

CLUB NEWS



July 5 SAOS Meeting

by Janis Croft,
secy@staugorchidsociety.org

Welcome and Thanks.

President Bob Schimmel opened the meeting at 7:15 pm with 62 attendees. Bob thanked Jeannette Smith and others for the refreshments while reminding all to drop a dollar in the jar. We welcomed new members

Elaine Hardy, Tom and Dottie Sullivan, Juanaid Farooq and Ken Weeks who joined at the meeting along with seven guests.

Our Sunshine Coordinator, Linda Stewart recognized our two July birthday people with free raffle tickets. Bob informed all that the Best of Show voting would occur between the Show Table discussion and program and encouraged all to remember to vote for their favorite orchid.

Club Business. The July 17 Keiki Club will be on Orchid Pests and Diseases at Kathy and Mark Young's air conditioned garage located at 160 West Genung Street, St. Aug 32086

The Ace Repotting Clinic will be on Saturday, August 6 at Ace Hardware on U.S. 1 from 9 am to 1 pm.

Email Sue Bottom (sbottom15@hotmail.com) if you need potting supplies, special quantities or different items and she will bring them to the next meeting for purchase.

SAOS Librarian Penny Halyburton shared two books on orchid pests and diseases. Check out the club's library collection on the website and email Penny (phalyburton@comcast.net) your request and she will bring the item(s) to the next meeting.



Leslie and Chip Brickell's greenhouse won First Prize in the Atlas Greenhouse Photo Contest with pictures entered by Terry Bottom. Terry presented Leslie and Chip with a framed photo that may be on the cover of Atlas' 2017 catalogue.



Terry also presented Wes Dean with a framed orchid photo as a thank you gift from the club for his donation of a white board and cypress wood used in the Jax Orchid Show.

The eBay Naming Rights Auction winner was Ken Weeks from Elkton with a very generous bid. He named the orchid after his recently deceased mom, Memoria Nancyjeanne Anderson. Thank you Ken, who also joined as a new member tonight.

Orchid Events. There are no Florida orchid shows this month. Check out our SAOS website for future dates and locations. The Odom's [6th Annual Cattleya Symposium](#) will be held in Fort Pierce on August 5 and 6.

Show Table Review. Courtney Hackney started the evening's discussion by again stating how wonderful it is that our club grows so many varieties of plants; our show table would rival any orchid show around. Summer is the season for blooming *Cattleya purpurata* (aka *Laelia purpurata*) and there were many beautiful and well grown examples. The primary hybrids are extraordinarily vigorous. This is a good species to ensure you have blooming plants in the summer. Courtney pointed out the beautiful Blc Everything Nice 'Showtime' plant which has been around for a very long time. He then stated that the Hawaiians are experimenting with color in their breeding processes and pointed out the Pot. Jerry Rehfield 'Red Flare' as an example. There were two examples of *Brassovola nodosa* 'Lady of the Night' which are easy to grow, love our summers and prefer to be mounted. This plant is often used in hybrids and Courtney later pointed out two that had *Brassavolas*

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Upcoming Orchid Events

July

- 12 JOS Meeting, Topic TBA, 7 pm
Louis Del Favero, Del Favero Orchids
- 17 Keiki Club for Orchid Beginners, 1 pm
Orchid Pests and Diseases
Mark and Kathy Young's Home
160 West Genung St, St. Aug 32086

August

- 2 SAOS Meeting, 7 pm
Managing Your Orchid Collection
Alan Koch, Gold Country Orchids
- 5-6 Sixth Annual Cattleya Symposium
Sponsored by Odom's Orchids
Indian River Research & Education Ctr
Fort Pierce
- 6 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 9 JOS Meeting, 7 pm
TBA
- 14 Keiki Club for Orchid Beginners, 1 pm
Photographing Your Orchids
Mark and Kathy Young's Home
160 West Genung St, St. Aug 32086

September

- 3 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 6 SAOS Meeting, 7 pm
Ten Unusual and Easy to Grow Orchids
Thanh Nguyen, Springwater Orchids
- 13 JOS Meeting, Angraecums, 7 pm
Tom Kuligowski, The Angraecum Blog
- 17-18 Ridge Orchid Society Show
Lake Mirror Center, Lakeland
- 18 Keiki Club for Orchid Beginners, 1 pm
Get the 'chids Ready for Winter
Dianne and Drake Batchelder's Home
728 Old Loggers Way, St. Aug 32086

