



January 2025

Southern Tier Orchid Society

WWW.SOUTHERNTIERORCHIDS.ORG

January Speaker: Ray Barkalow of First Rays

We are thrilled to welcome Ray Barkalow, founder of **First Rays, LLC.**, as the guest speaker for our January meeting. With over 50 years of orchid-growing experience and a background in science and engineering, Ray has dedicated his career to simplifying and advancing orchid culture. Through First Rays, established in 1994, he has supported hobbyists, botanical gardens, and commercial growers alike, offering innovative products and more than 200 free informational articles to help orchid enthusiasts succeed.

Ray's journey with orchids began serendipitously during his college years at Georgia Tech. What started as a challenge to keep a single cattleya alive soon turned into a lifelong passion. Over the decades, his travels around the globe—both for work and leisure—helped him amass an impressive orchid collection and inspired the creation of his now widely recognized **Semi-Hydroponics system**.

Known for his scientific approach, Ray is passionate about debunking myths and uncovering the "whys" behind orchid care practices. His curiosity and dedication have made him a respected voice in the orchid community. Despite his expertise, Ray admits that every grower faces challenges, quipping that you're not a true orchid grower until you've "killed your weight in plants."

In his presentation, "**Orchid Nutrition: The Role of Roots in Plant Health**", Ray will explore how the root system impacts orchid nutrition and how proper root care influences overall plant vitality. Attendees can look forward to practical insights and actionable advice to enhance their growing techniques.

Join us this month for an engaging talk from a true orchid expert whose dedication to sharing knowledge continues to inspire enthusiasts worldwide. Don't miss this opportunity to learn from Ray and discover new ways to nurture your orchids!



IMPORTANT NOTICE
2025 STOS Meetings will be held at the
Johnson City Senior Center
30 Brocton St, Johnson City, NY 13790

Member Info

EXECUTIVE BOARD

President

Linda Mittel

Vice President

Ruth Allen

Treasurer

Joe Sniezek

Secretary

Chris Higgins

AOS Representative

Polly Dillon

Members-At-Large

Jeff Hackett

Loi X Tran

Gail Gunsalus

Auction Committee Jane Trey, Jean Mint, Jeff Hackett

IT Specialist Melissa Bennett

Librarian Laurel Shaefer

Marketing TBD

Membership Melissa Bennett, Anitra Murphy

Newsletter Editor Jeff Hackett

Program Coordinator Jean Mint

Social Event Ruth Allen, Jane Trey

Social Media Loi Tran, Renee DePrato, Jean Mint

Show Chair Sam Hance, Jeff Hackett

Web Master Carol Bayles

Web Site:

<http://www.southerntierorchids.org>

Email addresses:

STOSorchids@gmail.com

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STOSorchids.marketing@gmail.com

STOSorchids.membership@gmail.com

STOSorchids.newsletter@gmail.com

STOSorchids.shows@gmail.com

Google Group (Listserv)

STOSorchidgroup@googlegroups.com

Facebook:

<https://www.facebook.com/SouthernTierOrchidSocietyNY>

Instagram:

<https://www.instagram.com/SouthernTierOrchidSociety/>

STOS Calendar 2025

Meetings are 2-4 pm (1:30-2 is 'social time')
at the Johnson City Senior Center,
30 Brocton St, Johnson City, NY 13790.

- Jan 19** General Meeting in Person
Speaker Ray Barkalow on Orchid Nutrition
- Feb 16** General Meeting
Speaker Tim Culbertson on Holcoglossums
- Mar 16** General Meeting
Spring Auction
Speaker Clark Reilly on Greenhouse Talk
- Apr 11** STOS Orchid Show;
Setup 2pm-7pm
- Apr 12** STOS Orchid Show;
STOS 7:30a, Judging 8a-11a, Public 11a-6p
- Apr 13** STOS Orchid Show
Public 10a-4:30p, Takedown 4:30p-6p
- May 18** General Meeting
Repotting Workshop
- June** Summer Recess
- July** Summer Recess
- Aug 17** Summer Picnic
- Sep 21** General Meeting
Fall Auction – In Person
- Oct 19** General Meeting
Officer Election
Speaker TBA
- Nov 16** General Meeting
Speaker TBA
- Dec 21** Holiday Party

