The 💱	Jonal Contract	VÞ	so	
Volume 42 Issue 5 Sept 2019	The Newsletter of the Gr	eater Lansii	ng Orchid Society	
GLUS BUARD	The purposes for which the Society is organized are to create an awareness of orchid culture; to foster the preservation of native species of orchids; to support research and development of orchid culture; and to hold meetings, lectures, and exhibitions.			
Pete Ostituni 517-449-5248 p.ostlund@yahoo.com Past President Jerrie Nichols 517-223-8965 nicholsjerrie@gmail.com Treasurer Rob Halgren 517-256-5693 rob@littlefrogfarm.com Secretary Ioana Sonea 517-349-3792	 SEPTEMBER 21 MEETING Presbyterian Church, Okemos Doors open at 6:30 p.m. for: Plant shopping Experienced Society members will be available to answer questions and help problem solve orchid growing issues Please have refreshments in place prior start of meeting. Meeting will start promptly at 7:00 pm This month's speaker is Gordon Griffin, will tell us all about Coelogyne orchids. Gordon is the Vice-Chair and Program director for the Grand Valley Orchid Societies also a judge at the orchid shows all around Michigan. 	p por to Benne who ciety.	Okemos Road	
 INDEX President's Message//In Memorium/ GLOS Calendar July Picnic Report/Books Needed/Wear Name Tag August Meeting Report August Board Meeting Report Unusual GLJC Judging and Awards Mid-America Information Membership Report/What is a CHM? Cultural Notes from Ray Barkalow AOS Corner Vendor Ads/ October Meeting GLOS 2020 Show Update 		area of his lighting	Coelogyne dayana	

Photos by Dot

PRESIDENT'S MESSAGE -- Dawn Kittle

I hope all of your orchids are surviving during this unusual summer! Some of mine are inside; some are outside. Soon we will be getting them ready for the up-coming shows. It doesn't seem possible that summer is almost gone.

Speaking of shows wasn't our visiting speaker, who is also an orchid judge, great? Her expertise on pleiones was enlightening. It is too bad that she is moving to Hawaii (for us not her). We will miss her enthusiasm and smiling face at the various shows.

From shows to picnics, don't we have fun? Our picnic this year had perfect weather. Well almost perfect -- the wind liked to blow us and everything on the tables all around. The food was great, the company fantastic and profit excellent. Thank you to Mike Underwood and Rob Halgren for a fun filled afternoon of auctioneering. All in all I would say we had a good turnout and a wonderful day. Hope you all enjoyed it as much as I did.

Keep caring for your orchids. The shows will be here before you know it.

MARYDEE SIST: March 30, 1947 - August 19, 2019

GLOS members received the sad, shocking news that MaryDee Sist died on Monday, August 19, at the age of 72 after a brief illness. She joined GLOS at our February Show in 2002 and was a member for the next 17 years. Many of you worked with her at the Show, whether at our Information Table or in our Hospitality Room. Mary Henman, who worked with her at the Show's Information Table, writes this: "I met MaryDee

during my VetTech training at MSU in 1989. Our class assisted her lambing season that year. I will never forget her knowledge and mentoring that I used when I acquired my flock. I will miss her no nonsense approach, her willingness to help during the orchid shows and her interesting stories. RIP MaryDee, you will be missed!"

What follows is what a friend of hers posted on Facebook on the 21st: "Last night the world lost a wonderful person. MaryDee VanDellen Sist lost her battle with cancer. She was a very private person and didn't tell many she was sick because she wanted to be remembered for the brave, caring woman that she was. She loved her friends, salukis, and farm. All are in good hands and being cared for. Hug your loved ones and say a prayer for MaryDee. She will be greatly missed by many and her legacy through saluki health research will live on for generations to come."

Kristen Lare and Birgit Puschner from MSU's College of Veterinary Medicine issued this statement: "Dr. Sist was an invaluable member of the Veterinary Diagnostic Laboratory's Endocrinology Laboratory for 15 years and served as an independent consultant at the Laboratory for two additional years. She earned both her BS and then DVM at MSU and was the owner of Animal Care Clinic in Williamston since 1992 and was a veterinarian in the Lansing area for more than 45 years.