October

- 1 SAOS at Ace Hardware, 9 am til 1 pm
3050 US 1 S in St. Augustine
Repotting and Plant Clinic
- 4 SAOS Meeting, 7 pm
Dendrobiums
Roy Tokunaga, H & R Nurseries
- 8-9 Fort Pierce Orchid Society Show
Fort Pierce Shrine Club
- 11 JOS Meeting, TBA, 7 pm
Roy Tokunaga, H & R Nurseries
- 21-23 Orctoberbest at EFG Orchids
4265 Marsh Road, Deland 32724
- 22-23 Gainesville Orchid Society Show
Kanapaha Botanical Garden

St. Augustine Orchid Society Organization

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in their parentage—Blc. Star Ruby and B. Crazyarachnos. Next he discussed the hybrid, Grammatophyllum Yuan Nun Leopard, which is very showy and quite large. This one had three sprays filled with flowers. He then held up two Den. bracteosums side by side to show the color variations. Next he pointed out a few plants that are great for windowsills, e.g. Eplc. Tinker Toy 'Sprite', Christensonia vietnamica along with many new miniature Phals. Courtney ended by pointing out the unusual Bulbophyllum maximum which one should not sniff due to its foul odor. They are relatively easy to grow and love lots of good quality water. Check out the photos of our show table examples at the end of the newsletter and on the SAOS website.



SAOS Program. Sue Bottom introduced George Hausermann from EFG Orchids in nearby DeLand who discussed **Landscaping with Orchids**. George brought along a five foot "tree" made out of red cedar and mounted on a platform that keeps it upright. He recommends using any hardwood log, tree, or branches for mounting one's orchids outdoors. Cypress and Red Cedar are both readily available in Florida. Depending upon the number of nooks and crannies available on your piece of hardwood, you can easily mount up to 50 plants. Then in the freezing temperatures you can quickly pop a frost cloth over the "tree" or put it on a cart and roll it into one's garage for the duration. Another solution to deal with winter freezes is to put your plants in clay pots and bury them in your landscape. Then if a severe freeze comes you can pop them out of the ground and move them to a protected area. George also recommended using infrared lights for short term temperature drops; the lights heat up the plants but not the air. One drawback is that they are expensive to run for a long duration.

As a general rule, George noted that soft leaf orchids do best in the shade and hard leaf ones enjoy the sunnier spots. If you are looking for terrestrial orchids, check out their roots which should have little fuzzy hairs as a general rule. Vanilla is one exception where the roots will grow the hairs only if planted in ground. If mounted, no little hairs on their roots. Some examples of terrestrials are the Jewel orchids and the Sarcoglottis sceptrodes which are ground orchids that prefer shady areas. For full sun, consider the Spathoglottis genus. When you are growing outdoors, it is best not to use solid plastic pots which hold water longer. You want the water to evaporate fairly quickly so remember this when you choose your potting medium also. Sphagnum moss in a solid plastic plant grown outdoors is not a good idea at all. If your plants are having a problem, pull it out of the pot and look at the roots. More than likely the plant is getting overwatered. George suggested buying the half dome protectors that are used on bird feeders to keep out squirrels. They make great rain shields for your orchids.

Next he demonstrated how he mounts his orchids. First you identify the side of new growth on your plant. Put that section next to the mount and use wire, staple gun, fishing line or other materials to firmly attach the plant to the wood. George recommended not watering frequently at first. This encourages the roots to start growing and attaching to the mount. Once that is started then proceed with normal watering for outdoors which for George is 3 times/week. He fertilizes once a week with 10-30-20 year round. For pesticides, he uses Talstar as a base and then adds to that whatever is needed for whatever pest. Since he is in commercial greenhouse conditions, a typical grower should adapt to their own conditions. He likes Cygon for scale and always adds basic dishwashing soap (no perfumes) at 1 oz./gal.

George advised all to plan on where you will grow your plant and when you repot, use the correct culture for that location. He also stated that Orchidata is an outstanding product and well worth the cost. He prefers mounting which eliminates the need to repot annually and allows more room for more wonderful plants.

Meeting Conclusion

Harry McElroy announced the Member's Choice Award as the Grammatophyllum Yuan Nan Leopard grown by Penny Halyburton and Michael Rourke. The raffle table closed out the evening. Thanks to 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**



CLUB NEWS

June 12 Keiki Club Repotting Phalaenopsis

About a dozen SAOS members met up at Sue and Terry Bottom's home to talk about and repot phalaenopsis. Keiki Club coordinator Mary reviewed some of the basics of phalaenopsis orchid culture, with particular emphasis on the growing medium used to grow phals. When the potting media moss starts to degrade, it is time to pot in your mix of choice. If you're using sphagnum, only use the long fibered New Zealand grade and if you're a heavy waterer, add inert materials like sponge rok or styrofoam to the sphagnum to provide more aeration. Alternatively a blend of ProMix and sponge rok works well for phalaenopsis. This can be top dressed with a little sphagnum moss (even the lower grade sphagnum) or cypress mulch to help prevent the ProMix from washing out of the pot. A number of people brought phalaenopsis and the repotting began in earnest.



