



September-2021-Newsletter

Please feel free to forward this newsletter to friends who might be interested in knowing about Five Cities Orchid Society and encourage them to subscribe at www.fcos.org

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Vanda 'Pakchong Blue' (Doctor Anek x coerulea) has wide temperature tolerance and blooms reliably. For a video with suggestions for growing Vanda orchids see:

<https://youtube.com/watch?feature=share&v=he26dXCWyUA>

A message from the President's potting bench:

Hello All,

We also have excellent speakers and topics lined up till the end of the year. Be sure to keep up to date on the events section of our website for the latest information:

www.FCOS.org/events.

I would like to encourage you to support the FCOS by becoming a member and paying your dues. If possible, you can also send in a donation --the FCOS is a 401(c)3 non-profit and donations are tax-deductible. Your contributions assist us in growing our programs and scheduling speakers for our meetings.

Happy Blooming!

Jeff

Membership Form

<https://fcos.betterworld.org/campaigns/membership-2>



Cymbidium Mem. Geoff Laird. Grown in Gorilla Hair in Los Osos by Jeff Parham. (No great apes were harmed to bloom this plant)



Cymbidium Mem. Geoff Laird, flowers opening on 4 1/2 ft spike.



**Five Cities Orchid Society Presents:
Ray Barkalow: Growing Orchids in Semi-Hydroponics - An
Advanced Course**

Thursday, September 9th at 7 pm

Our speaker this month will be Ray Barkalow, of First Rays Orchids
(<http://www.firstrays.com>), who will be enlightening us as to the newest craze in orchid

growing, semi-hydroponics. Ray pioneered this method and will share his experiences and insights to help all of us explore this new method of orchid culture. Many growers have found it an easy to manage way of growing orchids, and an option for some plants which haven't traditionally done well for them but seem to thrive in semi-hydro.

Ray's orchid growing career began over 35 years ago when he was a Ceramic Engineering student at Georgia Tech. During his professional career, he had many opportunities to travel internationally, and put together an extensive collection of orchids from around the world. His travel schedule (averaging 13 flights a week for three years at one point) led to a great deal of experimentation surrounding keeping plants healthy and happy during his absences, and that's what led to the development of Semi- Hydroponics.

Join [Zoom Meeting](#)

<https://us02web.zoom.us/j/87016320614?pwd=YlFhMXZqVFA1V1BSazVvQmlzNnh4QT09>

Meeting ID: 870 1632 0614, Passcode: 613810

To find your local number go to:

<https://us02web.zoom.us/j/kcNqzKNn34>

Understanding Transpirational Pull When Watering Orchids

Published 3 years ago (on August 13, 2018) by [Garden & Greenhouse](#) and reprinted here by permission of Ray Barkolow.

Water travels from the potting medium into the plant and makes the journey upward into the leaves, overcoming the forces of gravity, and your cultural conditions and watering habits can affect this. The force at work is called transpirational pull, which can be visualized by imagining sipping a drink through a straw. Evaporation of water through stomata (tiny openings in leaves) creates the suction, pulling water continuously upward. The hotter, sunnier and less humid the environment, the faster the evaporation and the faster the transpirational pull. Problems begin when the rate of transpiration exceeds the ability of the roots to absorb water and the plant wilts due to loss of turgor, or water pressure within their cells. Such loss of turgor is more difficult to see in most orchids, due to the presence of unique rigid structures throughout the plant that prevent the collapsing of the tissues, as happens with most other types of plants.

In epiphytic orchids, the velamen covering the roots instantly absorbs whatever water it comes in contact with. The water then enters the root, crosses the outer epidermis and moves toward the xylem (water-conducting tissue) by moving in the spaces between the cells or actually through them. Once the water reaches the xylem, which is a series of open tubes within the stele (that 'string' that's left when a root dies and rots), it moves quickly upward, continuing

through xylem branches and into the tiny veins in the leaves, and ultimately into the cells themselves through osmosis.