"In addition to her work at the VDL and in practice, she also founded Saluki Health Research, Inc. to initiate, sponsor, support, and carry out veterinary research into diseases and health problems of dogs, with an emphasis on the Saluki breed."



We do not have any details on a memorial at this time but will send out an email to everyone if we learn of a service.

→ Thanks to Jolanta Piecuch, Tammy Scherer, and Jim Churn for our August meeting refreshments. Dea and Julie Bishop, Pete Ostlund, and Georgian Franczyk offered to bring snacks to our September meeting.

GLOS CALENDAR OF EVENTS

- September 21 GLOS General Meeting Gordon Griffin will tell us about Coelogyne orchids.
- → October 12 All-State societies meeting with Chris Purver
- → October 26-27 Michiana Orchid Society Show in South Bend, IN
- **November 16 GLOS General Meeting -** Gary Meyer of Hawk Hill Orchids will talk about Dracula orchids.
- → November 30 December 1 Saginaw Valley OS Show at Kochville Veteran's Hall, 3265 Kochville Road, Saginaw
- → February 22-23 GLOS Orchid Show and Sale



Page 2



MINUTES GLOS MEETING – Picnic July 27, 2019 - submitted by Doris Asher, Acting Secretary

President Dawn Kittle called a brief meeting to order at 1:08 p.m. at Granger Meadows Park with 29 people present. Dawn welcomed everyone to the Picnic. She called for three volunteers to provide refreshments for our August 17th meeting, and Jolanta Piecuch, Tammy Scherer, and Jim Churn volunteered.

On behalf of Jack Shumaker, Georgian Franczyk reminded everyone about the upcoming All State Meeting on October 12th at 1:30 at which Chris Purver from the Eric Young Foundation will speak. Mr. Purver will be bringing orchids to sell -- he can accept only cash as payment.

Rob Halgren announced that he has what remains of both the Ron Ciesinski orchids and also those of Jack Shumaker. He invited everyone to come and buy.



Dawn adjourned the meeting at 1:13 p.m. so that auctioneers Rob Halgren and Mike Underwood could begin the auction, which concluded at 1:50 p.m. Pete Ostlund did an excellent job of organizing both the flat rate plant sales and the auction – members brought in a very large number of plants. Pete and Dot Barnett worked tirelessly to organize incoming plants for the early sales. Between the sales and the auction, we took in \$664.

> Chair of the Membership Committee, Doris Asher, collected renewals from three members.

After enjoying all of the delicious food, the warm sun, and the cooling breezes, everyone was on his or her way by 2:30

USED ORCHID BOOKS/PERIODICALS WANTED- Submitted by Doris Asher

Do you have some orchid books or orchid periodicals that you no longer want? We need them at our Orchid Show, where visitors to the Show snap them up very quickly. Because the books are donated, the Society makes 100% profit. We use the orchid magazines as free giveaways to Show visitors to encourage their joining our Society.



Because this service is so popular, we would like to offer inexpensive, used orchid books again at this February's Show. Since GLOS is an IRS not-for-profit 501(c) 3 organization,

you may deduct the value of the books and magazines you give us. The Treasurer will be happy to provide you a receipt for your gift.

Please consider giving such items at this September meeting to Doris Asher or to Mary Henman, our Show's Information Table coordinator.

REMINDER: WEAR YOUR SOCIETY NAME TAG - Membership Committee (Doris & Dot)

Your Society's Membership Committee urges you to wear your name tag, which is very nice for visitors and for those of us with failing memories! Anyone who wears the badge AND purchases even one raffle ticket at \$1.00 per ticket will get a complimentary raffle ticket – just a little incentive to remember to wear the badge.

If your name tag is lost, please let Doris or Dot know so that Dot can make you a new one.

MINUTES OF AUGUST 17 2019 GLOS GENERAL MEETING - submitted by Ioana Sonea, Secretary

Twenty-three members were in attendance; Katie Payeur and Sandra Dixon also attended (Sandra was the invited speaker of the evening). Plentiful and delicious refreshments were brought by Jim Churn, Jolanta Piecuch, Tammy Scherer and Ioana Sonea.