July 17 Keiki Club Orchid Pests and Diseases

We'll be meeting in air conditioned splendor at the Garage Mahal to talk about orchid pests and diseases. We'll talk about how to recognize the signs of this or that malady, and what to do about it if you discover problems. Some simple home remedies will be outlined along with some of the more exotic horticultural supplies for a severe problem. Most important, we'll talk about some of the things you can do to prevent problems from arising.

Moderator: Sue Bottom

Where: Kathy and Mark Young's Home
160 West Genung Street, St. Aug 32086

When: Sunday, July 17, 1 to 3 pm

August Monthly SAOS Meeting Managing Your Orchid Collection

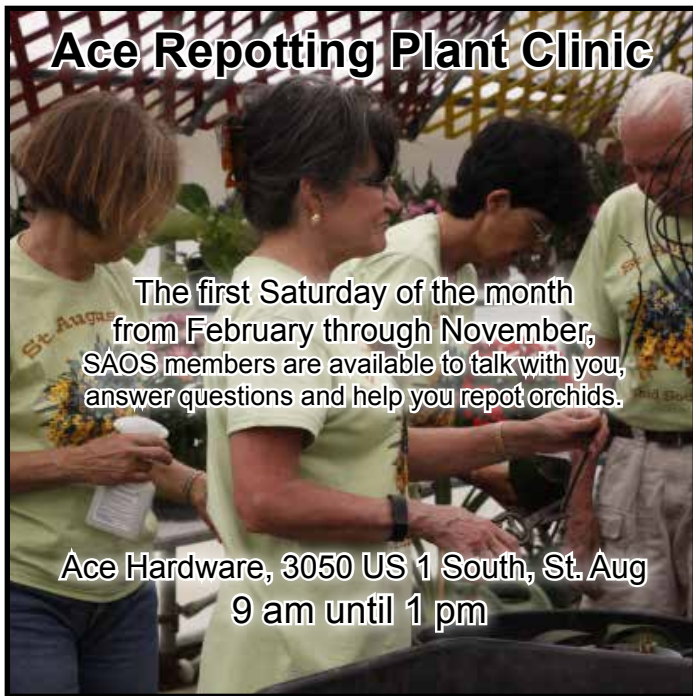
Alan Koch of Gold Country Orchids near Sacramento will talk about how to manage your orchid collection. Learn how to be a better grower and manage water, fertilizer, pests and diseases. Alan will talk about different orchids, how to purchase them to get the best value, how to incorporate them into your growing area and plants that will give you flowers all year long. You'll be able to preorder plants from Alan's advance list at a 20% discount. Orchids will be available on the sales and raffle tables. Friends and guests are always welcome.



Ace Repotting Plant Clinic

The first Saturday of the month
from February through November,
SAOS members are available to talk with you,
answer questions and help you repot orchids.

Ace Hardware, 3050 US 1 South, St. Aug
9 am until 1 pm



INSPIRATION



CULTIVATION



Orchid Questions & Answers

by Sue Bottom,
sbottom15@hotmail.com

Q1. My problem seems to be with Cattleyas and I call it White Smut. It cleans up with alcohol but the damage is done and it comes back. I've talked with people and they seem to say it's mealy bugs but I don't believe that is the case. I seldom see any mealy bugs around my plants but what do I know. When you magnify the picture it has a strange form. I've lost flowers due to the deterioration of the sheath. What do you call it and what is the remedy?

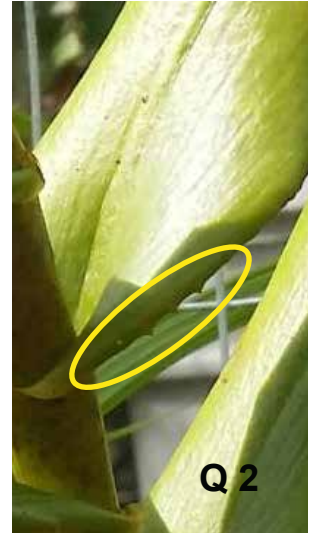


A1. That white smut is scale, boisduval scale to be exact and it is the bane of every cattleya grower on this Earth. It is on the base of the pseudobulbs, on the rhizome between pseudobulbs, sometimes the leaf axils, under leaves, roots, you name it. That black scarring is the damage from the scale. I had scale for years and years until I tried the insect growth regulator Distance. Distance will not kill scale, but it will prevent the scale from moulting so juveniles will never be parents (expensive though about \$180 a quart). You have to apply it with something that will kill the adult scale, one of the imidacloprid products is relatively cheap or the broad spectrum Safari (again expensive). Peststrong.com has the best prices. You might have to find another cattleya grower or three to split the cost with, but scale can be eradicated. You can suppress the population with alcohol, but you will not kill it. Until you get the Distance cocktail, buy one of the systemic insecticides and apply it as a drench so it will be absorbed by the roots upward into the plant. By the next day, you should be able to flick the scale off with your finger. I actually use a hose with a nozzle sprayer set on flat and water blast the dead remains of scale off plants. Scale is public enemy number 1 to the cattleya grower!



