Massachusetts Orchid Society

P.O. Box 1041
Medford, MA 02155

MAY 2023

INSIDE THIS ISSUE

Minute Minutes
Notes from the Board

- Reminder that we will be presenting the following MOS Board position nominees for in-person voting at our Annual Meeting, which will be held during our May 9th monthly membership meeting at Sons of Italy:

President:	Ralph DiFonzo
Vice President:	Michael Badia
Treasurer:	Amanda Larson
Secretary:	Steve Kirincich
Directors:	Dina Diresh (Past President)
	Linda Abrams
	Emily Dewsnap
	Jeff Feldman
	Brigitte Fortin
	Anne Pfaff
	Alexis Victor

Per MOS bylaws, nominations from the floor will also be taken at the Annual Meeting.

Please make every effort to attend and cast your vote. Please reach to out to Mike Badia (mikeb@massorchid.org), Jeff Feldman (jefff@massorchid.org) or Steve Kirincich (stevek@massorchid.org) with any questions.

Thank you! -Your MOS Nominating Committee

- The board is excited to announce our new monthly members sale/swap, beginning this May meeting. Bring in your orchids, potting supplies, books, or other sundries related to orchid culture prior to 7:30. Please be sure plants are pest and disease free!

- We want to start the food/hospitality table again. Please bring a dessert or small bite savory item to share with members. Store bought or homemade work, too! To keep it simple, we will not have coffee and tea but there will be water bottles and seltzers/sodas, plus plates, napkins and utensils.

Did you know that you can submit articles to the newsletter? Got extra orchid supplies you want to unload or looking for garden swaps? Submissions are due 14 days prior to monthly meetings.
Email Anne at newsletter@massorchid.org to post or advertise.

Got extra orchid supplies you want to unload? Looking for garden swaps? Advertise right here in our new Minute Minutes *Member's Classified section. Email Anne at newsletter@massorchid.org to post in the next newsletter.*

We are always interested in suggestions for speakers and topics, and special programs for upcoming general meetings. Email your thoughts to mos-board@googlegroups.com.

Find us on Facebook at www.facebook.com/massorchid and Instagram at www.Instagram.com/massachusettsorchid.

MOS Show Table Results, April 2023
Judges:
Scribe: Linda A.
Total Ribbons: 19

Name of Orchid	Name of Exhibitor	Light L,M,H	Temp W,I,C	Growing Location: Lights, Windowsill, Greenhouse? Judges' or Exhibitor's Comments?
Bulb. falcatum	Mike B.		W	Grown under lights
Paph. NoID	Minnie D.		W	Windowsill
Paph. Valerie Tonkin	Mike B.		I	Lights
Paph. White Empress Taylor x Skip Bartlett	Mike B.		I	Lights
Cattleya NoID	Steve Ki.		W	Lights
Pot. Young Min Orange x Lc. Trick or Treat	Steve Ki.		W	Lights
Zygo. Advance Australia 'HOF' AM/AOS	Li-An S.		I	Lights
Zygo. NoID	Minnie D.		W	Windowsill
Phrag. richterii 'Rands'	Mike B.		I	Lights
Lycaste tricolor	Joe L.		I	Lights – Cultural Award
Lycaste Luciani	Li-An S.		I	Lights
Masd. Sunny Angel '1'	Linda A.		C	Lights
Anguloa clowesii	Li-An S.		I	Lights
Den. thrysiflorum	Joe L.	I	I	Incredible culture!!!
Den. Little Norman	Steve Ki.		I	Lights – Good for beginners
Den. Chocolate Chip	Dianne O'S.	M	I	Windowsill
Den. Roy Tokunaga	Steve Ki.		I	Lights
Doritaenopsis NoID	Shu H.	M	I	
Phal. Liu's Cute Angel	Mary E.		W	

Congrats to Joe Levine!
Our April People's Choice Award winner for his exceptional Dendrobium thrysiflorum

Anguloa clowesii, Li-An S.