Neighboring Societies

CNYOS – Central NY Orchid Society (Syracuse)
GROS – Genesee Region OS (Rochester)
NFOS – Niagara Frontier OS (Buffalo)
CPOS – Central Pennsylvania OS (State College)
Albany Orchid Society (Albany, NY)

STOS Meeting Minutes

December 15th Meeting Notes

Location: Vestal United Methodist Church, Vestal, New York.

Time: 1:30 - 4:40 P.M.

Attendees: About 45 members in attendance

There was no formal meeting, but announcements were made and no formal reports were given.

Announcements: President Linda expressed her gratitude to Vice President Ruth Allen for organizing the STOS feast at our holiday party by arranging with the church for having the party in the kitchen area downstairs. Members provided many wonderful side dishes and desserts.

President Linda informed the STOS members present that the club would no longer be able to use the church belfry for future meetings because the church has a time conflict. As a result, all future STOS meetings will be held at the Johnson City Senior Citizens Center, 30 Brocton Street, Johnson City, NY, at the usual time.

Spring Show Note:

The Bonsai Society of Ithaca, NY has requested to partner with the STOS at our annual show. The show committee will look into this and Jeffrey Hackett will contact the bonsai organization to determine if this is a feasible arrangement. Luis Matienzo mentioned concern for insurance, and whether the AOS allowed this. Jeff will also check into this.

Show Table

At least six members presented at the show table

Orchid Giveaway and Brief Raffle

60 orchids were purchased from Bergen water gardens and picked up by Linda Mittel and Jean Mint.

Current paid members were given tickets for the orchid giveaway and after everyone present had received an orchid Luis Matienzo auctioned off the remaining orchids.

Additional Note: During the holiday party, Treasurer Angel collected 2025 STOS membership dues.

Meeting was over at 4:30pm and clean up of the food table was done by volunteers. STOS paid custodial services reset the room.

A New Meeting Venue; The Johnson City Senior Center

Starting in January, our monthly meetings will take place at the Johnson City Senior Center (JCSC), the same location as our upcoming orchid show in April. This venue offers more space and seating arrangements that encourage better socialization among members. Meetings will continue to be held in person with a hybrid format to accommodate all participants. We look forward to seeing you there!



2024 STOS Holiday Photograph
Photo Courtesy of Christine Chin

Executive Updates

Notes from the President, Linda Mittel

As we embark on a new year, I am thrilled to share some exciting news!

- **New Home:** We are moving our meetings and the upcoming annual show to the Johnson City Senior Center. This incredible space offers ample room for our gatherings. I have been impressed by the center's director and am confident this will be a fantastic location. Our next meeting on January 19th will be held there, so you will get to experience it firsthand!
- **Growth & Engagement:** 2025 is a year of growth! Increasing our membership is a top priority. A larger membership strengthens our finances and creates a more vibrant and engaged community. More members mean more volunteers to help with club activities, making things run smoother and more enjoyable for everyone.
- **Executive Board and Show Updates:**
 - **Admission Fee:** To help cover costs, we all introduce a small fee for attendees at our shows. Details are still being finalized, but it will be fair and affordable.
 - **Budget Focus:** Our show chairs, working closely with our new Treasurer, Joe Sniezek, have developed a budget to guide the planning and execution of our 2025 show. With the move to a larger venue, we anticipate increased expenses for advertising and promoting our events.
 - A copy of the meeting notes will be provided in the February Edition of the newsletter.
- **Volunteer Power:** I encourage everyone to consider volunteering! Even small contributions can make a big difference. Whether you have a lot of time or just a little, please get in touch with an officer or another member to see how you can help.
- **Special Skills:** We are looking for members with specific skills that can benefit our club, such as:
 - Artists, Graphic Designers
 - Lawyer
 - Marketing professionals
 - Event planners
 - Computer Savvy people
 - And more!

