



CLUB NEWS



Bret Ullery

August Meeting

by Janis Croft

Welcome and Thanks. Past President Bob Schimmel filled in for vacationing Tom Sullivan, and opened the meeting at 6:50 pm with 40 attendees. He thanked Dianne and Julie for the treats and reminded all to remember to “Drop a Dollar” to pay for the coffee, cups and supplies. He then stated that the Silent Auction would conclude before tonight’s

presentation begins.

Club Business Welcome. Membership VP Linda Stewart welcomed our visitors and new member Angelique Fry from California. She asked our September birthday people to raise their hands to receive their free raffle ticket. She asked that if you know of anyone in need of a cheering up or a get-well card, let her know by emailing her at info@staugorchidsociety.org.

Virtual Show Table. The Courtney Hackney show will be Wednesday Sept. 13 at 7 pm. The Zoom link will be sent by Email beforehand. The video of each month’s Virtual Show Table is posted on our website. Plan to send in your photos for October’s program by Sept. 26th.

Repotting Clinic. The last clinic for 2023 will be October 7th, the first Saturday of the month, from 10 am til noon at the Southeast Branch Library, 6670 US-1 N, St. Aug 32086. Fertilizer and supplies for growing orchids are available on the back table and you can request them by email at info@staugorchidsociety.org.

Gainesville Orchid Society Show. Janis Croft, Exhibits Chair, asked if anyone is interested in helping set up a tabletop exhibit to contact her. She then said if you have an orchid that you would like judged during the show, contact her for a registration number and arrange with Charlie for transporting it to the show.



Library. Librarian Howard Cushnir brought in a book on Miltoniopsis. If you would like a book or magazine, send a request to info@staugorchidsociety.org and he will bring the item(s) to the next meeting. You can access the list of library titles on our SAOS website.



Show Table Review. Courtney and Sue started the Show Table with some wonderful Vandas, which love every day watering. There was a Prra. Tango Fire that growing in a wire basket. Courtney said he had seen several other plants grown in these baskets and then asked the grower where to buy them. She replied the Dollar Tree. Next Courtney held up a small Cymbidium species and noted that not all Cyms are the large plants we see our members bring in. Steve Hawkins also brought in a Bulb. Karen Lewis with outstanding form and deep maroon color. Courtney said Krull Smith has many crosses from unusual plant combinations (many from Bill Thoms) and this was one outstanding example. Sue had a rescued Florida native orchid Habeneria odontopetala. Courtney said that these can be found in local wetland areas and are sweet smelling, and suggested she hybridize it with one of her cultivated habenarias. Next Sue held up a huge Dendrochilum magnum that was exquisitely grown with inflorescences spaced all around the plant. Courtney ended the review with another beauty grown by Sue, a hybrid remade by Keith Davis, Blc. Chinese Bronze ‘Marco Polo’ x Waikiki Gold ‘Lea’. She said the first one of three

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Upcoming Orchid Events

September

- 9-10 Fall JOS Orchid Festival
Mandarin Garden Club, Jax 32223
- 9 Florida North-Central AOS Judging, 10 am
Clermont Judging Ctr, 849 West Ave.
- 12 JOS Meeting, Trends in Vanda Breeding
Robert Fuchs, RF Orchids
- 13 SAOS Virtual Show Table, 7:00 pm
Courtney Zooms into Cyberspace
An Invitation Will be Sent by Email
- 16-17 Ridge Orchid Society Show
IFAS Stuart Center, Bartow
- 30-1 Tampa Orchid Club Show
Northdale Recreation Center

October

- 3 SAOS Meeting, Reblooming Orchids, 6:30
Courtney Hackney
- 7 SAOS Repotting Clinic, 10 am til 1 pm
Southeast Branch Library
6670 US-1 N, 32086
- 10 JOS Meeting, Topic TBA
Jose Exposito, Soroa Orchids
- 11 SAOS Virtual Show Table, 7:00 pm
Courtney Zooms into Cyberspace
An Invitation Will be Sent by Email
- 14 Florida North-Central AOS Judging, 10 am
Clermont Judging Ctr, 849 West Ave
- 15 Keiki Club - Growing Area Tour, 1-3 pm
Sherrie and Lester Jenkins' Home
2150 Eventide Avenue, St. Johns 32259
- 21-22 Gainesville Orchid Society Show
Kanapaha Gardens
- 21-22 Delray Beach Orchid Society Show
Fieldhouse at Old School Square

November

- 3-5 Fall Orchid Festival
Krull Smith Orchids, Apopka

- 4-5 Vanda and Slipper Symposium
NW Orange Cty Improvement Assoc
4253 W. Ponkan Rd, Apopka 32798
- 7 SAOS Meeting, Judging Orchids, 6:30
Alan Koch, Gold Country Orchids
- 8 SAOS Virtual Show Table, 7:00 pm
Courtney Zooms into Cyberspace
An Invitation Will be Sent by Email
- 11 Florida North-Central AOS Judging, 10 am
Clermont Judging Ctr, 849 West Ave.
- 11-12 Deerfield Beach Orchid Society Show
Safe Schools Institute
- 14 JOS Meeting, Winter Growing Tips, 6 pm
Jax Orchid Society Members

St. Augustine Orchid Society Organization

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to bloom was not as nice, but this second seedling is a keeper. Courtney stated that one should never give up on an orchid if you don't like the first blooms. Oftentimes, the second and later blooms will have better form and color.