Q2. Do you know if these are spines on this orchid?

A2. I've seen these growth aberrations on plants from time to time, they are not spines, just extra tissue. I have no idea what causes it, Courtney thinks perhaps some plants have a genetic predisposition to form them. No worries.



Q3. My orchids are doing fine, they have strong leaves and good roots. But when I water them there are small white bugs that appear in the water. Leaves, stems and aerial roots all seem OK. Only on one of them I found something looking cottony, so I took it out of the pot but I didn't find anything unusual. Taking it out, I left the bark in water and the little white bugs do come out also.



A3. Look closely at those roots, you can see lots of mealybugs feeding on them. Take the plants to the sink or outside use a hose with a hose end sprayer and blast the roots to physically remove the mealybugs. Then pot them back up and pour a systemic insecticidal drench through the pot, double strength because mealybugs are really tough to get rid of.





Lava Rock Courtney's Orchid Growing Tips

Many "Tips" readers have asked about the progress of my experiments with lava rock as a potting medium. While this experiment is still in progress, there are a few generalizations worth passing on. However, this is not a recommendation yet for the average hobbyist. As with all cultural

recommendations, make the change on a few plants before wholesale conversion of your collection. If you are currently happy with your culture then do not change them.

Most lava rock sold in the Carolinas is mined in Oregon and is unweathered, meaning it has not had the actions of water working on it for years. My experiments have utilized red lava rock and not the black form. The only advice I was able to get from Hawaiian growers was to not use the black form, although I do not know why. Perhaps it has something to do with heat absorption. The rock is mined, crushed, and packed without regard for size so each bag needs to be sorted for size. It is, however, inexpensive.

Some bags contain more, larger pieces, while others contain more fine material. This is both good and bad, depending on how the rock will be used. It does require grading as none of the low priced lava rock is graded. The largest material, 1.5-2" diameter works well for vandas and bifoliate cattleyas. Cattleyas and phals go in 0.5-1.5" grade and the remaining fraction is used for seedlings and paphs. Typically, there is also lots of dust or very fine material that is attached to the rock that washes away relatively quickly. This fine material does contain significant soluble material and is best washed off first. Lava rock is relatively light with an extremely porous surface, but occasionally some dense rock, which lacks the porous nature required for potting orchids, will be included. Discard this material. Some bags will have almost none of the dense stuff, while others may have lots of it.

Not all of my experience using lava rock has been positive. So what are the advantages of using this medium? First it is inexpensive and readily available. Most important for me, is that it does not decompose at all. In the hot South, many media break down before an orchid reaches its maximum growth in the pot. Bifoliate cattleyas hate to be repotted and grow relatively slowly so this can be a real problem. I also have limited amount of time to repot and would rather spend my "orchid time" doing other things in the greenhouse.

The key to the successful use of lava rock is to remember that the environment provided by lava rock is very different than what the orchid has already experienced. There is more air movement and less moisture than in more typical media. Roots grown in a pot with sphagnum or bark typically shrivel and die in lava rock. The first phals I put in lava rock became badly desiccated until they grew new roots. The second group were immediately placed in lower light and given more water until they began to grow new roots. The most recent group has been the most successful. Phals were removed from the pot and a core of the old material was left around the roots. The phal was then placed in the pot with lava rock already added so that the phal is properly placed relative to the top of the pot. Then lava rock is added around the plant and a few pieces placed on top of the old medium. This allows the phal to adjust gradually with new roots emerging from the old medium into the lava rock. So far this is working well.

The most important rule to follow when repotting into lava rock is to remember that it works best when the plant is growing new roots. This generally is when it is warm, so avoid repotting in the winter. While this is generally true for all orchids, it is even more important for orchids planted in a rapidly drying medium, such as lava rock, or if the orchid is mounted.

My bifoliate cattleya growth has excelled in lava rock; perhaps because they prefer drier conditions and are always repotted when they are getting new roots. The greatest surprise has been for paphs. Their requirement for more water suggested that the lava rock medium would not work. Fine, gravel sized lava rock was used and the paphs planted in clear plastic pots so that they could be repotted if new roots were not observed. Rock was placed about a quarter inch higher around the plant than if bark had been used. Slow release Dolomite Lime was placed on the surface along with Nutricote fertilizer. Paphs grew so fast that some of the multiflora types split their pots.