The meeting was called to order shortly after 7pm by President Dawn Kittle.

Formation of a sub-committee to look at alternate meeting places. The Church will be meeting on Aug 21, 2019 to determine the fee structure for the Meeting Hall rental, and it would be wise to have some alternatives if prices were to rise. Discussion followed, during which Georgian stated that 501-3c charities such as GLOS can get rooms for free at MSU: she suggested talking to Jack Shumaker about this. Jolanta said that the Michigan Nature Association allows her garden club to meet for free in their facility.

Pete Ostlund volunteered to lead the committee, and Dawn Kittle asked for additional volunteers. Mike Underwood and Teresa Fowle volunteered to help. [Note added on Aug 22: the church has decided to keep the current rental fee for the upcoming year]

Volunteers for refreshments at the September meeting are Dea and Julie Bishop, Pete Ostlund, and Georgian Franczyk. Dea reminded people to come hungry, there would be lots of food and a good variety to boot!

Show and tell table. Teresa Fowle presented the numerous plants on the display table. One of them was the Paph that Julie Bishop received as part of her Lifetime Accomplishment award, still blooming and beautiful 2 months later. Some of the other beautiful plants included an awarded Phrag belonging to Sandra Dixon (AM 80 pts), and 2 very healthy mounted plants belonging to Chris



Steele.

Speaker for the evening was Sandra Dixon, who gave a very interesting talk about Pleiones, small terrestrial orchids with Cattleya-like blooms. She provided a great deal of details about their



culture and some excellent references. Sandra generously donated one Pleione to the Raffle for members to bid on. Several members, not certain of winning one at raffle, purchased one or more of the Pleiones she had brought, including yours truly.

I'll be following her directions: keep in a shallow, well draining medium,water generously while leaves are growing. Reduce watering as the leaves die back, then remove from the pot once the roots have dried. Cut the roots to within 1cm of the bulb; discard the old bulb, and place all the new ones in a cool spot (a fridge is perfect) for 1-2 months; the

plants can be stored without medium. When you see signs of growth repot in a shallow pan with freely draining medium, but don't water until you see roots develop (spring flowering Pleiones will bloom before the leaves and roots develop). We'll find out next spring how they do!!

Both Silent Auction and Raffle had interesting plants available, and bidding was brisk, particularly on the 2 new AOS books on orchids that Doris had generously donated.

The meeting was adjourned at about 9pm.

Where in the world can they be grown? http://www.pleione.info/pleione-review.html

Pleiones can be grown wherever conditions sufficiently mimic their natural habitat. They come from areas with distinct seasons of Spring, Summer, Autumn and Winter and grow best wherever the average summer temperatures does not exceed 25 centigrade (though a few odd days up to 30 centigrade is tolerated). In winter, while they are dormant, they need to be kept cold but just frost-free. A range between 1 and 5 centigrade is ideal. If need be, small numbers can be kept in a fridge if your winters are usually too warm (you can un-pot them and keep them in the fridge in a paper bag). Within these restraints they may be grown on a windowsill, in a glasshouse or cold frame and may be put outside for those months that are frost-free. In areas with few and gentle frosts they can even be planted in the garden. But most people grow them as pot plants.

AUGUST 8, 2019 BOARD MEETING MINUTES - submitted by Ioana Sonea, Secretary

Present: Dot Barnett, Rob Halgren, Dawn Kittle, Jerrie Nichols, Pete Ostlund, Ioana Sonea, Becky Thayer The meeting was held at Pete Ostlund's home, after board members had a chance to admire the beautiful perennial gardens and the blooming orchids in the greenhouse. Pete provided the Board with pizza, salad and cheese cake to fuel our brains..

The meeting was called to order at 7:20pm by President Dawn Kittle.