If you have any of these skills, please consider how you can share your talents with the club. Let us work together to maintain our outstanding club, known for its knowledgeable growers and incredibly friendly atmosphere.

Thank you for your continued support!

Notes from the Vice President, Ruth Allen

With our move from Vestal UM Church to the Johnson City Senior Center for our meetings, I am coordinating moving our library cabinet, books and refreshment supplies from one location to the other. It's been a challenge with the cold windy weather. Just when I think I have time to do it the weather becomes unbearable to do so. My deadline is to have it there before our January 19th meeting.

I am also considering media in the Scranton area for publication of our show. Please provide any marketing suggestions as you have them.



Executive Updates cont.,

Notes from the Treasurer, Joe Sniezek

As part of the transition of treasurers, a new address will be used to receive all physical mail for the club. All checks and other mail should be directed to the below address:

Southern Tier Orchid Society inc.
PO Box 607
Endicott, NY 13761

I have been working with the Executive Board and the various committees to produce a proposed 2025 budget. If any boards/committee members have a refined estimate for your areas of responsibility, send them to me at: jjsnieczek@gmail.com

Committee Updates

- Auction :** *No Updates At This Time.*
-
- IT :** *No Updates At This Time.*
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- Library:** *No Updates At This Time.*
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- Marketing:** *If anyone has interest in assisting with this committee, please contact stosorchids.marketing@gmail.com or Linda at the next meeting for more details.*
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- Membership:** Melissa Bennett has audited the STOS Google Groups email list, ensuring that paid members are on the list. The email list is the primary mode of communication between club members, and important club correspondence. Melissa has developed and documented a protocol for its maintenance so that anybody can follow the instructions and do the task. Soon, she will begin removing unpaid members from the list.
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- Newsletter:** Few images were sent submitted since last month – please feel free to share orchid pictures or any potential articles you would like featured in the newsletter to: stosorchids.newsletter@gmail.com.
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- Program Coord.:** Jean Mint has been making a significant effort to secure speakers for future meetings. If you have any suggestions, please make them to stosorchids@gmail.com.
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- Social Event:** Jane Trey and Ruth Allen have reviewed expenses for refreshments for our meetings and submitted the amount to the budget. Everyone appreciates that members bring a snack or dessert for the meetings keeping our expenses low, thank you for your continued participation.
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- Show:** Sam Hance and Jeff Hackett have developed a show 2025 budget and presented both it and the finalized vendor contract to the Executive Board. Vendors will be invited shortly and contracts distributed. The committee will work with Jane Trey to make an inventory of the existing show materials and start purchasing show supplies. Jeff has consulted with the American Orchid Society to ensure there are no prohibitions to inviting non-orchid related clubs and vendors to the show. The Bonsai society will be contacted to see their interest in having a membership table at the show. **If you would like to see any particular vendor at this show, send suggestions to stosorchids.show@gmail.com .**
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- Web Master:** *No Updates At This Time.*



Miscellaneous Membership

2025 Membership Renewal

It's that time of the year again! Membership renewals for 2025 are now being taken! To maintain your active status and continue enjoying the benefits of being part of the Southern Tier Orchid Society, please ensure your dues are paid by the deadline. Thank you to those members listed below who have paid ahead of time. If you believe there is an error, please see Joe Sniezek at the next meeting to resolve any discrepancies.

Renewal Options:

- Cash
- Check made out to the Southern Tier Orchid Society with "Membership Dues" written into the memo
- Paypal through the club website

Renewal Cost: \$20

Per the STOS bylaws:

- Members with delinquent dues cannot vote in membership decisions.
- If dues remain unpaid after May 1st, the membership will be dropped from the rolls, and you will no longer receive newsletters or other mailings until full payment is made.

Don't miss out on another exciting year of orchid events, educational programs, and community fellowship!

Your timely payment significantly helps the club and is much appreciated by our membership committee and treasurer.
Thank You.