SAOS Program Sue introduced our speaker, Bret Ullery who operates Accent Orchids in St. Petersburg along with his wife Ruth. When they first met, he gave her a lime green dendrobium orchid. She then went to an orchid auction and bought 26 orchids. Their love of orchids continued and they started their business together. Tonight he spoke about Schomburgkias, known for their cow horn bulbs. This genus has been eliminated, and the species moved into *Myrmecophila* or *Laelia*. *Myrmecophila* is a word from the Greek *myrmex* (meaning ants) and *philos* (meaning a friend). The plants in this genus have a symbiotic relationship with ants. They often host many ants, sometimes fire ants, in their bulbs and the ants provide nutrients via dead leaves, moss and excrement. The other *Laelia* group needs some media and more water compared to the *Myrmecophila* types. They are smaller plants and their flowers are much slower to open. Bret continues to use the term *Schomburgkia*.

He started his presentation by showing how he divides a plant when a few live eyes are at the base of the bulb. Ruth walked an example around to show everyone the live eye. He labels the division and leaves many of them on his bench until they start new growth. He also showed us how he mounts the bulbs in clay pots using small holes that he has previously drilled. First, he cuts off all of the old roots. Then he uses zip ties to wrap around the bulb and secure it to the inside of the pot using the holes. Bret then hangs the pots high up in his greenhouse and forgets about them until he starts to see growth emerge from the pot. Bret prefers to mount using zip ties through drilled holes in various types of wood pieces or baskets. He said after a few days, he goes around and tightens the zip ties again because the bulb has shrunk a bit. The pseudobulb has

to be tightly adhered to the mount in order for the roots to become securely attached. Ruth also added that one should not put anything in between the mount and the bulb.

Schomburgkias like lots of fertilizer because they use lots of energy to grow such large inflorescences, some as long as 18'. They can survive temperatures down to the mid-30's for a few nights but he advised for our local conditions to bring them in when we have our sustained low temperatures. He waters using water soluble fertilizer via a Dosatron system into his overhead spray system once a week, and waters two more times with his plain well water. His greenhouse can get up to 118° in the summer so he often sprays his plants with plain water in the afternoon to cool them down. He has several plants mounted to palm trees on his property and just lets them thrive in the normal rainfall. Bret felt this was the closest way to nature and the best way to grow them. He then told us about his favorite, *Myrmecophila galeottiana* that is quite rare and slow growing with pink and burgundy flowers. He paid \$300 for one back bulb that took him three years to get growing. This one spikes at different times from all of his others.



Bret provided everyone with a #2 pencil and had us guess how he wanted us to use it. First was to make labels, as the pencil-written name will last longer than the tags. Then to push the sharpened tip into potting mix to see if it is time to water. If it is just damp, water the next day; if dry, water today. The third use was to sign up to volunteer in your orchid society. There are many opportunities for you to be a part of making it all happen!

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



CLUB NEWS



October 3 Meeting Reblooming Orchids

Crowd favorite Courtney Hackney will talk about reblooming orchids identifying the cultural factors that trigger different orchids to bloom. Depending on the type of orchid, changes in light, temperature, day length and similar environmental conditions induce flowering. He grows many different genera, but his favorite is the Cattleya Alliance. He has about 500 mature cattleyas and even more seedlings, but his favorites are classic clones, some of which appeared in orchid collections over 100 years ago. He makes 8 to 10 hybrids per year.



Dr. Hackney is Emeritus Professor of Biology and the former Director of Coastal Biology at the University of North Florida. He wrote a Growing Tips column for 20 years that appeared in newsletters around the country. He has also published in the Orchid Digest and American Orchid Society. In 2004, he published "American Cattleyas", the culmination of a decade of study and interviews, which summarizes in old photographs and print how all of the modern cattleyas came to be. The book also describes what we know about cattleyas and cattleya hybrids, how to grow them, and what to expect from modern hybrids.

September 13 Virtual Show Table

Courtney talks about the plants brought into the Show Table at our meetings. He also does a monthly online program focusing on the pictures of blooming orchids members send in. Courtney will Zoom into cyberspace at 7 pm to talk about the different orchid varieties with tips on how to grow them. An invitation will be sent to your email address. If you want to share images of your beauties in bloom for next month's program, send high res pictures by September 26th.