- Treasurer's report (Rob Halgren): GLOS received \$664 at the annual picnic
- Secretary's report (Ioana Sonea): no outstanding items from previous board meeting
- Membership report (Doris Asher via email): GLOS currently has 87 members in 76 households, of which the majority (82%) receive the Calypso via email. Members receiving print copies have generously helped defray the costs of printing and postage.
- Old business:

1. The picnic went well, we will continue to distribute tasks at the Board meeting preceding the picnic. 2. Upcoming programs:

- o Aug 17, 2019 general meeting: Sandra Dixon on Pleiones. Will bring some bulbs to sell.
- o Sept 21, 2019 general meeting: Gordon Griffin will talk about Coelogynes. Rob Halgren will sell plants including some from Jack Shumaker
- o Oct 12, 2019 All State Orchid Societies meeting. See flyer in Calypso for details. Please note early start (1:30pm)
- o Nov 16, 2019 general meeting: Gary Meyer will be talking about Draculas (the cost of inviting him will be split with AAOS). He or Kristin Uthus will be selling plants.
- o Jan 18, 2020 general meeting: possible speakers are Bill Cadman on Paphs and/or Bill Bergman on Cypripediums
- o Mar 21, 2020 general meeting: possible speakers are Dea Bishop or Jerrie Nichols, speaking on topics of particular interest to new or neophyte members.
- o Apr 18, 2020 general meeting: several possible outside speakers were discussed. Dawn Kittle will contact them to see who is available.
- 3. Away shows:
 - o Michiana is Oct 26/27, 2019 and coincides with the Windsor show. Jerrie Nichols will prepare some baskets (volunteers to help gladly accepted!). We hope that Bill Porter will be able to transport the baskets to the show, and that Rob Halgren can bring them back.
 - o Saginaw is Nov 30-Dec 1. Ioana Sonea will collect plants and set up the display: volunteers to help gladly accepted!
- New business:
 - 1. Meeting place. The church is reviewing its pricing for the Meeting Hall and will let GLOS know after their Aug 21st meeting if there are any changes to the rental fees. The board discussed that it would be prudent to establish a sub-committee to investigate other potential meeting places: this will be discussed at the next general meeting (Aug 17th)
 - 2. Pete Ostlund re GLOS annual show: not much to change. Will see if Bill Cadman will do the setup. BTW: it'll be Pete's B-day on Friday Feb 21.. B-day cake is in order (NOT chocolate)!
 - 3. Postcards to advertise the show: Dot was offered an excellent deal (\$281 to print 3000) and has submitted the order. She will design the postcards as well as a flyer and circulate the latter via email.
 - 4. Doris Asher has contacted AOS and potential judges for the show
 - 5. Dot Barnett brought up the perennial conflict between the Great Lakes Judging seminars (once yearly, in June) and the monthly meetings that coincide with the general meeting: suggested moving the June meeting date and potentially changing the dates of the general meetings: judges have a long day when they have to judge then come to the general meeting. Further discussion with a wider audience is recommended.
 - 6. The board voted unanimously to authorize Rob Halgren to make the annual donations to:
 - o Great Lakes Judging Center (\$150)
 - o Michigan Nature Association (\$100)
 - o Nature Conservancy (\$100)
 - 7. The next board meeting will be held at Rob Halgren's home on October 3rd.

The meeting was adjourned at approximately 8:30pm.

Notice to all GLOS members: if any part of your contact information changes, please notify Doris Asher or Dot Potter Barnett.

AN UNUSUAL MONTHLY JUDGING FOR THE GREAT LAKES JUDGING CENTER - by Doris Asher

Like each of the more than thirty American Orchid Society judging centers in the United States and Canada, the Great Lakes Judging Center offers orchid judging once a month to orchid growers with a nice plant in bloom and no orchid show to take it to. The Great Lakes Judging Center meets every third Saturday at 1:00 in the Matthaei Botanical Gardens in Ann Arbor. Ann Arbor had severe thunderstorms on Friday night, July 19th, which knocked out Matthaei's electricity. Several judges met at one of the area motels to interview a prospective student judge. Meanwhile, the few of us who came to judging met at a picnic table under a shade tree at the Garden and judged several plants, awarding three, all belonging coincidentally to members of the Greater Lansing Orchid Society!! I had brought the refreshments which we loaded back into my car and drove it to the picnic table where we ate our lunch and continued judging. We thought it amusing that one of the beverages I brought was lemonade – makes one think of the saying about "if you get lemons, made lemonade"!! It was actually a lot of fun except for some biting flies -- I don't know what they were but they hurt!!