In order to keep the whole thing working, it is important that water keeps moving in an unbroken flow. That is helped by the fact that water molecules are cohesive and bind together. Those bonds are strong enough to keep the molecules stuck together even as they travel up to great heights (think about trees!). However, if the transpirational pull becomes greater than the water supply absorbed by the roots, cohesion is broken and an air bubble, or embolism, forms. Unless the bonds can be reestablished relatively quickly (sometimes water will enter the xylem from surrounding cells and fill the gap and force the air to dissolve), the flow of water is permanently interrupted. Water can be diverted around the embolism by moving laterally into other xylem tubes, but if too many embolisms are present the part of the plant above them will die. Fortunately, that is less common in orchids, as the rate of water transfer within the plant is much slower than that of many annuals and perennials, and the transpiration rate has been reduced through some evolutionary metabolic modifications

How Culture Affects Transpirational Pull

The obvious reason for a problem is a lack of watering and infrequent watering. If you tend to water infrequently, or insufficiently, the roots cannot take up as much water as they can when they are watered frequently. Even if the individual particles in the potting medium stay wet, that does not mean they can easily transfer it to the roots. Such a practice tends to strain the cohesivity of the water already within the plant, slowing the whole growth process. Likewise, growing in too dry of an environment accelerates the transpirational flow, which can outstrip the roots' ability to replace the water, leading to desiccation and wilting, usually seen first in flowers.

Probably the least obvious cultural issue is excessive humidity. Yes, orchids have evolved, in many cases, to live in high-humidity environments, but if the relative humidity is consistently very high, the rate of evaporation of water from the leaf stomata is stifled, which slows the transpiration process and ultimately slows the growth of your plants.

Summing this up, for optimal growth of your plants, water should be applied frequently and copiously to the airy root system, and the relative humidity should be kept moderately high, but not saturated.

Ray Barkalow has been growing orchids for over 45 years, and owns First Rays, which offers horticultural products to the hobby grower. He may be contacted at raybark@firstrays.com and you can visit his website at www.FirstRays.com.

Last month's meeting featured Ron Parsons who spoke about the genus Stanhopea.



At the August 2021 FCOS meeting Ron Parsons gave a Zoom presentation entitled '*Stanhopea* and their Relatives'. Ron has been growing orchids for over 40 years and has been taking photos of his and other growers orchids and various other plants for about 25 years. Ron states that these genera are generally warm to intermediate growers with a few cool growers and are naturally occur generally in Central and South America. Ron stated that there are about 215 species in these combined genera. He then presented photos of a variety of species in the genera that are relatives of the Stanhopeas including *Coryanthes*, *Acineta*, *Lueddemannia*, *Gongora*, *Cirrhaea*, *Schlimia*, *Polycycnis*, *Kegeliella*, *Sievekingia*, *Soterosanthus*, *Horichia*, *Houlletia*, *Paphinia*, and *Embreea*. He also showed photos of three species in three genera that used to be part of the subtribe Stanhopeinae but have been removed to other tribes. These were *Coeliopsis*, *Peristeria*, and *Lycomormium*.

Ron also mentioned that this and Mery Gerristem four volume book entitled 'A Compendium of miniature Orchid Species' can be purchased through Redfern Natural History Productions. Their website is <https://www.redfernnaturalhistory.com/>. Their first edition of this publication contained 2 volumes while the new edition contains four volumes containing about 2,300 pages and 3,100 photos.

He also suggested that when every you purchase a bare root orchid at a show that you should consider spraying it with an anti-transpirant such as 'Cloud Cover' or 'Vapor Guard'. These products form a thin, flexible film that allows plants to breathe but reduces water loss. They reduce transplant shock, keeping fragile transplants from drying out before their root systems develop. They do not interfere with photosynthesis or respiration, which allows for normal growth and development to continue. You can find these and other anti-transpirant products when you do a search on the web.

Ron' presentation can be viewed for a limited time by clicking this link:

https://us02web.zoom.us/rec/share/y2cvNmu9zGVXtYQEJixNtdjL3IYim8DMiy8VXnIYhGBdhQWMMOzC_6i_OmQt9xhH.dQckNxWdOIhowtzJ Passcode: bg9&kK*dÂ

What's Blooming Now - a few photos from our members and friends



Laelia purpurata
â€“Bleeding Heartâ€™
one of the first cattleyas I
purchased from Santa
Barbara Orchid Estate.
After growing it for 12
years Iâ€™m finally
figuring out it likes the
cooler locations in my
greenhouse. Grown in a
clay pot with Hydroton
(clay pellet) media. Grown
by Ed Lysek.