American Orchid Society Corner

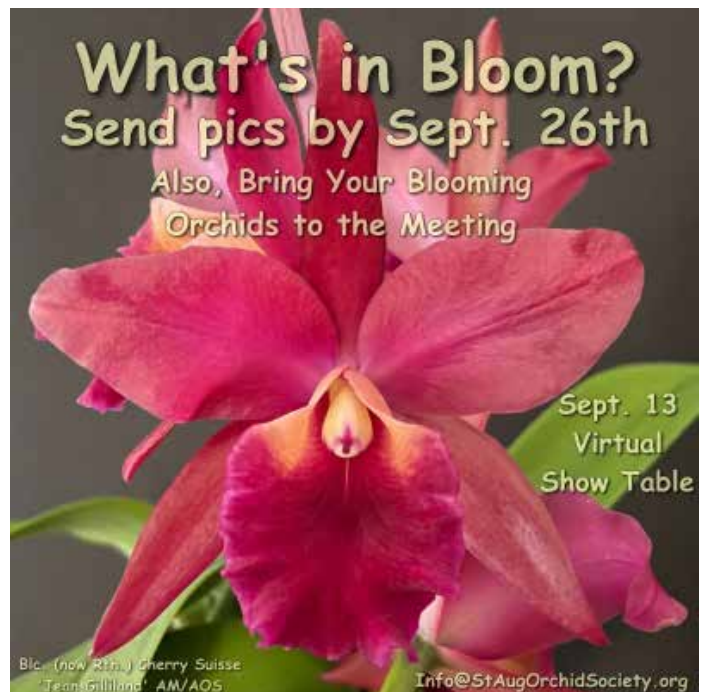
Webinars

September 19, 8:30 pm, AOS Members Only
Virtual Judging as Education – Sergey Skoropad
September 21, 8:30 pm, Everyone Invited
Greenhouse Chat - Ron McHatton