Dtps. NoID, Shu Han

Bulbophyllum falcatum, Mike B.

Lycaste Luciani, Li-An S.

Lycaste tricolor, Joe L., Culture Award

Phal. Liu's Cute Angel, Mary E.

Den. Little Norman, Steve K.

Den. Chocolate Chip, Dianne O-S.

Den. Roy Tokunaga, Steve K.

Zygo. Advance Australia 'HOF' AM/AOS, Li-An S.

Paph. White Empress Taylor x Skip Bartlett, Mike B.

Paph. Valerie Tonkin, Minnie D.

Phrag. richterii 'Rands', Mike B.

Masd. Sunny Angel '1', Linda A.

C. NoID, Steve K.

Pot. Young Min Orange x Lc. Trick or Treat, Steve K.

Zygo. NoID, Minnie D.

UPCOMING EVENTS

Monthly AOS Judging at Tower Hill
06 May 2023 10:30 AM
Tower Hill Botanic Garden,
11 French Dr., Boylston, MA
Please visit our website: nejcaos.org

Monthly Meeting
09 May 2023 7:30 PM
Daryl Yerdon – Pests & Diseases
Sons of Italy, 117 Swanton St.
Winchester, MA

Monthly AOS Judging at Tower Hill
03 Jun 2023 10:30 AM
Tower Hill Botanic Garden,
11 French Dr., Boylston, MA
Please visit our website: nejcaos.org

Monthly Meeting
13 June 2023 7:30 PM
Tim Culbertson – Lycaste Orchids
Sons of Italy, 117 Swanton St.
Winchester, MA

Monthly AOS Judging at Tower Hill
01 Jul 2023 10:30 AM
Tower Hill Botanic Garden,
11 French Dr., Boylston, MA
Please visit our website: nejcaos.org

Monthly Meeting
11 July 2023 7:30 PM
Fred Clarke, SVO – Cychnoches, Mormodes and Catasetums: Recent Trends
Sons of Italy, 117 Swanton St.
Winchester, MA

Daryl Yerdon presents "Pests & Diseases"

In 1996 Daryl joined the New Hampshire Orchid Society and purchased his first orchid at the annual show in Nashua, NH. Daryl's orchid collection has grown from that first orchid to over 500 plants grown in a large greenhouse.

In 2009 the New Hampshire Orchid Society awarded Daryl with the Sawyer Family Advanced Grower Trophy recognizing him as an expert grower for the NHOS. From 2010 until 2021 Daryl was the owner of Kelley's Korner Orchid Supplies which was recently sold to a new owner and relocated to Pennsylvania. Daryl frequently displays his orchids at many local orchid society shows, where several of his plants have received a variety of awards from the American Orchid Society.

Daryl grows a wide range of orchids in an 18' x 28' Arcadia greenhouse. Based on trial and error his collection has changed throughout the years. Currently the majority of orchids are primarily species, but with a nice selection of favorite hybrids mixed in. The largest genus in his collection would be *Dendrobium*, but he grows a wide variety of orchids in pots as well as mounted on various materials. Daryl plans to continue growing orchids, displaying them at orchid shows and becoming more active at the Massachusetts and New Hampshire orchid society meetings where he can provide his knowledge and expertise to other growers.

THE SCIENCES

The Other Orchid Thief: Virus Ravages the Popular Flower [Slide Show]

Once the province of high society, orchids have found their way into households worldwide, but so has a plant-killing batch of viruses plaguing nurseries

By Daniel Grushkin on May 5, 2010

For hobbyists like Colette Theriault, a photographer who lives in Ontario, orchids are an addiction. Theriault bought her first *Phalaenopsis* in 1999 and nurtured it for three years before it bloomed its first pink flowers. The success led to more, until she had 25 orchids crowding her windowsills. In March she discovered yellow spots on the leaves of her collection—a telltale sign of a virus, like those plaguing the orchid industry.

