Dear TOS Members,

Feb 2025 – Very much a month of mixed weather with temperatures of sub-freezing to mid-70s°F, and sometimes within the same day! If you are fortunate enough to own a greenhouse with thermostatically-controlled vents, they are opening and closing like a yo-yo at this time of year when the sun breaks through sporadically in the afternoons.

What always stands out in the bare, open woodland in Feb are the wonderful, greyish-green lichens growing on the bark of established trees, rocks, the ground, and indeed on old headstones of graves (I stumble across a surprising number of small family cemeteries in the woods on my walks).

You may well be wondering why is he mentioning lichens in an orchid newsletter! Well, because both these life forms depend upon fungi for their existence and are examples of Mother Nature's most intimate of relationships. The fungi are more obvious in lichens in that they are the visible, predominate organisms in the special partnerships they form with algae (or some cyanobacteria); whereas in orchids, the living fungi are hidden, residing in and around the root tissues as hyphae, forming what is known as mycorrhizal relationships. Mother Nature has evolved many fascinating biological relationships, some seen, others not, and for sure there are many more such relationships out there still waiting to be discovered.

Business-related Matters from Feb 17 TOS Board Meeting

1. Balance of the checking account as of Feb 16, 2025 was $10,034.

2. We have an opening for a Trustee to join the Board and would welcome interest from any member. It is not necessary to be an orchid expert; what's needed is a willingness to jump in and get involved in shaping TOS to move it onward and upward for the next decade. Yes, the right person really could spend the next 10 years on the Board in different positions as your passion grows!

3. The Board sends a big 'Thank You' to member Nick Plummer who donated the bulbophyllum divisions sold at the Feb meeting. $125 were added to the TOS coffers through Nick's generous donation.

4. Feb Membership Report (Carole Saravitz, TOS Membership Chairperson)
   Total Paid-up Members at end of 2024: 195+35 Partners
   Total Paid-up Members thus far for 2025: 99+19 Partners
   Members who have not yet paid their 2025 dues are kindly reminded to do so prior to, or at, our upcoming meeting on March 10. Thank you.

5. Any paid-up member wishing to participate in the spring bulk purchase order of Acadian Supply repotting media, must respond by March 7 to the TOS email that was sent out on Feb 18.

In Reflection: Feb 10 TOS Monthly Meeting at JCRA

A panel of TOS experts fielded questions on a selection of members' orchids (including their own) that needed help. Several chemicals/products were mentioned for members to try for treating the various pests and diseases encountered at the meeting. These are summarized below.

For Scale and Mealy Bug Infestations

Imidacloprid

This systemic active ingredient is formulated as liquid and granular products. The latter is more convenient to use if you wish to just sprinkle a few granules in the pot, but if you are looking to hit an infestation fast and hard, spray the plant. It is generally co-formulated with a second active ingredient; the turf and soil product shown here has the insecticide, β-cyfluthrin, as the second a.i. I use about tablespoonful per gallon of water.

Acephate

This systemic active ingredient belongs to the old organophosphate class of insecticides. It is still effective, but beware it stinks - a sulfurous, skunky odor - so definitely do not use it indoors!

Insect populations build up resistance to chemicals so it is always good practice to routinely alternate chemicals after using them a couple of times.

For very light infestations of mealy bug or scale, remove with a tissue soaked in 70% isopropanol.

Neem Oil

A natural product extracted from the Neem tree (*Azadirachta indica*), which is native to India. It is formulated as a sprayable oil solution and works by effectively blocking the spiracles in an insect's exoskeleton, thereby resulting in the insect's suffocation.

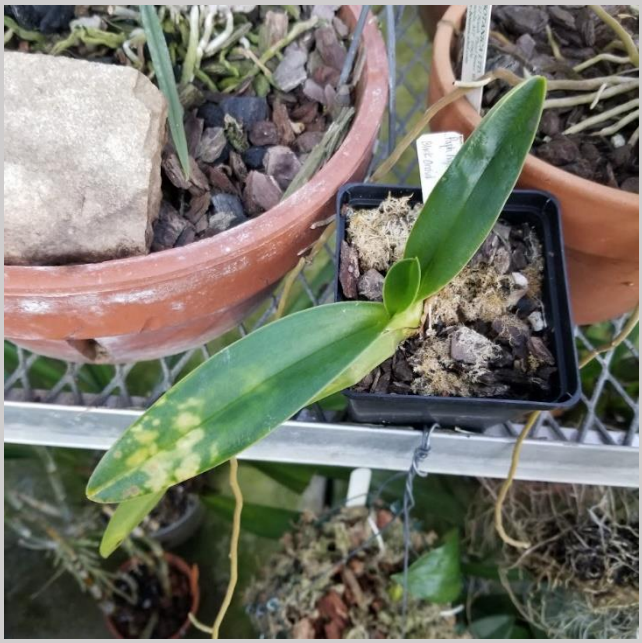
Mineral Oils

These are refined fractions of petroleum products that work as insecticides in the same manner as what is described for Neem oil. They are formulated and sold as Horticultural Oils, which are used heavily in the citrus industry.