**Pot. Paradise Rose
â€™SVOâ€™™ X Pot.
Lebenkries â€™Diamond
Orchidsâ€™™. I debated a
long time before buying
this seedling at the FCOS
Orchid Show a few years
ago. Almost killed it
several times, but it is
now thriving and
blooming. Iâ€™™ keeping
it much drier in winter in a
net pot with large bark for
improved drainage.
Grown by Ed Lysek.**





This *Paphiopedilum Maudiae* shows the benefits of attending our monthly Zoom meetings. Thanks to Jan Plestedâ€™s April presentation, I gave this plant consistently moist conditions, repotted it in fresh bark/perlite, fertilized weekly at half strength and increased light intensity slightly. Previously I would get one flower spike per year. This year 4 spikes - Thank you Jan! - Ed Lysek

Epi. â€œOrange

Passionâ€™™ one of my favorite Epidendrums.

Look for a division of this plant at our next member auction, possibly in December. Intermediate conditions, somewhat trailing habit and a small sized plant, good for hanging baskets. - Grown by Ed Lysek.



Masdevallia "Harlequin Bay Island"™ This is my experiment to see if I can grow these cool loving miniatures in my warm conditions. Plants are potted in sphagnum moss in clay pots kept in a tray of rainwater. Grown by Ed Lysek.

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So far the plants have done well with outside temperatures approaching 100F on a few days. The moist clay pots constantly evaporate water keeping the roots cool. I've had this plant 3 months and all of these are new blooms.



Tolumnia â€“Pretty n Pinkâ€™™ likes warm conditions with strong air movement so roots dry quickly when watered. Mounted on an oak branch and misted every morning. - Grown by Ed Lysek.



If you have cool conditions you can grow *Miltonopsis* (pansy orchids) but if your conditions are warm, the genus *Miltonia* has a number of species and hybrids that can thrive with warmer conditions. *Miltonia* â€“Totem Lakeâ€™™ - Grown by Ed Lysek.





Stanhopea hernandezii
side view. Found in
Mexico at an elevation of
between 1,700 to 2,250
meters. Can grow in
warm to cool conditions
as an epiphyte, terrestrial
or lithophyte. This plant is
grown in a basket moss
lined filled with Orchiata
bark. Grown by Chris
Ehrler.



Stanhopea hernandezii
(another angle).



Stanhopea tigrina side view. This flower is over 6 1/2 inches across the width of the sepals. Natively grows in cool to warm conditions in Mexico as an epiphyte at an elevation of 600 to 1,700 meters. This plant is grown in a basket moss lined filled with Orchiata bark. Grown by Chris Ehrler.



Stanhopea tigrina (another angle).



Dracula berthae. Grows natively in Colombia at an elevation of 1,800 to 2,600 meters as a cool to cold epiphyte. Grown in moss mounted on a wood slab in a cool greenhouse. Grown by Chris Ehrler.

Dracula inaequalis. Is a Colombian and Ecuadorian species that grows from maybe as low as 400 to 2,200 meters in elevation as a warm to cool growing epiphyte. Grown in a mesh pot with sphagnum moss in a cool greenhouse. Grown by Chris Ehrler.





Dracula inaequalis side view.

Laeliocattleya interceps (aquini coerulea). A cool grower that is grown mounted with moss on a piece of wood. Many of the roots aerial and not in the moss. Plant from Jeffrey Thompson. Grown by Chris Ehrler.



Scaphosepalum lima. Natively found in Colombia growing as a cool to cold epiphyte at an elevation of 1,800 to 2,500 meters. Orchid from Ecuagenera. Grown in a cool greenhouse in a plastic mesh container with sphagnum moss. Grown by Chris Ehrler.