Thank You Angel Caolie; Change of Treasurer



Bc. Daffodil
Photo Courtesy of Angel Caolie

We would like to announce a change in the club's leadership and express our gratitude to Angel Caolie who has served as Treasurer for the past two years. Angel had expressed her desire to transition out of the role some time ago but generously continued serving until we could find a suitable replacement.

We are thrilled to welcome Joe Sniezek as our new Treasurer. Joe, a former STOS member who rejoined our society this year, has stepped forward to take on this important role. With experience in finances and a growing collection of orchids, Joe brings both professional expertise and a shared passion for orchids to the position. The Executive Board enthusiastically supports Joe, and he is already working closely with Angel to ensure a smooth transition of records and responsibilities.

Angel is delighted with this change and will remain an active and valued member of our society. We extend our deepest gratitude to her for her dedication and exceptional service as Treasurer. Her contributions over the past two years have been instrumental in supporting the club's operations and events.

Please join us in thanking Angel for her outstanding work and in welcoming Joe to his new role! You'll have the chance to meet Joe and learn more about his orchid interests at our next meeting.

Christine Chin

Christine Chin is an artist, photographer, and mother based in Ithaca, NY. She joined STOS in December 2022 and has been an active member ever since, contributing her skills and enthusiasm to the club since. Christine serves as the official AOS photographer for the STOS Show, a critical role that ensures our show is recognized by the American Orchid Society. She photographed the 2024 annual show and has generously volunteered to take on the role again for 2025. Christine also captured the group photograph of STOS members, family, and friends at the 2024 holiday party – creating a cherished memory for the club.

As an artist, Christine's passion for orchids influences much of her work. Her art explores the complex and changing relationship between invasive and native species in warming ecosystems. In spring 2024, she was a guest artist at the Steere Herbarium at the New York Botanical Gardens, where she photographed herbarium specimens for her art projects. Christine specialized in 19th and 20th century photographic processes, including cyanotype, silver darkroom printing, and photogravure. This February, she will showcase her work at the State of the Art Gallery in Ithaca. She also displayed and sold her orchid-inspired artwork at the 2024 STOS show.

Christine's orchid journey began in 2021, when she rebloomed her first grocery store Phalaenopsis, sparking her curiosity about orchids. Today, she grows over 20 species of Phalaenopsis and has expanded her collection to include more than 30 genera, primarily cultivated on tented shelves under LED grow lights. Recent additions to her collection include Lycaste and Anguloa – and she intends to add various Coelogyne and Dendrobium to her collection. Her *Angraecum sesquipedale* (pictured on page 9) is currently delighting her with fragrant flowers.

Christine has also ventured into orchid hybridization. She has a *Phalaenopsis* cross (cornu-cervi x heiroglyphica) and a *Catasetum* cross (ivanuae x Grace Dunn) growing in flask. Although she considers herself an amateur, she has learned valuable lessons, such as adding vents to flasks to improve flask growth.



A self-portrait of Christine Chin

Beyond orchids and art, Christine leads a vibrant life. She is the mother of two children, Leo (9) and Lily (13), plays fiddle and occasionally oboe in the Finger Lakes Fiddle Orchestra, and enjoys telemark skiing at Greek Peak. Christine's creativity, dedication, and generosity make her a cherished member of the STOS community. We are grateful for her many contributions and look forward to seeing her photography and artwork in the upcoming show in April.



January & February Orchid Checklist

Cattleya

Watering and fertilizing will be at a minimum, as will potting. Be on the lookout for senescing sheaths on your winter-into-spring bloomers. Careful removal of the dying sheaths will still allow buds to develop without the danger of condensation-induced rot. Low light will lead to weak spikes, so, and as noted above, staking is critical. If you have a chance to get out to nurseries, there may still be a chance to acquire good plants in sheath for spring bloom. Getting them now not only ensures that you'll have them, but allows them to acclimate to your conditions and bloom at their best.