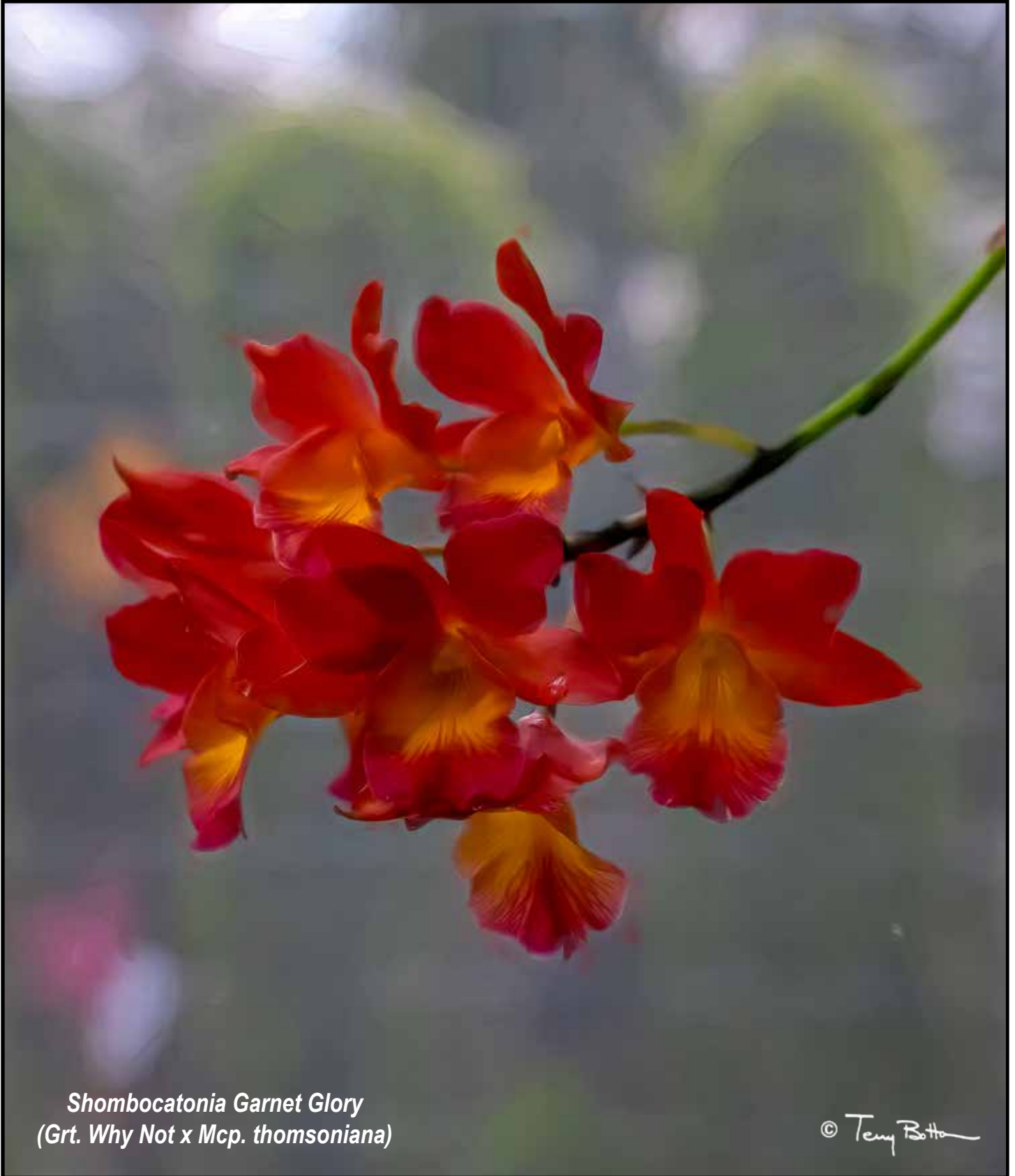
Orchids Magazine this Month

Paph. philippinense – Kay Perry
Clowesia Rebecca Northen–Judith Rapacz-Hasler
First Lady Cattleyas: Bess Truman–A.E. Chadwick

[Photos of Latest AOS Awards](#)



INSPIRATION



Shombocatonia Garnet Glory
(Grt. *Why Not* x *Mcp. thomsoniana*)

© Terry Botta



CULTIVATION



Orchid Questions & Answers

by Sue Bottom,
sbottom15@hotmail.com

Q1. I've noticed that new growths on some of my cattleya species have been turning black. Do you think this may be caused by fertilizer burn?

A1. If you are growing outside or watering from overhead, it's possible that water is pocketing in the new growths above the papery sheath that covers the new growth, and then a bacterial infection destroys the new growth. The problem isn't with wetting the leaves, it's that a pocket can form between the emerging pseudobulb and the protective sheath, and water can easily be trapped in there. I either score the sheath or gently pull down the sheath to remove the pocket.



Q2. We had a blustery day and my shade umbrella fell down. I forgot to put it up the next day and I thought I had saved my phals from the sun. My local orchid FB page suggested that the problem was sunburn plus some infection. I've never seen the circular spots before with sunburn.

A2. I think your local FB page is correct. That looks like the sun burnt those thick fleshy phal leaves and that created an opening for bacteria to invade the tissue. It probably happened really fast. You should cut away all the infected



tissue to prevent the bacteria from reaching the crown of your plants. Good luck with rehabbing them!



Q3. I have a couple of orchids with yellow spots. One is an antelope type dendrobium, the other an Epidendrum nocturnum. I have Physan, Sevin, Banrot, and what used to be Bayer's (in the blue bottle). Will any of these work or must I buy something like Pageant?



A3. That looks like the beginning of one of the cercosporoid infections, so you'd use thiophanate methyl. It used to be sold as Cleary's 3336 or Thiomy, and is one of the fungicides in Banrot. I find the fungus is almost impossible to get rid of; it's a blight on dendrobiums. You can spray for it, but once you see the damage, the fungus is inside the plant, beyond the reach of the chemicals. The best advice/hardest thing to do is remove all the damaged leaves and then spray. That chemical is also available as a granular, which is much easier to use. You can find it by searching for thiophanate methyl granular on <https://www.domyown.com>.



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Shipping Orchids

by Dr. Courtney Hackney

Christmas for orchid hobbyists comes whenever a package arrives with “live orchids” on the package. Large commercial nurseries have, by necessity, learned how to get plants to you in just about the same condition as when they left the nursery. Some small orchid businesses and many hobbyists are not as adept

at sending plants as one might like. If you have reached the point where you are exchanging orchids with other hobbyists or selling them over the internet, it has already become clear that shipping orchid plants is not as easy as it might seem.

With just a few exceptions, it is best if orchids are on the dry side before shipping. That does not mean that they should be desiccated. If an orchid has reached the point where it would be watered the next day if left in your greenhouse, then it is ready to be shipped. Not only do you not want to pay for the extra weight of water in the pot, but also excess water invites both fungal and bacterial infection. Dry orchids also seem to withstand both excess heat and cold better. Bare-root divisions of plants should be thoroughly dried, as roots damaged during repotting are very prone to bacteria infection when confined in a box. Even *Phalaenopsis*, shipped bare root, quickly put out new roots and within a month are not different from those that had not been shipped.