For Fungal and Bacterial Infections

PHYSAN 20™ (blend of quaternary ammonium chlorides)

This product is a broad-spectrum disinfectant with antimicrobial activity. The label claims it to be effective as a fungicide, bactericide, and virucide. However, recognize that this product will NOT cure viral infections in orchids (nothing will), but it does show some efficacy towards controlling fungal and bacterial infections in orchids. So, having stated that, the two orchids below have tested negative for Cymbidium Mosaic Virus and Odontoglossum Ringspot Virus (CymMV & ORSV) using Agdia ImmunoStrip®, which leaves fungal or bacterial microbes as the likely causal agents for the symptoms on these orchids. Therefore, treating with PHYSAN 20 would be a good approach to try. Personally, I plumb for fungal pathogens as the causal agent because bacterial infections tend to cause brownish-blackish, soft, and wet-looking patches as they spread – think of crown rots in Phals, or stinky Erwinia infections in the pseudobulbs of Catasetinae orchids.



Cinnamon Powder

This spice contains cinnamaldehyde, a natural compound which has antimicrobial properties. Apply a little of the powder directly to a cut leaf or stem to help prevent fungal and bacterial infections. I apply it with a cotton bud.

Potassium Bicarbonate

This chemical is a very close relative of sodium bicarbonate, the cooking ingredient commonly known as baking soda. Food-grade potassium bicarbonate is used as an agent to control acidity in wine making. It is a cheap chemical that gets formulated and sold as expensive fungicide in a spray bottle. It does have fungicidal properties, but more as a preventative agent rather than a curative agent. A tablespoonful dissolved in a gallon of water with a few drops of dishwashing liquid to act as surfactant serves as a general spray to help prevent fungal diseases on plants.

For Initiating Root Development

Dip'N®Grow

This is a mix of 2 plant growth regulators: Indole-3-butyric acid and 1-Napthaleneacetic acid. A few drops added to a spray bottle of water and sprayed directly onto divided rhizomes at repotting is effective for initiating roots. Remember, roots are everything; establish and maintain good healthy roots and you are 90% on your way to growing top notch orchids!

The panel discussed the somewhat withered condition of the Phal in the photo to the left. Its flaccid condition was related to poor root structure – in fact, it literally fell out of the pot in which it was brought to the meeting for lack of any proper root structure. The recommendation was to get the plant into some fresh medium and focus upon a watering protocol that ensures it is kept adequately hydrated. Here, we are seeing the plant in fresh medium following repotting - I'm sure what little root structure

was remaining would have been sprayed with Dip'N®Grow, so let's follow this Phal's progress. Stay tuned.

It would be remiss of me not to mention that you need to always wear appropriate personal protective equipment (e.g. gloves, eye protection, mask, etc) when mixing and applying chemicals. Read and follow the directions on the product label regarding application rates. If orchids are not specifically mentioned on the label, I suggest following the application rates mentioned for Ornamentals.

And, now for the all-important disclaimer: should any of the above products harm or kill your orchids, TOS experts are not responsible. Also, the products in the photos above are not being endorsed in any way, they are just the ones I've used; there are plenty of other generic products out there containing the same active ingredients. 😊

Upcoming: Mar 10 at 7.30 p.m., TOS Monthly Meeting at JCRA

Steve Frowine will be speaking on the topic of **Growing Orchids without a Greenhouse**. This is what Steve writes in his blurb for his presentation:

"Years ago, almost all orchids were grown in greenhouses. This is just not so today. In fact, more are now grown on windowsills and under lights. Some can actually be grown better this way without the big cost and trouble of building and maintaining a greenhouse. In this talk, Steve will give pointers on how to have great success with this approach and will discuss the most recent efficient and effective lighting sources and equipment and how to make best use of windowsills. He will present a fine array of orchids ideally suited to this type of culture. Steve has had many years' experience with this type of growing."

We shall meet with Steve to have dinner at the Neomonde Mediterranean restaurant, 3817 Beryl Rd, Raleigh, NC 27607 before the meeting, so come join us and begin shaking off those winter blues! There will be about a dozen donated plants going into a Silent Auction at the meeting too.

Upcoming: Away Show

Virginia Orchid Society Show – Richmond, VA
February 28 – March 2, 2025
Lewis Ginter Botanical Garden, 1800 Lakeside Ave, Henrico, VA 23228

Many thanks to Ralph (Shows Co-Chair), Sunny (President), Cyndi (Secretary) and TOS member Jane Allman for putting in the fabulous display below. And, 'Thank You' to all members who loaned their flowering orchids for the display. If you are looking for something really cool to do this weekend, go check out the VOS show in Richmond!