Odontoglossums

These cool-growing orchids once classified as *Odontoglossums* are now considered part of the genus *Oncidium*. These orchids and their intergeneric hybrids offer a great splash of color now. Though once thought of as being difficult to grow and requiring cool temperatures due to the emphasis on odontoglossum breeding, the new intergeneric hybrids made using *Oncidium* and *Brassia*, for example, are just the opposite. These plants are quite content in more intermediate conditions. New growths generally emerge in the spring, later forming beautiful plump pseudobulbs. Look for the flower spikes to emerge from the inner sheath of the pseudobulb. If your plant's pseudobulbs are shriveled, then the plants have been kept too dry or too wet. Inspect the roots to determine which condition prevailed. If the lead pseudobulb is large, plump and green (and back bulbs are shriveled) but no flower spike is evident, the plants may have been kept too dry.

Paphiopedilum

The standard *Paphiopedilum* *insigne*-derived hybrids, which are called "bull dogs" and "toads," are at their peak. Unlike most other orchids, they can even be potted while in bud. There really is no wrong time to pot a *paphiopedilum*, and no other orchid responds so favorably to fresh mix and a cleanup. Keep an eye on watering until roots begin to grow.

Phalaenopsis

Now is the peak of spike development, with the first plants in full flower. Staking and plant preparation is a must for those all-important spring shows. Correct staking now will give a better display and also make it much easier to transport to your society meetings and shows. Care with watering is vital to avoid mechanical damage to the flowers, as well as rot-related problems. Keep spent blooms cleaned up to avoid botrytis inoculation. Do not repot this month. Now you'll be seeing lots of *phalaenopsis* at orchid shows and sales.

Cymbidium

We are well into the flowering season now. Outdoor growers should be cautious of freezing temperatures. Damage starts to occur below 30 F. Be diligent about tying the inflorescences for best arrangement of the flowers. Also watch closely for slugs and snails. If weather is quite wet, protect the plants from the rain and this will help to reduce the risk of botrytis spotting.

Lycaste

The most glorious of all orchids, *Lycaste*, will be moving toward their flowering season. Make sure the palm-like leaves do not interfere with the emerging inflorescences. Tying them loosely together often is helpful. Some growers cut the leaves off at the pseudobulb, but this removes part of the attractiveness of this elegant orchid. Resist picking up the plant to inspect those beautiful buds and then setting it down in all different directions as the flower buds will be forced to re-orient themselves to the light source each time and will not open as nicely as they should. Keep plants a little drier during the shorter days.

The AOS thanks Ned Nash and James Rose for this essay.

Upcoming AOS Webinars

Greenhouse Chat January 2025 with Ron McHatton

Thursday, January 2nd, 8:30 PM EST

Join Dr. Ron McHatton as he answers your questions about all things orchids. Please send your question and pictures to Sandra Svoboda at greenhousechat@aos.org by December 31st, 2024. Greenhouse Chats are OPEN TO THE PUBLIC BUT REGISTRATION REQUIRED.

Inorganic Potting Media: Never Repot Again with Harvey Breneisse (Part 1)

Thursday, January 9th, 8:30 PM EST

Harvey reviews the various inorganic media with a focus on semi-hydroponic orchid growing. First of a two-part series.

(AOS Member Only, Registration Required)

Greenhouse Chat February 2025 with Ron McHatton

Wednesday, February 5th, 8:30 PM EST

Join Dr. Ron McHatton as he answers your questions about all things orchids. Please send your question and pictures to Sandra Svoboda at greenhousechat@aos.org by December 31st, 2024. Greenhouse Chats are OPEN TO THE PUBLIC BUT REGISTRATION REQUIRED.

Inorganic Potting Media: Never Repot Again with Harvey Breneisse (Part 2)

Wednesday, February 12th, 8:30 PM EST

Harvey reviews the various inorganic media with a focus on semi-hydroponic orchid growing. Second of a two-part series.