Lava rock holds a surprisingly large amount of water, but still requires more frequent watering. Lava rock also holds fertilizers along with less desirable salts so flush at least once a month. Once lava rock has weathered moss and ferns will grow on the surface prompting me to wonder whether there may be some benefit to letting the rock weather a little before using it in pots. As with all media, it takes time to determine if a particular medium will work under your conditions. Lava rocks requires more time watering, but less time repotting. While it is too early to recommend this medium, it has potential for hobbyists that like to water or hate to repot.

Note: Courtney Hackney wrote a monthly column of his orchid growing tips for about 20 years, we're reprinting some you might have missed, this one from July 2005.



CULTIVATION

The Art of Maintaining Root Systems

by John Woolf, [Woolf Orchid Culture](#)

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Some orchids produce massive root systems easily, such as *Cymbidium* and *Zygopetalum*, others such as *Paphs* and *Miltoniopsis* don't. Producing a good root system starts with the germination of the seedlings, or the beginning of the meristem process, in flask. You can produce good plants in flask without any root system simply by omitting the hormones and chemicals that initiate root development. This is normally done where the combination of growing and rooting hormones retard top growth as in the tissue culture of *Eucalyptus* species, then two separate growth media are used, one to promote top growth and one to produce roots. After the plants have produced the required amount of roots, they are then deflasked and grown in a propagation area. This system can also be used for orchids as it is easier to work with them in flask at the early stages of development if they have little or no roots. They are then transferred to a medium containing the hormones needed for root development before being deflasked.

Plants coming out of flask without a good active root system are much harder to establish and losses could be high, hence the deflasking problems many growers suffer. Some growers say the roots produced in flask do not continue to grow once deflasked into a growing medium like bark or sphagnum, however, I do not find this to be true. Roots produced in flask do continue to grow if treated properly. As well, the plant then produces more roots as they harden off. Treating plantlets with hormones/chemicals such as "Dip 'n Grow" when deflasking, assist in the retention of existing roots and the quick production of new roots. These chemicals *Must Not Be Used at a Stronger Rate or More Often than Recommended*. You will only succeed in producing stunted useless plants with huge root systems. Care should also be taken when using these products on larger flowering plants as the side effects can cause loss of flowers, etc. (see *Australian Orchid Review*, December

1995, page 21). *Remember to use your personal protection gear when using chemicals. Treat them all as potential hazards.*

Selection of the growing medium for the plant's life from seedling to adult and beyond is crucial. Without a good active root system to hold the plant firm in its pot and to gather food and water, it will not perform to its optimum.

Purchasing plants

Flasks: Look for a balance between top growth and roots. Don't look for plants that have reached the top of the flask as these could have run out of nutrients and may be harder to establish. Also, the moisture congregates on the inside of the lid and leaves against the lid will be growing "under water" and normally die off after deflasking, leaving dead tissue for you to cut off risking infection through an open cut. Select plants about two thirds of the height of the flask.

Small Plants: Seedlings or mericlones - look for well-established, well-grown plants that are firm in their pots. This normally means a good root system. When you get the plant home, gently slide it out of the pot and check the growing medium and the roots for health and pests. Repot into your own medium or slide back into the original pot.

Larger Plants: Look for live root tips and a good open potting medium. As soon as the weather permits (your normal potting time), repot into your preferred potting medium. After potting, a treatment of the product mentioned earlier (ONLY ONCE) will ensure the minimum of stress to the plant(s).

Your Own Collection

Small Plants: Don't be frightened to slide plants out of pots to check the medium and roots. If you can't get the plant back into the pot, simply pot into a larger pot it evidently needs. This can be done nearly all year. Regular potting of small plants, even every six months, is beneficial. The plants seem to respond and enjoy the fresh growing medium.

Larger Plants: Repot every two years. Every twelve months remove the top inch of medium and sprinkle a little Blood and Bone fertilizer, then top off with new potting medium. Select your growing medium with care (see growing medium next paragraph) and if you suspect a problem is occurring, take the plant out of its pot and check. Some orchids such as *Paphiopedilum*, *Miltoniopsis*, *Disa* and all terrestrials should be potted every year.

Growing Medium

This is where your own cultural practices dictate the type and size of the product you use to pot your orchid into. The amount and quality of water, the type of house (shadecloth, fibreglass roof with shadecloth sides, or totally enclosed glass/fibreglass), the amount of air movement and fertilizer are all factors that place demands on your potting medium. Other factors such as very cold frosts also dictate the type

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of potting medium. Don't put your plants into a mix that will hold a lot of moisture if you get severe frosts. That moisture will freeze killing the plants' root system.