Stelis spp that is just beginning to open. Grown outside on a piece of wood with sphagnum moss. Each flower is about 1/16 of an inch across. It would be interesting to see the bug that pollinates it in the wild. Grown by Jeffrey Thompson.



We really like the color of this Oncidium. It looks like it is related to a lot of Oncidiums. I think it is kind of a community project. It really catches your eye.

It is easy to take care of-- keep it in a cooler, shadier part of greenhouse

Grown by Judy Scheithauer



Zygopetalums are one of my favorite orchids. I love the puff of scent the plant sends out morning and evening to attract insects.Â

I keep them in the cooler, shadier side of greenhouse.Â Also put them outside with the cymbidiums in the summer.

Judy Scheithauer



BULBOPHYLLUMS

Adam and Jason graciously gave FCOS permission to reprint their recent blog discussing the genus *Bulbophyllum*. Please visit www.orchidweb.com for more information on these and other orchids offered by [Orchids Limited](#).



*Two members of our staff at Orchids Limited thoroughly enjoying the proximity of this *Bulbophyllum* Doggy Dooflower!*

[Bulbophyllum - The Orchid that Hoodwinked the Fly!](#)

Posted by Adam Kostanecki & Jason Fischer on Jul 13th 2021

We're star-struck by the variety of fascinating colors and shapes of our *Bulbophyllum* flowers, and we want you to be too! Just know, these produce a different kind of 'fragrance' than you're used to...

An Abundance of Bulb Forms

Bulbophyllum, which are considered the largest group of orchids at over 2,000 species, are epiphytes that are known for their foul-smelling flowers and diversity in growth form. On one end of the scale, you have *Bulb. Phalaenopsis* with its large, spherical pseudobulbs that produce long, glossy leaves that can reach several feet in length. On the other end, you have species such as [*Bulb. moniliforme*](#) and [*Bulb. ayuthayense*](#) with their miniature, flattened pseudobulbs that mark up only a few millimeters in diameter. Between these two exemplary ends of the pseudobulb diversity scale, there are plenty of *Bulbophyllum* species to collect and admire!

Fly-Attracting Flowers

While their vegetative nature can vary quite a bit, many of the orchids within this genus share some common floral traits. Despite the smell, the flowers are very attractive and all varieties have a hinged lip that works as a pollinator catapult! The foul-smelling flowers lure flies to land on the lip, which quickly tilts back knocking the fly's head into the column where the pollen sacs are stored. These stick onto the insect, making it an unsuspecting pollen courier on its way to other *Bulbophyllum* flowers! The flowers are typically short-lived, lasting up to a week. Fortunately, these bloom during the warm season, which means you can place it outside your household during that time if the smell is overbearing. While most household-size plants will produce light fragrances that are only noticeable when smelling right next to the flower, botanical specimens will make you aware from a few feet away when they are in full bloom. It is worth noting that there are a few exceptions to this foul-smelling flower rule, such as [*Bulb. odoratissimum*](#), which has a sweet fragrance!

A Tropical Genus with Relatives Across the Globe

Bulbophyllum are predominately tropical-growing orchids that are distributed across the globe. From the tropics of Central and South America, through the jungles of Africa & Madagascar, over the foothills of the Himalayas, down to the lush island forests of Indonesia, New Guinea, and New Zealand it's hard to find a tropical region in which *Bulbophyllum* are not found! New Guinea alone has over 600 species, leading many to believe this to be the island that harbored the most recent common ancestor for all species within the genus.

How to Care for Your Bulbous Bloomer

Given the wide range of diversity within this genus, the best care instructions will be species-specific. Fortunately, you'll find these in the description and care table of each product on our site! That being said, there are general care guidelines that you can follow when it comes to caring for your *Bulbophyllum*. Most species are subtropical to tropical growers that like to be kept above 65°F, so this is an excellent genus to grow outside whenever you have daytime highs that range from 70°F to 80°F. Otherwise, most households can retain a comfortable temperature to grow these plants with. In the wild these are almost always found growing in partial to full shade, however, hobbyists have found this genus to be tolerable of full sun, even going so far as to suggest that these orchids flower more often in such conditions.