(AOS Member Only, Registration Required)

See AOS.org/orchids/webinars



Angraecum sesquipedale
Photo Courtesy of Christine Chin

Preface

After exploring the captivating world of orchid species like *Phalaenopsis gigantea* and *Bulbophyllum maxillare*, we turn this month to a broader and foundational topic: orchid culture. This marks the first article in our newsletter focused on the principles of growing orchids successfully—a subject as essential as the orchids themselves.

In *Good Orchid Growing, or the Concept of Stress on Plants*, the late Dr. Carl L. Withner examines the many factors that influence orchid health, from light and humidity to temperature and nutrient balance. Dr. Withner's timeless wisdom sheds light on how environmental stresses impact our plants and provides practical strategies to create conditions that allow orchids to thrive.

As we embark on this new focus, we invite you to delve into Dr. Withner's insights and reflect on how these principles apply to your own orchid-growing journey. Together, let's cultivate not only beautiful flowers but also a deeper understanding of what it means to care for these remarkable plants.

Good Orchid Growing, or the Concept of Stress on Plants

Why are some orchid growers more successful than others - I mean, in growing fine plants with beautiful flowers? They produce the kinds of plants that show maximum qualities, the kinds of specimens you know are possible but that you can never quite achieve. Why do some people have a "green thumb" and others have only what is termed in some parts of Brooklyn the "dreck effect"? Well, my wife says I think like a plant, and although I'm reputed by some to have a green thumb, I know that others can grow much better plants than I do. This puts me under some stress, but the main problem is that my plants don't or can't improve their situation. Eventually you compromise between what you know and what you do - I'm starting to write this now about the stress on the grower, when what I wanted to do was write about stress on the plants.



Vanda NoID
Photo Courtesy of Josh Demaree

Good Orchid Growing, or the Concept of Stress on Plants cont.,



Bc. Katherine H. Chatman "Suckers"
Photo Courtesy of Anitra Murphy



D. NOID
Photo Courtesy of Anitra Murphy

The idea is that whenever you have less than perfect conditions the plants are under stress and respond with less than maximum growth. Perhaps this is just as well, for if we all grow such plants, bursting with vigor, who would have room for them all anyway? All orchid greenhouses are too small (they're built that way, it would seem) and that produces the first sort of stress - from overcrowding. One of my friends says he specializes in growing orchids back into their pots, but I don't really think that is his intention. Few people, apparently, have the courage and determination to keep their greenhouses with sufficient "lebensraum" for every plant. Sooner or later, one plant begins to shade another; flower spikes are broken or distorted; petals are crumpled; roots grow into other pots, and sure enough, something behind something else dies because it wasn't watered, or you didn't notice that the roots had rotted off from lack of repotting. Each plant obviously needs its own niche for exposure to a proper environment for maximum growth and flower production.

We are involved here with what is called in biological circles the principle of limiting factors. This idea may be stated by saying that whenever any process, such as growth, is controlled by a variety of factors, any one of them can be limiting at any given time. At one time it may be the amount of light, at another the temperature, or in turn any one of many other environmental or internal factors may be involved. Whenever the balance among factors is not optimal, the plant is placed under stress. If the stress is too great, it may die, or alternatively, produce smaller growths, not flower, produce fewer or poorer flowers, lose leaves, form blind sheaths, or just plain rot.

Good Orchid Growing, or the Concept of Stress on Plants cont.,

Light is most often a critical factor, one that can easily cause stress. If individual leaves are not saturated by light, each does not make the food that is possible through photosynthesis. This means fewer reserves for cellular respiration and maintenance processes in the plant and it may mean a lack of sufficient additional reserves for growth and flower production. When reserves are plentiful, multiple growths may break, leaves and bulbs may turn a healthy shade of red, and sugary nectar droplets will be formed on the sheaths and flowers, even on the leaves of some orchids. Since new growths depend upon the vigor and reserves of previous growths with good root supplies, continued lack of stress from sufficient light is critical. Light, along with production of food, has other effects on the plant, namely, the production of heat. This occurs within the tissues of the plant, as well as within the greenhouse which is really an infra-red trap. Each plant, according to its origins in nature - on low savannah or high cloud forest - grows best within a particular temperature range. Exceeding this range can slow down the rate of metabolism and growth or, in other words, produce a stress that prevents maximum results. So while increasing the light for photosynthesis, be careful to control heat buildup.