Congratulations to Rob Halgren and to Pete Ostlund for their beautiful orchids! :



Rob: Paphiopedilum godefroyae 'Littlefrog Ron's Choice' HCC/AOS

Congratulations to Rob and Pete!



Rob: Paphiopedilum Catherine Briois (delenatii x godefroyae) 'Littlefrog Big Alex' HCC/AOS



Pete: Paphiopedilum Hisae's Royal Duck (Bel Royal x adductum) 'Syzygy' HCC/AOS



Award photos by Ed Cott (black backgrounds)

The Paph. against the tree was taken by Lynn O'Shaughnessy before the official photographer, Ed Cott, arrived. Ed is from Canada, and had gotten caught up in a border-crossing delay. Volume 42 Issue 5

MID-AMERICA ORCHID CONGRESS IN MILWAUKEE, WI

The next Mid-America Orchid Congress will be hosted by the Wisconsin Orchid Society in the conference hotel, the art deco-style Ambassador Hotel, September 14-15, 2019. The Society has named their event "Fall in Love with Orchids". The

Show will be in the "Show Dome" of the Mitchell Park Horticultural Conservatory Saturday, 9 am – 5pm, and Sunday, 9 am -- 4 pm.

Saturday's guest speakers are Ms. Wenging Perner, Hengduan Mountains Biotechnology Nursery and Laboratory, Sichuan, China, "Chinese Cypripediums and Their Culture" (and "The Rare, the New and the Unusual" in Chinese orchids following the banquet). Fred Clarke, Sunset Valley Orchids, will also give two talks: "Catasetums" and "Australian Dendrobiums".

The registration form and more information are available on the Society's website (www.wisconsinorchidsociety.com). Feel free to contact GLOS's Mid-America Representative, Doris Asher, too, for more information. She and Lynn O'Shaughnessy are going to the meetings.

The topic to be discussed at the Affiliated Societies Breakfast in Milwaukee will be "What Does the MAOC Do for Your Society?"

Check out the new, re-designed MAOC website:

https://midamericanorchids.org.

Go to the education page and watch and read about Ghosts!! This video is a definite MUST-SEE!

GLOS TREASURER'S REPORTS - submitted by Rob Halgren, Treasurer

Treasurer's report July 15, 2019 Period since 4/4/2019	Treasurer's report August 16, 2019 Period since 7/15/2019		
Income Memberships \$431 Various at March meeting: 48.00 Various at April meeting: 16.00 Various at May meeting (per Doris) 115.00 Mailed to treasurer (various dates) 252.00	Income Memberships \$24 Picnic: \$267 Auction and sales: 664 Julie Bishop: (mailing costs + donation) 125		
Meeting income: \$267 March meeting: 75 (s.a. 30, raffle 45) April meeting: 74 (s.a. 32, raffle 42) May meeting: 118 Total Income: \$698	Total Income:\$793Expenses:Asher (Show expenses, 2020):522Donation – Great Lakes Judging Center:150Donation – Michigan Nature Assn:100Donation – Nature Conservancy:100		
Expenses: Asher (Show expenses, 2019-2020) : 619.32 Dot Barnett (website security): 49.95 Auto Owners Insurance: 269.00 Total Expenses: \$938.27 Net expense for period: \$248.27	Total Expenses: \$777 Net income for period: \$16 N.B. We have \$12,505.25 in 9 CDs (As of June 30, 2019)		
N.B. We have \$12,505.25 in 9 CDs (As of June 30, 2019)			

You are receiving the Calypso either as a PDF file, a hard copy, or both, depending on what we have from you in our records. If you would like to change this, please tell either Dot or Doris Asher. *If you are not receiving emails from us*, please let Dot or Doris know -- we will need to know if we have your correct email address!

If you have not received the PDF file by at least one week before the General Meeting, please let Dot know.