Theriault is now fighting a losing battle to save the first orchid she ever bought. "It's psychological for me," she says. "I was mad at myself for buying more plants."

Not long ago, only a rarified elite kept orchids in their homes. Collected from the tropics, orchids transported to other climates lacked the conditions needed to flourish and were nearly impossible to breed. But in recent decades growers have learned how to clone thousands of identical plants, and an industry has grown around the flowers. As growers have bred increasingly baroque varieties, sales have exploded, making orchids the second most sold houseplant in the U.S. (after poinsettia). Go to any Home Depot and brazen sprays of purple orchids are on display along with aisles of drywall and doorknobs. Even corner bodegas in big cities tend to carry a droopy *Phalaenopsis* or two for sale as house gifts.

View a slideshow of orchids

The popularity of orchids culminates in spring displays that pull in huge crowds. Last month, their strange and colorful petals drew 117,000 gawkers to the Bronx for a radiant exhibition at The New York Botanical Garden. Another legion of aficionados will descend on Oklahoma

City for the American Orchid Society meeting this month.

As the orchid business has leapt from $47 million in 1996 to $123 million a year, a batch of viruses has bedeviled orchid greenhouses. "It's ruining the business," says Joseph Silva, co-owner of Silva Orchids in Neptune, N.J.

There are 30 known orchid viruses, but when growers say a plant has "a virus" they usually mean one of the two most prevalent: *Cymbidium mosaic* virus (CMV) or *Odontoglossum ringspot* virus (ORSV). Neither causes any obvious signs, but once orchids contract them, the plants begin to limp along—with fewer, shorter-lasting flowers. Then brown spots begin to appear on the leaves, the petals mottle and wilt, and the plant ultimately succumbs.

Tellingly, viruses do not naturally spread among wild orchids, which multiply by producing hundreds of thousands of feather-light seeds, none of which can carry viruses. So the only vector for spreading CMV and ORSV are the growers themselves. In some cases, careless producers have cloned infected plants and inadvertently sold armies of orchids bearing viruses. More commonly, workers spread the virus with their clippers. Unless heated or bleached between each trimming, the blades play the part of a dirty syringe.

"Orchid growers divided plants indiscriminately, gave them to friends, sold them. It didn't take long for one infected plant to infect thousands—never through the air, never through insects, but simply by human propagation," says Bill Zettler, a plant pathologist at University of Florida.

There are no current statistics on the prevalence of viruses. But studies during the last 20 years show a startling rate of both CMV and ORSV. Viruses infected 50 percent of the orchids tested in Singapore's botanical gardens in a 1994 study, 25 percent of those grown in Hawaii in 1993, and 65 percent of the cut orchids from Thailand, the world's largest exporter, in 2005.

Currently, at least two groups of orchid scientists, one in Hawaii and another in Singapore, have begun trying to solve the problem by genetically engineering breeds that resist CMV and ORSV. Sek Man Wong, a plant pathologist at the National University of Singapore, is using RNA interference to splice virus RNA into the plant's genetic blueprint. Theoretically the virus signatures should allow the plant to recognize and eliminate a potential infection. He hopes to have the genetically modified orchid ready for the market by 2015.

In the meantime, the percentage of infection among growers worldwide has likely dropped in

the years since industry groups such as the American Orchid Society turned a spotlight on the issue. Ron McHatton, chief operating officer of the American Orchid Society, has been trying to quell a rash of gossip about viruses because, over the last few years, growers fingered Taiwan for continuing to spread the contagion. As the largest potted-orchid exporter, Taiwan delivers $21 million in *Phalaenopsis* orchids each year. "People are saying the industry is riddled with virus. It's just not true," McHatton says.

Chin-An Chang, the former head of the plant pathology at the Taiwan Agricultural Research Institute, thinks it's unreasonable to ask for virus-free orchids because market prices are now so low. "A serious hobbyist who's concerned about viruses can go directly to the nursery for high quality. For the consumers buying it from the supermarket, some percentage of virus should be acceptable." That is hardly comfort for fans, who primp and beautify their orchids and end up infecting their entire collections.