The key to successful shipping is in packing. If a plant is larger than the pot where new growth (e.g. in cattleyas) or leaves (in phals) extend beyond the pot, care must be taken to avoid serious damage. Clay or plastic pots can be placed in a larger plastic pot with moss or newspaper in between. The goal is to keep the plant from moving during shipping. Shredded paper, moss, and many other types of material are often placed around new growths, the base of the plant, or anywhere there is sensitive tissues. Tape or rubber bands are used to hold this material in place so that the medium does not fall out of pots. Bare root divisions should be placed into plastic pots and surrounded by shredded paper so that the plant is firmly in the pot. Special care must be taken to avoid crushing bulbs and new growth. Finally lay old newsprint out and roll the pot and plant into a large cylinder. Fold the top and bottom over and tape shut. When ready, plants look like a stack of firewood. For tall plants it is a good idea to place a bamboo stake



as long as the plant to keep the plant from bending. Find a box that is 2-4 inches longer, wider, and deeper than the plants to be shipped. Layer newspaper in the bottom and sides. This prevents cold and hot air from quickly entering the package during transport. Next add a layer of insulating material such as plastic peanuts or crushed paper. Layer plants like firewood with enough insulation between to prevent each plant from moving and crushing other plants. Clay pots require more packing in between because of the weight. When the package is within two inches of the top, fill to the top with your insulating material and gently shake the package to encourage the packing material to fill any unoccupied space. Add additional material so that the package is slightly overfilled. Add one more layer of flat newspaper and squeeze the box tight. The package should bulge slightly and nothing should shake inside. If it does, repack. Tape in all directions, including the edges. That ensures that the edge does not get caught in machinery and accidentally opened.

Orchids in flasks may be difficult to ship as the flasks get shaken and seedlings damaged. Most shippers remove plants from flasks to ship. Stem props and soft seedlings must also receive special care, as they are vulnerable to conditions, especially desiccation, that would not harm a mature plant. This is one of the few cases where plants are shipped in plastic bags. The less shipping time, the better and sensitive stages should be shipped by two-day delivery. Older plants can be shipped three-day delivery. However, the longer orchids are in transit, the greater the chance of damage. This is especially true in winter and summer.

Despite many years of opening packages it is still a thrill to unpack a box of orchids. It can also be very disappointing to find new arrivals badly damaged because they were not packaged correctly. If you are sending orchids remember how it feels to be on the other end. Let the shipper know the condition of your orchids when they arrive so that they can change their packing.

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 September 2003.



Farewell Schomburgkia

by Greg Allikas, courtesy of the AOS

Certain tropical orchids are well-suited and often used as landscape subjects in frost-free areas of Florida. *Schomburgkia tibicinis* was one of them. I say “was”, because although the orchid is still around, the name isn’t. I will use it in this personal tribute until farther down the page when we deal with new order of taxonomy.

I came to West Palm Beach forty years ago. I was growing a few orchids then and remember seeing a fairly robust specimen of *Schomburgkia tibicinis* growing high on a Royal Palm tree at Hennegan’s Garden Center on State Road 80. In those days I had thought most orchids were of a delicate nature and wondered about this orchid with a long inflorescence that was growing in nearly full sun. Years later, I would see this species growing in a similar, but even brighter, setting in its habitat in Belize. By that time I was a far smarter orchidist and knew about the schomburgkias’ preference for bright light.

My early exposure to this dramatic orchid gave me an introduction to the diversity of orchids and *Schomburgkia tibicinis* has always been a favorite. I learned about the orchid’s association with ants that its current name reflects. Although we never saw ants taking up residence in hollowed-out backbulbs, it seemed that ants always showed up on the inflorescences of flowering plants. I wondered if there were some quality to the sugary nectar on the flowers and pedicels that had a special attraction for ants, preparing the relationship for future housing. As with that other species found in Belize, *Coryanthes macrantha*, the orchid provides the shelter and the ants provide the defense. I also learned the folklore; the dried-out pseudobulbs are used as toy horns by native children, giving the orchid the common name, “cow horn orchid”. I have always been drawn to orchids that have a history as well as a pretty face and *Schomburgkia tibicinis* fills the bill nicely.

I picked up my first *Schomburgkia tibicinis* from a long-gone local business called Quiet Place Nursery. They were a small orchid firm behind a busy intersection in Lake Worth. There was nothing but white sand underneath the benches and one thin layer of shade cloth above the plants. Those orchids that weren’t mounted were potted in cypress mulch topped with Osmocote. As the owner Marie explained, “Maybe these plants are grown a little tough, but we don’t have to worry about people taking them home and killing dainty little things. If they’ll grow here, they’ll grow anywhere.”

We have never grown what were, until recently, considered the “true” schomburgkias; those from South America. Some grow them successfully here in South Florida but I



Schomburgkia (now Myrmecophila) grandiflora

suspect many of them are from elevations higher than the ten-foot average across most of the southern part of the peninsula. Our summer night temperatures never go below 75° F. This group would include the type for the genus, *Schom. crispa* (now *Laelia marginata* (Lindl.) L.O. Williams) and many fine orchids such as *Schom. undulata*, *Schom. rosea* and others.