After some 30 years of growing orchids and trialing many potting media and additives, I still return to good composted bark. There is nothing better for a mixed genera collection. In specialist situations and with good quality water, you can use other mediums successfully.

Selection of the Potting Medium: This, as stated previously, must be in conjunction with your own personal cultural practices. Choose a grade of bark that will meet the following criteria. You should do a set of trials using the same plants in the same type and size of pots in different grades of bark.

- (1) The bark will last for two years.
- (2) The roots are attracted into the bark.
- (3) The bark drains quickly.
- (4) The bark retains a coating of moisture.
- (5) There is ample air space between the pieces.
- (6) The pH of the bark is compatible with the type of orchid to be grown in it (fertilizer uptake is restricted if the pH is not correct).
- (7) The bark comes in the correct sizes for your usage - Fine, Medium, Coarse and Extra Coarse.
- (8) The bark is rough so it doesn't pack down over time.

Preparation of The Bark: If the bark is already composted, a little Blood and Bone mixed into the moist bark and left for 3 to 4 days will suffice or you can use it straight from the bag. If the bark is fresh, it should be treated with a combination of fertilizers, moistened, mixed several times over a period of several weeks before use. It should have a good earthy fragrance, not a pine fragrance.

Potting: The bark should be moist, NOT WET, when you pot with it. After potting, a soaking with "Dip 'n Grow" will be beneficial in reducing the stress on the plant and ensuring the roots get away quickly to hold the plant firmly and begin to feed the plant. Selection of the pot is important.

DO NOT OVERPOT, select a size that will give your plant two years growth. Remember, clay pots dry out faster than plastic pots, so take this into consideration when selecting a potting mix. You may have to use a finer mix so the plants don't dry out too quickly. If you are a heavy waterer, clay pots might be the right option.

Retention of a Good Active Root System: If you have followed a similar program to the one I have outlined, you shouldn't have any problems. If not, then why not try changing a few of your plants to see if you can improve them and make sure they are "doing their best" for you. If they grow and perform better after the change, change the rest over. Remember, unless they have a good root system under them, they will not perform to their optimum.

HELPFUL HINTS:

- (1) Select a medium that will last two years.
- (2) Select the right grade to suit your culture and the plant. (i.e., your shade, your watering etc, and the plants needs)
- (3) Larger pieces can be used in the base of the pot to add to the drainage
- (4) The only potting mix additive I suggest, other than fertilizer, is styrene foam.
- (5) The bark/mix must drain freely.
- (6) Ensure the bark is properly treated and not too fresh so the roots will be attracted to it.
- (7) An application of rooting hormones like Dip 'n Grow is beneficial.
- (8) Use the correct type of fertilizers, totally chelated forms are recommended.
- (9) Remember, organic fertilizers are beneficial from time to time but constant use can break bark down quickly.
- (10) Flood the pots regularly with water to remove stale air from between the bark and replace with fresh air containing oxygen
- (11) Check your root systems regularly, at least twice per year.



CULTIVATION

Weeds, Ferns and Orchids Don't Mix

by Sue Bottom, sbottom15@hotmail.com

If you spend a lot of time working in the garden, you don't need anybody to tell you what a weed is, you know they easily outcompete all those plants you so carefully planted. Most orchids tend to be slow growing so weeds can quickly gain a foothold in your orchid's pot. They compete with your orchids for water and nutrients, their roots invade the root zone and reduce drainage and aeration, they are hosts for pests and diseases and let's face it, they're ugly. Ever see a dedicated gardener walk by a weed without pulling it? That is easier said than done with some of the weeds that invade our orchid pots.



Artillery fern (Pilea microphylla) is not a true fern. It seems every time you touch it, seeds are explosively spread throughout the growing area.

Oxalis and artillery fern are difficult to control in part because the seed pods can be ejected on touch and ferns have spores that easily become airborne spreading from pot to pot. If you are diligent and pull weeds while they are still young, you may be able to keep the population under control. A long tweezers or hemostat can help you grasp a weed growing in small crevices and hopefully allow you to remove it, roots and all. But if the root has had the opportunity to burrow into pot, you are just removing the top growth and the weed will return twice as strong. You also have the potential for damaging orchid roots as you dig around searching for weeds. One very effective way of getting rid of weeds is repotting the orchid, being careful to search for and remove all the invader's roots. But if you are trying to grow specimen plants, you typically want to delay disturbing the roots for as long as possible, so what are the other options?