ABOUT THE AUTHOR(S)

Daniel Grushkin writes about science and technology for *Businessweek, Nature Medicine* and other publications. He also co-founded Genspace, a community laboratory in New York City focused on biotech education and innovation.

Recent Articles by Daniel Grushkin

DIY Biotech Labs Undergo Makeovers

Biotech's First Musical Instrument Plays Proteins Like Piano Keys [Slide Show]

Glowing Plants: Crowdsourced Genetic Engineering Project Ignites Controversy

St. Augustine Orchid Society
www.staugorchidsociety.org

The Nursery Man's Test

Early Subtle Signs of Virus

by Sue Bottom, sbottom15@gmail.com

Subtle expression of virus in young cattleya leaves: longitudinal irregular chlorotic streaking, evident on upper and lower leaf surfaces. Depending on the severity of the virus infection it may or may not disappear when the leaf is mature.

They say that the only way to be sure if a plant is virused is to test it. Now we'll have to add a qualifier to that statement, "…unless Dave Off is in town". Dave manages Waldor Orchids in Linwood, New Jersey with other family members. He was vacationing in St. Augustine with his family and spoke to our club. The subject of orchid viruses came up in one of our conversations, and Dave offered to walk through my greenhouse and identify potentially virused orchids. I hoped he would be unsuccessful, because several years ago I discarded about a third of my cattleyas after they tested positive. Unfortunately, Eagle Eye Dave walked through the greenhouse and brought a half dozen or so cattleyas to my attention. Each one later tested positive for virus.

Dave has an internal checklist that he uses to identify virused plants. He looks at the new growth, and it must be at the proper point in its growth cycle, when the leaf is unfolding but before it hardens off. The symptoms on the young leaves are very subtle. On the newest forming leaf, there is a longitudinal streaking running parallel to the veins in the leaf. This streaking does not tend to traverse the entire leaf blade. It is slightly irregular on the horizontal axis, so it is somewhat blotchy in appearance. The streaking is evident on both

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the upper and lower leaf surfaces. The discoloration is inside the young leaf, with no sunken areas. This streaking may or may not disappear when the leaf is mature, depending on the severity of the infection. It is best viewed early or late in the day rather than in too bright light.

If Dave sees some chlorotic streaking, he starts inspecting the rest of the plant, first looking at the other new growths to see if they too exhibit symptoms. Both top and bottom leaf surfaces are inspected. If virused, the streaking will be visible in all the new growths. He looks at the older part of the plant, perhaps there might be the necrotic black splotches or the reddish purple markings often reported for virused plants. He looks at any flowers that might be present, for signs of color break or necrotic streaking. He looks at the flower sheath for signs of abnormalities. He also evaluates the plant's growth vigor, as virus can sap strength from a plant.

The chlorotic streaking from virus in young cattleya leaves is very subtle. Dave could predict from the markings whether it was CymMV or ORSV. ORSV streaking tends to be more blotchy and CymMV more linear. The presence or absence of color was also predictive. I'll need a few more lessons to make any educated guesses.

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The phalaenopsis bench was Dave's next target. I have not tested many phals because of the generally held assumption that many of the phalaenopsis sold in the mass markets could be virused. Dave found a dozen plants that looked suspicious to him, and upon testing, Dave continued to bat a thousand… more bench space!

The chlorotic streaking is more obvious in the soft, fleshy phalaenopsis leaves. These tested positive for CymMV and ORSV. .

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In more advanced stages of viral disease, the more commonly recognized signs of virus might appear in the plant. These include the black necrotic blotching often reported for Cymbidium Mosaic Virus (CymMV) or the reddish-purple markings of Odontoglossum Ringspot Virus (ORSV) in the leaves. The flowers can show the presence of virus in color break and brown necrotic blossom streak. Even the flower sheaths can express virus symptoms. Dave's chlorotic streaks in young leaves are your early warning system, letting you know there may be something suspicious in your plant.