For years there has been confusion, differing opinions and rumblings about changes in *Schomburgkia* and *Laelia* so we can’t say we weren’t forewarned. Withner, in his 1992 Volume III of *The Cattleyas and Their Relatives* had not yet reached the conclusions that today’s taxonomists have. He kept a slightly enlarged concept of *Schomburgkia* that included the South American species, the ant-associated species, and one Mexican (Guatemala, Honduras too) *Laelia*: *L. superbienis*. This is not so odd because the Mexican species has been passed around genera like a hot tamale, having visited *Cattleya*, *Laelia*, *Schomburgkia* and even *Bletia*. Withner was sharp enough to deduce that the Mexican *Laelia anceps* was different enough from the Colombian *Schomburgkia splendida* to not put them in the same genus. But today’s taxonomists, who are heavily vested in DNA evidence as the irrefutable truth, have indeed lumped the South American schomburgkias into the same genus as the Mexican laelias - *Laelia*. Although I am happy to see such a pretty name preserved (*Laelia*, named after one of the Vestal Virgins), I expect that some time in the future we may see this genus spilt because of floral and vegetative characteristics of certain species.

So the genus *Schomburgkia* is gone. The South America species have moved north to *Laelia* and the ant-lovers are now in the genus *Myrmecophila*. Withner addressed the latter move even though he himself used *Schomburgkia* for

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all of them in vol. III: "The choice of using the segregate genus (*Myrmecophila*) for the ant-inhabited taxa, or keeping them altogether within *Schomburgkia*, seems to me a relatively arbitrary one". He goes on to propose keeping them all in *Schomburgkia* and dealing with the differences at the sub-generic level. Now there's a thought that appeals to me. I always liked Pabst & Dung's revision of Brazilian laelias (*Orchidaceae Brasiliensis*, vol. I, 1975). They presented a group of orchids that had some things in common (*Laelia*), yet some differences (*Cattleyodes*, *Hadrolaelia*, *Parviflora*, *Microlaelia*) - sections within the genus.

I suppose I will get used to it, but only if name changes stop coming so rapidly. I for one will be happy to say goodbye to those silly hybrid genus names from the everything-in-*Sophronitis* days, like *Thwaitseara*. But I will miss hearing the rich guttural sound of *Schomburgkia* (or as one friend pronounced it, *Schromburgkia*). The name itself holds a special magic for me; remembrances of my early days as an orchid grower when every new orchid discovered was a source of excitement. I'll miss hearing the call of the *Schombocat* as I console myself watching ants crawl up and down the four-foot inflorescence of a *Myrmecophila tibicinis* next spring.

This article was written by Greg Allikas in 2009 and was accessed on the AOS website on August 3, 2023. <https://www.aos.org/orchids/collectors-items/farewell-schomburgkia.aspx>



Schom. (now L.) superbiens var. alba 'Don Hubert Cross'

Myrmecophila, Schombo/Laelia Culture

by Paul Storm,

courtesy of the American Orchid Society



*Ferg. (now Rchg.) Chichiriviche Sunset
(Rth. Orange Rocket x L. undulata)*

Myrmecophila, *schombo/laelias* and their hybrids are among the easiest orchids to grow and bloom due to their stamina and vitality, making them an easy success for orchid aficionados. As for all orchids, the basic requirements are light, air circulation and water, which will receive more attention a little further on. Although there is a myth that if one wishes to bloom them one must "burn" them. On the contrary, I have found that a medium bright light level suitable for *cattleyas* (about 2,500-3,000 foot-candles) is sufficient for growing and blooming all members of this group.

With the exception of *Myrmecophila humboldtii*, all *Myrmecophila* species can be grown in pots, baskets or mounted. *Myrmecophila humboldtii* does not grow well in pots or baskets and needs to be mounted, or it can even be grown bare root, simply standing in a clay pot if watered frequently.

Schombo/Laelias, their hybrids and *Myrmecophila* hybrids, with the exception of *Laelia lyonsii*, are all comfortable in whatever medium the grower favors but the important difference in culture is the watering frequency. *Laelia lyonsii* prefers to be potted. If it is grown in baskets, the medium should be less porous and the basket must be watered more frequently.

Many members of this group of orchids have characteristics that include thicker leaves and, in most cases, pseudobulbs of varying sizes, which appears to suggest to some growers that frequent watering is not a requirement. This assumption often leads to a lack of

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Symbria. (now *L.*) *Summit*
(*anceps* x *lyonsii*)

success in growing most of this group, as schoms often appear to grow but they grow more slowly and bloom less frequently when underwatered. During the course of our schombo programs for orchid societies around the United States and the Caribbean, on many occasions we hear the complaint that plants in this group purchased in flower fail to bloom again, or when purchased as divisions or bare-root plants either never bloom or bloom infrequently, and that they are “slow growers.” Upon further inquiry and analysis, we have determined that in almost every case, infrequent or sparse watering was usually the culprit. Too little light could also be a factor if the plants are grown under conditions that are too dark, such as under fully leaved trees.