Monthly Feature

If you are seeing this orchid flower for the first time and masdevallia comes to mind you are in good company. It is in fact, *Bulbophyllum maxillare* (Lindl.) Rchb.f., as described in W.G.Walpers, Ann. Bot. Syst. 6: 248 (1861) by the renowned German botanist, Heinrich Gustav Reichenbach. You see in the scientific name that a nod - the 'Lindl.' abbreviation in parentheses - is given to the esteemed British botanist, John Lindley, who had some eighteen years earlier described the same 'type specimen'[1] as *Cirrhopetalum maxillare* Lindl., in Edwards's Bot. Reg. 29: t. 49 (1843)[2,3]. Now, let us jump forward to

1904 to address the masdevallia look-alike comment. This is when another German botanist, Friedrich Wilhelm Ludwig Kraenzlin, described a different type specimen of the species being discussed as *Bulbophyllum masdevalliaceum* in Bot. Jahrb. Syst. 34: 251. The masdevallia genus with its many species had long been described by this time, and Kraenzlin clearly saw the resemblance to a masdevallia flower in the flower of this bulbophyllum, hence his use of *masdevalliaceum* as the epithet.

Welcome to the dynamic world of plant taxonomy and classification. This example of synonyms (and I mention only two!), i.e. *Cirr. maxillare* and *Bulb. masdevalliaceum*, for *Bulb. maxillare* demonstrates nicely how a single orchid species can end up with different names, some being valid, others not. Though perhaps not as sexy-sounding and headline-grabbing as CRISPR[4] technology or germ cell research, plant taxonomy is also an evolving scientific discipline driven by an ever-growing mountain of information, which gets assessed and considered objectively in advancing the classification of orchids. Personal opinions and subjectivity that may have held sway in the past - depending upon the reputation of the orchid taxonomists - are disappearing more and more, especially as DNA-profiling becomes a cheaper and a more routine analytical tool for use in identifying plants. Type specimens stored in various herbaria around the world may, for whatever reason, get re-examined and may end up being re-classified based upon new information. And, re-classification, frustrating as it may be for those us trying to remember orchid names, does ensure that orchids are named correctly and assigned to their correct taxa (hierarchical classification levels). The Kew Royal Botanic Gardens, "Plants of the World Online[2]", is an authoritative information source that helps provide a much-needed standardization of the documentation of orchids (and other plants) on a global basis. One spinoff of having such a global repository is that it is very useful in foreseeing a threat to the conservation of a species. As we look to the future, we can expect artificial intelligence to play an increasingly important role in plant classification for the rapid screening and cross-checking of country-specific botanical journals and/or herbaria as they become digitalized.

For now, the RHS currently recognizes *Bulbophyllum maxillare* (Lindl.) Rchb.f as the scientific name of the orchid in the above photograph. It is native to the islands of the Malay Archipelago, Soloman Islands, and the northern region of Queenlands, Australia.

[1] 'Type' is the dried herbarium specimen of the original field-collected plant. It is used as the ultimate reference material against which taxonomists compare another specimen when either defining a new species or confirming an existing species or a variety of an existing species.

[2] https://powo.science.kew.org/taxon/urn:lsid:ipni.org:names:623262-1

[3] Cirrhopetalums are today still within the *Bulbophyllum* genus; they are grouped together in a section (taxonomic rank immediately below genus) because DNA analysis has shown them to be a monophyletic group, i.e. a group of closely species that includes a common ancestral species.

[4]CRISPR = Clustered Regularly Interspaced Short Palindromic Repeats occurring in DNA

Members' Awards

Lifetime member, Harry Gallis, MD, has a good eye for spotting a magical orchid. He was recently awarded an AM/AOS of 86 pts for this fabulously-patterned specimen of ***Dendrobium*** **Miva Abracadabra 'Riverwood'**

It is a primary hybrid of ***Den. atroviolaceum*** **x** ***Den. polysema***, both of which belong to the Lautoria section of the *Dendrobium* genus. The flowers of Lautoria dendrobiums are characteristically colorful with strong patterning, and of lasting quality, and are a particular favorite of Harry's.

Tom Schopler shares this photo of a very beautiful specimen of *Paphiopedilum delenatii* f. alba. I'm no orchid judge, but if this orchid is unawarded, if caught on just the right day after opening and taken to an AOS judging session, a flower of this form and quality has good potential for garnering an AOS/AM award.
Take good care of it, Tom!

May March be a great month for you.....with just the right amount of orchid madness! I spotted my first Trout Lily (*Erythronium americanum*) in bud this morning so spring really is just around the corner.

Phil B.

https://triangleorchidsociety.org/
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