Broadcast Spraying. There are a variety of studies that suggest that certain herbicides can be sprayed on orchids to eliminate weeds without hurting the orchids, although there is no herbicide labeled for use on orchids. One study states Karmex (containing 80% of the active ingredient diuron) can be sprayed on cymbidiums at the rate of 1

tbsp/gal, one suggests Simazine (containing 80% active ingredient) can be sprayed on a variety of thick leaved orchids at the rate of 2.5 tbsp/gal and another suggests that Turflon (containing 60.5% of the active ingredient triclopy) can be sprayed on cymbidiums at the rate of 0.34 wt oz/gal without causing phytotoxicity. I normally believe in better living through chemicals, but simply cannot bring myself to broadcast spray herbicides on my orchids.

Weed Painting. The Australian Orchid Nursery talks of using Roundup to control the Australian gesneriad Saintpaulia weed (*Pseuderanthemum variable*) that is not easily controlled by other herbicides. Their website suggests you water plants well before the application, make a mixture containing 50% Roundup and 50% water and then paint the weed leaves with a child's paintbrush. Of course, they caution you to take care not to overpaint the roots and to also delay watering for as long as possible so as not to wash the herbicide into the roots before it has done its damage to the weeds.



Creeping woodsorrel (Oxalis corniculata) is orchid enemy number 1 in my growing area. Its roots penetrate deep into the potting mix and the seeds spread readily.

I decided to do a trial run using the paint brush approach with the granular herbicide Diuron (80% active ingredient) that is also sold as Karmex, Parrot, Di-on and a few other trade names. Even with trying different strength solutions from a paste to a flowable liquid and using 6 different brushes, from a small painter's brush, sponge brush and finally a kid's paintbrush, the painted application could not be confined to just the weed leaves. No matter how small the paintbrush or how carefully you try to apply the herbicide, some drips off onto the orchid roots or the weeds are growing in crevices so you end up painting the orchid along with the weed. It is time consuming, sloppy, and the weed surface seems to repel the herbicide. The paste and the solution were also probably more concentrated than desirable so this experiment was curtailed and labeled a failure.

Continued on page 11



CULTIVATION

Continued from page 10

Selective Spraying. Perhaps there is a middle ground between broadcast spraying your orchids and painting your orchids with herbicide. How about a spray bottle filled with a somewhat dilute herbicide solution selectively sprayed only on the weeds rather than spraying the entire plant? Using about one third the dosage recommended by Bing for cymbidiums, a spray bottle was filled with water to which Diuron was added at a rate of 0.25 tsp/qt along with a little dish soap as a surfactant. Time to do battle with the weeds.



The ferns, Mexican petunias and artillery fern were sprayed with a Diuron solution. Start with a dilute application and test several plants to see what happens several weeks after spraying before making further decisions.

Spraying the weeds growing in the pots of thick leaved orchids like cattleyas, dendrobiums and cymbidiums worked like a charm. With a simple twist of the nozzle, you can adjust the spray pattern from a thin jet for weeds lurking between pseudobulbs to a fine mist for weeds growing in a patch in the pot. This is an easy and quick way to apply herbicides selectively to the weeds. It might take 2 or 3 weeks for the weeds to die off so don't be in too great a hurry to repeat the application. Depending on the weed pressure, you might only have to spray weeds in the pot a couple times during the growing season. With more sensitive genera including thin leaved orchids such as the oncidiums alliance, perhaps a more dilute solution should be used. In fact, before trying this in your growing area and under your conditions, pick out a plant or two of each genus you grow to be your guinea pigs and see how they fare before applying to the rest of your orchids. Caveat emptor!

Under Bench Treatments. The reason Diuron was available in the potting shed arsenal is that I have long used it for weed control under benches, under vandas and in pathways. You can pull on the nitrile gloves and then broadcast spread it. It is simple, quick and effective to

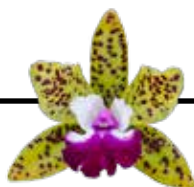
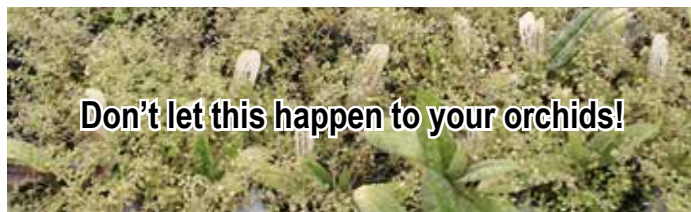
use. Weeds are gone in about three weeks and it seems to have residual effects for some period of time, because retreatment is only required two or three times a year.



Weeds grow under the vandas in their winter growing area where it's hard to treat under their long roots.