But we are not finished with the light and its detrimental heat effects. Excess light causes a deterioration of chlorophyll, yellowing the leaves, and eventually causing them to fall from the plant prematurely. The heat also causes an increased water loss from the leaves so that they become collapsed, soft, and pliable, and bulbs become wrinkled and ridged. One immediately proceeds, as an average response, to overwater the plants to make up for this obvious dehydration - only to kill the roots and worsen the total picture. Decrease the heat by increased air movement; diffuse the light; increase humidity to prevent excess water loss; don't overwater the roots. Be patient if the plant is new until it makes one or two growths under your specific conditions and has had a chance to adapt.



Phal NoID
Photo Courtesy of Gen Kelly

Good Orchid Growing, or the Concept of Stress on Plants cont.,

At this point you are beginning to see the interrelationship of all these variables and how the principle of multiple factors gets to work. Everything from cuticle thickness (relating to humidity and conditions the plant was grown under previously) to the type of flower pot used plays a role in the total process. Orchids grow slowly, and they die the same way, so fortunately, you usually have an opportunity to change whatever is not optimal and alter their deterioration.

Orchid roots need lots of air and a certain humidity to stay alive. The velamen does not cover the very apex, and if humidity is low such tender tips have difficulty in surviving, particularly if nutrients in the water, or its pH, are not favorable. Good green roots continuing their growth into the air without stunting or stopping are a fine measure of proper humidity and good general conditions. Since roots absorb water at a given rate, only a certain amount can enter them within a stated period of time. If water loss through leaf or flower surfaces is excessive because of heat or low humidity, the plant loses turgor, gets soft and wilted with shrunken pseudobulbs. This condition is not cured by additional watering. There cannot be any faster uptake by roots, particularly if they are waterlogged, so the resolution of this stress involves heat and humidity control.

Proper humidity has remarkable effects on orchids, aside from keeping root tips alive. It seems to produce a real change in vigor and growth. The leaves expand more fully, flowers open to larger size and stay in good condition for longer, leaves last for an extra year without falling, bulbs don't shrivel, more buds break for new growths. Everything goes better with humidity, even petal spotting and root rotting, unless you also have buoyant air as well. The humidity and good air go hand in hand, and many times the lack of them, it seems to me, causes more stress than lack of proper light and temperature.

Continues next page...



C. Spring Fragrance
Photo Courtesy of Linda Mittel

Good Orchid Growing, or the Concept of Stress on Plants cont.,

The factor causing least stress under average conditions is nutrient availability. Because of advertising and convenience it is easier to provide fertilizer than high humidity, proper temperature, or proper watering. In bark, with its lack of nutrients, this factor may become critical because of the almost total lack of necessary ions. With other media - osmunda, moss, or tree fern - the stress may be decreased as natural nutrients are available in degree. Of course, the balance of the chemical compounds, the pH of water, presence or absence of sodium, carbonates, etc. can complicate this picture unbelievably.

How is it then that the plants can grow at all – each with its season to grow, another to rest, a period of flowering? I'm always impressed by the adaptability of orchids and their tolerance of greenhouse, windowsill, or under light conditions. The question is, how close do we come? How many plants from various niches do we try to grow together? And which environmental factors are at work producing stress conditions and limiting the growth or flowering of individual plants? As your "green thumb" develops, you'll begin to know at a glance, or at least you'll have some definite ideas, and what will you do about them? The more ideal your conditions, the fewer fluctuations in their supply at critical times, the less stress your plants will have. They will begin to look better and produce the fine flowers you deserve.

Note: The late Dr. Carl L. Withner wrote this article for the Orchid Society of Nova Scotia in May of 1997, and it was reprinted in the March 2002 Canadian Orchid Congress newsletter, a great searchable source of orchid information.



Bc. Maikai
Photo Courtesy of Angel Caolie