Our greenhouse is located in central Florida along the west Gulf coast where we never remain too cold for too long, thanks to the Gulf Stream. In winter, we water thoroughly and deeply at least twice a week. In late spring, summer and early autumn we water thoroughly and deeply at least three times a week. It is important to understand that I do not advise growers to overwater but rather to not underwater. Drying out between watering is always important and cannot be overemphasized as long as *Myrmecophila* and schombo/*laelias* are not allowed to remain too dry for an extended period. In addition, we add a very dilute fertilizer solution to every watering. As with all epiphytic orchids, the most important factor is to allow the orchid, to drain thoroughly before the next watering, just as they do in nature. Obviously, schombos grown in baskets with a porous medium or when mounted can and should be watered even more frequently in hot or dry weather. Furthermore, we are acquainted with some schombo

growers who water their plants in baskets or on mounts almost daily, but always allow them to drain.

All orchid growers have varied conditions and cultural instructions should always be adapted to individual conditions. However, by following the plan outlined above we enjoy continued plant growth and frequent flowering.

Finally, with regard to potting medium, we always use and recommend *Orchiata* for the best growing success and minimal repotting. *Myrmecophila albopurpurea* and *Myr. thomsoniana* appear to especially enjoy and appreciate a tree fern mount but, once again, almost all schoms in this group will adapt to a wide range of potting media and cultural practices.

This article appeared in the American Orchid Society Orchids magazine, in November 2013 (Vol. 82:11, p. 673)



Symbria. (now *Myc.*) *Memoria Louise Fuchs*
(*Mcp. tibicinis* x *C. bicolor*)



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Discolored Leaf Tips

by Sue Bottom

Discoloration of orchid leaf tips can occur as a result of bacterial, fungal or cultural issues. The discoloration can be brown or black, sometimes with a leading yellow edge. Trying to decipher the causative agent can require a little detective work. Here are some reasons for leaf tip discoloration along with pictures to help you diagnose problems you may be having.

Fungal Infection - Anthracnose. In thin leaved orchids, such as many oncidiums, gongoras, stanhopeas, and dendrochilums, the symptoms of Anthracnose usually begin at the leaf apex and move toward the base of the leaf, with alternating bands of dead tissue and spring bodies in the dead area on the leaf upper side.

The damage seen in thick leaved orchids like cattleyas is not so easily identified. In some cattleyas, the damage begins at the leaf tip and moves downward relatively slowly. The damaged portion of the leaf becomes necrotic and eventually papery. Younger sections have a dark demarcation line with a yellow advancing edge, with tiny dots, the spores, in the dead tissue. In other cattleyas, affected leaves have discoloration from the leaf tip advancing downward without a strong demarcation line. Leaf tips have discolored yellow to brown blotches, extending mostly along the leaf edges.

The first step in treatment is to sanitize the plant by removing infected tissue, down about an inch below the discoloration. You can protect the remaining part of the plant with a protective spray with a systemic fungicide labeled for treatment of *Colletotrichum*. Both Pageant and Phyton (contains copper, so don't use on dendrobiums) are highly rated in Ann Chase's [2022 Guide to Ornamental Fungicides](#).

Bacterial Infection - Pseudomonas. Bacterial infections tend to be fast moving as the bacteria invade the plant leaves and dissolve cell walls rapidly spreading the disease. When the symptoms appear first on the leaves, the damage caused by water molds is difficult to distinguish from the damage caused by bacterial organisms, both can cause black, water-soaked lesions on the leaves that spread rapidly, though the ooze produced by bacterial infections can be quite offensive. These symptoms are often described as black rot, although the term black rot is reserved for the disease caused by water molds as opposed to bacteria. Black rot caused by the water molds typically starts in the roots and moves upward through the rhizome and pseudobulbs causing the leaves to yellow and drop.

In the pictures below of bacterial infections, the leaves did not have a bad odor as is common with *Pectobacterium* (syn. *Erwinia*) infections. The suspicion is this damage is caused by *Acidovorax* (syn. *Pseudomonas*) *cattleyae*, although it is also possible it is some other as yet unidentified bacterial pathogen infecting the orchids. The leaves rapidly discolor from the tip to the base of the leaf.

The first step in treatment is to sanitize the plant by removing infected tissue, down about an inch below the discoloration. You can protect the remaining part of the plant with a protective spray with a bactericide. Both KleenGrow and Phyton (contains copper, so don't use on dendrobiums) are highly rated in Ann Chase's [2022 Guide to Ornamental Fungicides](#). Hydrogen peroxide is a good home remedy that can be sprayed or poured on the leaf full strength.

Calcium Deficiency. Calcium deficiency manifests itself in black necrotic leaf tips and other expanding tissue. Calcium is an essential plant element that helps build strong cell walls. Calcium is not translocated through the plant like some other elements, so calcium must be provided in amounts commensurate to the growth rate. Calcium uptake via the roots requires a strong transpiration stream. If the root system is compromised, by bush snails, repotting, salt build up, etc., the plant may not be absorbing enough calcium to build new tissue. In their article *Leaf-tip Die-back of Cattleya – What's the Real Cause*, Poole and Sheehan postulate that unusually high temperatures in the absence of the cooling effects of frequent watering can interfere with calcium uptake.

