown Cattleyas

by Sue Bottom

Some cattleyas have a linear growth habit, growing in a straight line from one edge of the pot to the other. These are easy to repot, you can wait until several bulbs grow out of the pot and cut the new growth away, or secure a pot next to the original pot so the cattleya will grow into the new mix. Other cattleyas break multiple leads and grow all around the pot, and tend to keep growing upwards on top of the older pseudobulbs. You can end up with two, three or four layers of rhizomes. These can grow into specimen plants with multitudes of flowers. Eventually, there will come a time they have to be repotted and you will have to disturb the roots. Repotting these overgrown cattleyas often require hammers, knives and brute force.



*The leaf yellowing started about two months before it bloomed, so I knew this was the year it would have to be repotted*

There was one overgrown cattleya in the greenhouse that started to show yellowing leaves in the late winter/early spring. Clearly this plant was signaling the older pseudobulbs and leaves were dying, either due to advancing age or degrading potting mix. The mix was several years old but the plant was still firmly established in the pot so it was allowed to go through its blooming cycle before surgery was scheduled. The first step was trying to get it out of the pot, or in this case, pots. Two or three years ago it had started growing out of the pot but the mix was still fresh so it was simply dropped into a second larger pot. Somehow we didn't have to break the pots to extricate the plant, but it did require knives to separate the roots from the pot and two people tugging on the pot and plant to remove the outer pot.

The repotting process is a great feedback loop. In this case, you could see how much the plants enjoyed growing in the space between two pots, no media required. This trick works particularly well with bifoliate cattleyas that resent having their roots disturbed. Once we got the plant



*Two or three years ago it started growing out of its 8 inch pot, so it was just dropped into a second larger pot because the mix was still in good shape*

out of the inner pot, the other thing that was obvious was how healthy the roots were despite being in the same mix for 5 years. The thick layer of Styrofoam chunks in the bottom third of the pot together with the coarse potting mix and shallow slotted orchid pots allow for great air flow around the roots.

Once we got the plant out of the inner pot, the Styrofoam was removed and discarded. Using old steak knives, we cut through the oldest sections in the middle of the clump while protecting the newest growths until we had some manageable sections to clean up. You could see that the plant had grown around and up over itself into 3 or 4 layers. The leaves that were yellowing were attached to bulbs growing from the rhizome in the deepest part of the pot.

At this point, it was time to search for the oldest pseudobulbs with the yellowing leaves to cut them away from the plant. The plant was turned upside down and the potting mix was pulled away until the oldest rhizomes were visible. One by one, the rhizome was cut and the pseudobulb pulled away from the top of the plant. Then, the process was repeated until all the bulbs connected to the yellowing leaves were cut away from the plant. If there had been any fungal damage, sunburned leaves, or other ugly plant symptoms, these too would have been removed. All in all, about 20 bulbs were cut away from the plant.

The final step was giving the roots a haircut and applying some root stimulator on the rhizome and roots. The Dip 'N Grow product works well for this at a 20:1 dilution rate. Mix up 1 tsp (about 5 ml) of the product in 100 ml of water and pour it into a small spray bottle for use that day. Do not mix up more than you can use in a day. If you have any extra after your potting chores are over, search around for a plant that seems to be struggling and pour the remainder into that pot.

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# CULTIVATION

## Continued from page 10

It is always amazing how much better your plants look after they have been repotted. The big overgrown cattleyas take quite a bit of time and effort to get them situated in



*The outer pot was removed, revealing a mass of happy, healthy roots growing in the air space between the two pots.*



*Divide the plant into viable clumps with several leads, give the roots a haircut and some root stimulator.*



*Outer pot is removed, now we are ready for major surgery. Look for a place to cut where you will be damaging only the older growths.*



*One by one, these senescing leaves and bulbs were removed from the plant and discarded.*



*Remove the bulbs with yellowing leaves, turn the plant upside down and look for the lowermost rhizomes attached to the yellow leaves' bulbs.*



*Four plants in 8 inch pots, all healthy leaves. Amazing how much better they look after repotting.*



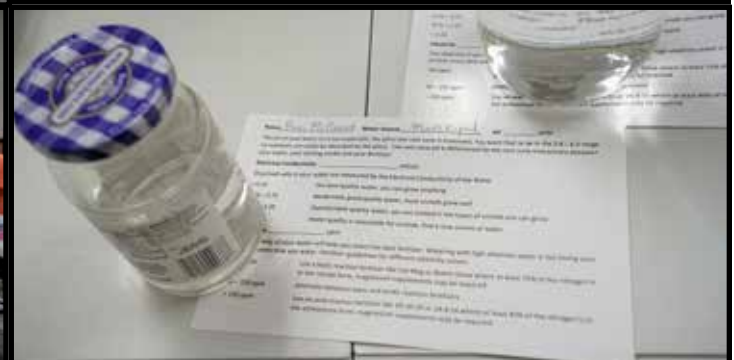
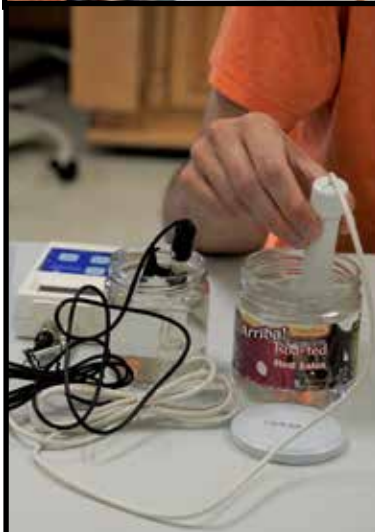


# WATER TESTING



## Water Testing

Mary Radcliffe and Brandon Silvester did a bang up job getting everyone's water samples logged in and tested. They analyzed 43 samples for pH, electrical conductivity and alkalinity and provided each person with a summary sheet of their results. Each person got an assessment of the quality of their water for growing orchids as well as fertilizer suggestions. It was pretty hectic trying to get all the water samples tested, but they persevered! Hats off to Mary and Brandon for their hard work!





# SHOW TABLE

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**Grower Sue Bottom**  
*Den. aggregatum*



**Grower Courtney Hackney**  
*C. Ivy's Blue Eyes 'Yellow Lip'*



**Grower Courtney Hackney**  
*Pot. King Tut 'Hackneau'*



**Grower Ralph & Shirley DePasquale**  
*Onc. sphacelatum*



**Grower Steve Dorsey**  
*Pleurothallis tribuloides*



**Grower Linda Stewart**  
*Bulb. maximum*



**Grower Roberta Hicks**  
*L. purpurata*





# SHOW TABLE

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**Grower Keith Davis**  
*C. nobilior* var. *amaliae* 'Fabio Hahas'



**Grower Alien Black**  
*C. mossiae* 'Pretty in Pink'



**Grower Suzanne Susko**  
*Miltoniopsis* *Andrea West*



**Grower Steve Dorsey**  
*Pyp. Mendenhall* 'Hildos' FCC/AOS



**Grower Sue Bottom**  
*C. Terry Bottom* 'First to Bloom'



**Grower Leslie Brickell**  
*Staurochilus* *luchuensis*

Link to all Photos submitted. <https://flic.kr/s/aHsmVSRVCa>