In fact, there are many under bench treatments you might consider. Your goal is to make the under-bench areas the most inhospitable environment imaginable for bacterial and fungal disease organisms as well as insects and chewing critters. Step one is making sure the area is clean of spent flowers, fallen leaves and other orchid debris. Step two is making sure there are no weeds growing that can harbor diseases and pests. Step three is to periodically nuke the area under the benches to eliminate any unseen but potential threats to your orchids. Spraying beach or pool algacide under-benches to disinfect and periodically applying slug, snail and roach control chemicals can help control those creepy crawlers.

Eliminating weeds from your growing area is very important, but you don't want the weeds to come under control to the detriment of your orchids. As with any new suggestions, experiment carefully on a small scale starting with less valuable orchids to make sure that you will not fall victim to any unintended consequences before you implement them throughout your growing area. If you conclude that a recommended growing trick or remedy might work for you under your growing conditions, you may then be able to expand the scope of your experiment and ultimately you may decide it is safe and valuable so you can make it part of your normal growing routine.



HOME & BACKYARD



Leslie's Orchid House is right at home amongst her outdoor plantings of perennials and roses adjacent to a sitting and repotting area under a pergola where more orchids like to hang out.

Home and Backyard Orchid Growing

Leslie and Chip Brickell – Atlas Greenhouse Photo Contest

Leslie and Chip Brickell have lived in their home in St. Johns on Julington Creek for many years, long before development in the area exploded. You know the moment you turn into the driveway that this is the home of a gardener extraordinaire, just take a look around the yard and all the manicured beds of blooming perennials and roses.

Leslie and Chip did a lot of research before selecting their Atlas greenhouse. They decided on a single wall polycarbonate structure covered with 65% shade cloth. The two interior American Coolair circulation fans run 24 hours, 7 days a week.

There are a number of thermostats set to control internal temperatures during both warm and cool weather.

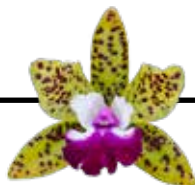
- To cool the greenhouse during warm weather, there are two intake fans that work in conjunction with the water wall. When the temperatures rise to 80°F, the fan closer to the pergola comes on and draws air in from the outside. This pushes hot air from the greenhouse out through the water wall, which is not circulating water at this temperature. This fan continues to operate until the temperatures drop below 80°F. If temperatures continue to rise above 85°F, the second intake fan comes on and the pump for the water wall is triggered to turn on, so water begins to circulate in the water wall dropping temperatures inside the greenhouse through evaporative cooling. The fans and water wall operate until temperatures drop below the preset maximum.

- During cooler weather, a thermostat controls the opening and closing of the upper exhaust vent and fan. When temperatures rise to 70°F, the vent opens so built up heat in the greenhouse can be exhausted. The vent shuts down and the fan turns off when temperatures drop back below 70°F. If temperatures drop below 53°F, the two electric heaters with internal thermostats turn on and continue to operate until the internal greenhouse temperature rises above the preset minimum.

The greenhouse is watered by hand. A Dosatron proportioner is used for automatically injecting fertilizer into the irrigation water. Leslie's water is from a deep well and produces very high quality water, relatively low in alkalinity and dissolved solids so a Cal Mag fertilizer works well for her. She waters her mounted orchids daily and potted orchids several times a week during the warm season. Leslie has all kinds of orchids in the greenhouse, cattleyas, dendrobiums, bulbophyllums, oncidiums as well as some unusual orchids like paraphalaenopsis.

Vandas, bulbophyllums and other orchids are also grown outside under the pergola where an overhead misting system waters the area once or twice a day. This area is a shady and relaxing area for sitting and enjoying the view as well as for working at the repotting bench.

What a wonderful thing to have all that available bench space. Rumor has it that there are regular deliveries of orchids to help Leslie fill the greenhouse, what fun! You may see Leslie's Orchid House on the front cover of the Atlas 2017 catalogue, it won first place in their 2016 Photo Contest with Terry's photograph, simply beautiful.



SHOW TABLE



Grower Carolyn Smith
Phal. NOID



Grower Yvonne & Bob Schimmel
Dtps. NOID



**Grower Penny Halyburton &
Michael Rourke**
Zygo. Advance Australia



Grower Shirley Browning
Encyclia NOID



Grower Harry & Celia McElroy
Den. Baby Pink



Grower Sue Bottom
Lc. Mishima Luster 'Jean' FCC/AOS



Grower Tom Sullivan
B. nodosa



SHOW TABLE



Grower Suzanne Susko
Tsubotaara (Ctst.) Melinda Marie 'Blue Moon'



Grower Penny Halyburton & Michael Rourke
Gram. Yuan Nan Leopard



Grower Sue Bottom
L. Pacavia



Grower Courtney Hackney
Lc. Bethune x Lc. Belle of Celle



Grower Linda Stewart
Ctsm. Splendens



Grower Sue Bottom
Den. bracteosum - white form