Some cattleyas seem more prone to calcium deficiency in the hot summer greenhouse. Try keeping temperatures down with good air movement and an underbench misting system, repot as new root growth is occurring and try watering twice an hour apart, along with supplying adequate calcium, to prevent calcium deficiency.

Excess Salts. Leaf tip burn is not unusual in orchids grown in the home or under very dry conditions. It is not necessarily indicative of overfertilizing, but rather salt related damage. When the salt concentration in the soil solution reaches a certain critical point, either through being concentrated by overly dry conditions, the excess application of fertilizer or irrigating with a high soluble salt content water, salt toxicity can occur. Salt toxicity is more common in salt retentive mixes containing Pro-Mix and sphagnum moss, so regular flushing of the media is often recommended.

The leaves on some of my habenarias look burnt. The plants are grown indoors under lights in clay pots filled with high quality sphagnum moss in pebble filled humidity trays.

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CULTIVATION

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It seems to be a slow moving problem that began early in the growth process, and strangely some varieties exhibit no leaf tip damage. The first guess was the discolored leaf tips were a salt toxicity problem, from a combination of potting in sphagnum moss and using quarter strength fertilizer with every watering, so I started alternating fertilizing with a reverse osmosis water flush. The more I looked at the damage, the more it began to look like a fungal problem, even though the leaves are never wet (which would help the spores invade the leaves). Of course, those *habenaria* leaves are soft and tender with no waxy cuticle, so fungal invasions are easier. The jury is still out on what caused the leaf problems. I'll hedge my bets, flushing with RO water with every other watering and drenching with a systemic fungicide.

A related problem may be the low humidity in the house. We average about 45 to 50% humidity in the house when the AC is running, so the plants are grown in water filled humidity trays with carpet padding covered with pebbles. The water in the humidity trays wicks up through the clay

pots to provide another source of humidity. The humidity meters read an almost perfect 60 to 70% when set at the base of the humidity trays, but when moved to the same height as the leaf canopy, the humidity readings dropped down to 50 to 60%. Apparently the humidity trays have a very localized impact; the humidity decreases rapidly with distance above the trays. The 50-60% humidity is probably at the low end of acceptable for *habenarias*.

Brown or black leaf tips can occur on orchids for a variety of reasons. You will have to determine whether the damage is from a bacterial or fungal infection or some cultural misstep. You can compare the damage on your plant with some of the images provided to help guide you in your diagnosis. Think about your growing conditions and whether they are contributing to the types of problems that are known to cause discoloration on your leaf tips to see if there are some simple changes you can make to make your growing environment more hospitable.

References:

Poole, Hugh A. and T.J. Sheehan. 1973. Leaf-tip Die-back of *Cattleya* — What's the Real Cause? *Am. Orchid Soc. Bull.* 42(3): 227-230



Anthraxnose in Soft Leaf Orchids-Characteristic bands of dead tissue with abundant spores.



Anthraxnose in Cattleyas-Sometimes the damage is sharply delineated with abundant spores



Anthraxnose in Cattleyas-Yellow to brown blotches extending down along leaf edges



Bacterial infection traveling up vanda leaf, remove entire leaf and try to reduce leaf wetness



Bacterial brown spot on young cattleya leaf causes loss of leaf, try to reduce leaf wetness



Bacterial brown spot on mature cattleya leaf causes localized damage, plant walls off damage



Expanding tissue becomes necrotic from lack of calcium uptake in hot summer greenhouse.

Leaf tip burn in *habenarias*, is it from overfertilizing, not flushing the pot or lack of humidity?



SHOW TABLE



Grower Suzanne Susko
Ctsm. Orchidglade 'Jack of Diamonds' AM/AOS



Grower Leslie Brickell
Phal. Joy Fairy Tale 'Joy' AM/AOS



Grower Gale Hall
Ascda. (Pakchong Gold x Bitz's Heartthrob)



Grower Keith Davis
Lc. Lustre (1907) 'Westonbirt'



Grower Allen Black
C. Maximum Lust



Grower Sue Bottom
Phal. Tying Shin Fly Eagle 'Wilson #66'



Grower Gale Hall
Den. Pop Eye



SHOW TABLE



Grower Sue Bottom
Blc. (Memoria Helen Brown x
Chinese Bronze-Waikiki Gold)



Grower Steve Dorsey
Blc. Fort Watson 'Mendenhall' AM/AOS



Grower Courtney Hackney
Lc. S. J. Bracey 'Waimaeo'



Grower Brandon Silvester
C. William Caldwell



Grower Bev Vycital
Ctsm. (Portagee Star x Dagny)



Grower Suzanne Susko
Mps. Edie Brown 'Sparkling Diamond'