In your best attempt to mimic natural conditions, keep humidity at or above 60%. This can be achieved by growing over a [humidity tray](#) or misting often while growing in a terrarium. Water daily if mounted on a cork slab, or as the media approaches dryness, if potted. Typically, you can expect to water several times per week, more or less depending on the climate you live in. Avoid letting the media dry out completely, as this is not a condition the tropical-growing species are accustomed to! If you acquire a temperate-growing species, be sure to check whether it requires a winter dry rest.

We have grown *Bulbophyllum* in multiple types of potting material and they do not seem to be very picky. Most collectors opt for sphagnum moss, but we have also had success growing them in [coco-peat](#), peat moss mixed with bark and perlite, as well as our [Orchiata Power and Power Plus Mixes](#). If your humidity is high or you are comfortable with watering frequently, these plants will grow excellently in open baskets or on [slab mounts](#). Baskets can be filled with a potting medium and slabs can have a bit of Oregon or sphagnum moss behind the root system. Only opt for bare-rooting your *Bulbophyllum* onto a cork slab if you are growing in a greenhouse environment, where humidity is constantly high and plants are watered frequently. So, there you have it a fascinating genus with a diverse array of growth forms and floral traits that are guaranteed to turn heads. Just be sure to advise any olfactory-sensitive friends of yours to pinch their nose before entering the room if one of these pungent plants is in bloom!

Cheers!

Adam Kostanecki & Jason Fischer of Orchids Limited



Bulb. phalaenopsis in full bloom. Photo Credit: Jardin Botanique

Bulb. rothchildianum 'Red Chimney' FCC/AOS





Bulb. ericssonii in full bloom.

Bulb.
ayuthayense putting out
new growths.



FCOS Lifetime Membership

A New FCOS Lifetime Membership is available for a donation of \$500. The FCOS Board is looking for creative ways to ensure the long term financial health of FCOS. For those of you who are able to consider this generous donation your lifetime membership will help FCOS maintain its quality speaker programs and prepare for the resumption of our Spring Show. [Click here for donation details.](#)

Become a Life Member of FCOS for a \$500 donation!



LETTERS TO THE EDITOR:

Here's a better way to air your dirty (or clean) laundry. Got a complaint, suggestion or just want to express your opinion, send an email to our editors, [Jeff Parham](#), [Chris Ehrler](#) or [Ed Lysek](#). (photo courtesy of Gary Yong Gee).

Question: Kristie Wells asks "I have a Cattleya or Blc. orchid with roots growing outside the pot. Should I repot and put the roots into the new pot? Last month's newsletter had an article from Ray Barkalow stating roots growing in air will die if planted in media.

Answer: If your growing conditions are keeping the root tips growing and green tipped, you could wait until new roots are just emerging before repotting. The old roots might die when placed in the new media, but the emerging new roots will quickly grow and sustain the plant. But this will require waiting until new root tips begin to emerge. If the media in the pot is beginning to break down, it may be necessary to repot immediately, but best to wait until new roots begin to emerge if at all possible.

Some orchids will grow and thrive if the roots are left to dangle in the air or exposed when mounted on various types of wood. This is more common in humid greenhouse conditions where orchids are watered or misted daily. You should water that are in the air when you water the plant. You can even consider spraying the air roots each day.

You could place the existing pot into a larger pot and lightly fill the space between the old pot and the new pot with large pieces of bark. The roots hanging on the outside of the old pot will be surrounded by the new pot and bark with plenty of air spaces and should remain in active growth. This will work if the media in the old pot is not in need of replacement. Santa Barbara Orchid Estate pots some of their orchids in gravel and as their plants grow they drop smaller pots into larger ones and fill the space between with additional gravel. This "pot in a pot" can continue for several years and several pots (bigger each time) and is possible because the gravel never breaks down.

FCOS Garage Sale

Send an email to [Jeff Parham](#), [Chris Ehrler](#) or [Ed Lysek](#) and include an image of your item, a description, price, and your contact info. We'll include your info in our next monthly newsletter if there is space. FCOS assumes no responsibility for payment, taxes, etc. We ask the items be orchid or plant related. FCOS is not taking a commission or participating in any other way.

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Orchids are really great!

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