Often CymMV causes black blotches on the leaves that result in a really ugly plant, although there are other diseases that can cause black splotching.

Sometimes ORSV causes circular to angular patterns on the leaves with the discoloration ranging from yellowish to reddish purple to brownish in color.

Blossom brown necrotic streak from CymMV (generally thought to be in combination with ORSV) shows up 5 to 10 days after the flower opens, resulting in unsightly discoloration on the floral segments.

Color break from ORSV is an irregular, nonsymmetrical marking on the flower. You might simply discard the plant with apparent color break, but thrips and chemicals can cause similar blemishes on the flower.

Careful observation is the key, and testing to verify or refute the presence of virus helps build your knowledge set so your eyes can be trained to detect the early symptoms of virus. It is not a 'once and done' proposition. The plants must be in the proper stage of growth for

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these subtle signs to manifest themselves. Dave keeps newly arrived plants to his nursery in a staging area for perhaps 18 to 24 months. Changing the plant's environment can add stress, which can make the symptoms more evident. The plants are inspected regularly as they go through one or two growth cycles under his growing conditions. Only after this observation period are virus free plants allowed to be placed into the general growing areas.

Dave had some other interesting growing tips. I was repotting a cattleya seedling he gave me and noticed a little wire with a long tail wrapped around the rhizome. Dave said that was an "artificial root" used to hold the seedling stable in the pot. He doesn't use rhizome clips, so this method allows a young plant with little root mass to be kept from wobbling around in the pot until it grows its own roots.

He doesn't use rhizome clips on the larger plants either, instead using a potting stick to pack the media tightly around the plants. Potting sticks were commonly used during the era of osmunda fiber, which is no longer available as a potting media. The potting sticks were often made of wood and blamed for spreading virus between plants. Dave's potting stick is specially fabricated to his specifications, made of fiberglass resin, so it can be sterilized. He packs the bark media tightly around the plant with the potting stick, so no rhizome clip is required.

Dave's family has been growing orchids since 1925. His family's nursery was concerned about viruses long before it became fashionable, and they were the first in their state to be certified virus free. He has one hundred years of orchid growing knowledge in his bloodline, so it is no surprise that he sees things that others might miss. I cannot wait for my next orchid growing lesson!

·THE AOS CORNER·

Greenhouse Chat with Ron McHatton
Orchid related questions, answered by AOS experts.

Click Here to watch now.
Note the specific times below if you wish to watch or listen to those topics.

00:55 Adjusting which acids should you use
3:43 Repotting reed stem Epidendrums
5:06 Branching Phalaenopsis inflorescences
6:50 Interesting facts about short-stemmed vandaceous plants including Phalaenopsis
10:34 Culture of Nigrohirsute Dendrobiums
15:04 Rescued Phalaenopsis
18:49 Phalaenopsis buds that won't open
21:08 Distilled water for Orchids
23:46 fused Phalaenopsis leaves
26:19 Bulbophyllum phalaenopsis cultural requirements
28:07 LowE coated glass
32:50 Warszewiczella amazonica bud blast
34:26 Cattleya seedling growing requirements
38:35 Phalaenopsis japonica care
42:18 Paphiopedilums that won't bloom
46:42 How to flower Cattleya amethystoglossa
52:34 Lemon juice to adjust pH
54:05 Reed stem Epidendrum growing in cold conditions
56:43 Rescue plants- additional questions
58:48 What causes bud blast in Cattleyas?
1:02.15 Using aquarium water for Orchids

Seasonal Orchid Care May/June

Click here for Checklist

Organizing orchid culture and its chores by season is a convenient way to make sure that your orchids get the proper care at the right time. Becoming in tune with your plants' growth cycles creates a connection with the natural world and makes you a better grower.

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