Page 7

THE MID-AMERICA ORCHID CONGRESS

GLOS MEMBERSHIP - prepared by Doris Asher, Membership Committee Chair

Our GLOS numbers stand now as follows: as of August 23rd – 75 households comprising 86 individuals. At this time last year, we had 102 members in 88 households. Our fiscal year has ended (on June 30, 2019). We need to receive renewals from twenty members. Sadly, per our Bylaws, these former members will not receive any more Society newsletters or other mailings. Members in arrears are welcome to renew at any time and will be reinstated immediately!

We have 40 people who are Life Members (46.5% of the membership). These numbers are included in the current membership numbers detailed above. Life Memberships are still available – Life membership dues are \$80 for individuals, \$120 for two living in the same household.

Total Households (including Life Members): 75 (households)

Households getting Calypso electronically: 62 (82.7%)

Households needing paper copies: 13 (17.3%)

Calypso costs us:

Copying: \$.60 each x 6 issues = \$3.60/year

Copying plus postage: + \$.55 stamp = \$1.15 each x 6 issues = \$6.90/household/year

13 households get paper copies: \$89.70 annually. This amount is partially offset by donations that some paper members contribute (requested on dues form).

WHAT IS A "CHM"? - from Doris Asher

At the Great Lakes Judging Center monthly judging on August 17th, Dot's beautiful Oeceoclades angustifolia won a CHM of 83 points. The award CHM is a "Certificate of Horticultural Merit" and is one of two awards limited to species or natural hybrids: the Certificate of Horticultural Merit (CHM) and the Certificate of Botanical Recognition (CBR).

Certificate of Horticultural Merit (CHM) - awarded to a well-grown and well-flowered orchid with outstanding esthetic appeal that contributes to the horticultural aspects of orchidology. The judging team scores the plant on a scale of 0 - 100, and the plant must score at least 80 points. The plant can receive up to 36 points for flower characteristics, 12 each for form, color, and size. Plant characteristics can earn up to 36 points also – up to 12 points each for robustness (size, natural vigor),



condition (culture), and floriferousness. In addition, the plant can earn up to 28 points for "aesthetic appeal".

Certificate of Botanical Recognition (CBR) - awarded to a cultivar deemed worthy of recognition for rarity, novelty, and educational value. No award of any kind may have previously been made to the taxon. This award is not scored, but given by the consensus of the judging team – $\frac{3}{4}$ of the team must vote to give the CBR. Any time a species receives an award for the first time, regardless of what award it gets, the plant's identification must be verified by the AOS's Species Identification Task Force (SITF). This is a group of very knowledgeable orchidists with strength in orchid taxonomy. The award photographer takes extra pictures of the

orchid in question to enable the SITF to determine if its name, in this case, Oeceoclades angustifolia, is correct. Dot's award is considered "provisional" until the identification is confirmed. If the SITF says it really IS Oeceoclades angustifolia, the award stands. If they determine it is something else, the judging team who made the award comes back into play to determine if the CHM is appropriate for the new (correct) name or not.



CULTURAL NOTE from Ray Barkalow of First Rays Orchids

Choosing and Using Fertilizers

I will get few arguments if I state that feeding our plants is one of the more confusing aspects of orchid growing. Or, put another way, "ask a dozen growers, and you'll get thirteen opinions". I believe that comes from the fact that folks can grow and bloom their plants successfully with a wide variety of feeding regimens. Unfortunately, for me anyway, that is not very satisfying information, as it does not address what is "best".

The "Reader's Digest" version of my conclusions is below; to understand where the information came from, read the rest of the article.

- Always use K-Lite Fertilizer. There is no need to change, ever.
- Do not water first, then feed.
- Feed at every watering, flooding the plant and pot thoroughly each time.
- Divide 75 by the number of times you feed per week. The result is the concentration to use, in ppm N, at each feeding.
- Divide 2 by the %N on the fertilizer label. The result is the teaspoons per gallon for 25 ppm N; adjust as necessary.
 - Example 1: You water and feed three times a week, using K-Lite @ 12-1-1. 75/3=25 ppm N. 2/12=1/6 teaspoon/gallon. Example 2: You water and feed once a week, using K-Lite @ 12-1-1. 75/1=75 ppm N. 2/12=1/6 x 3 = 1/2 tsp/gal. Example 3: You water once a week using Miracle-Gro @ 30-10-10. 75/1=75 ppm N. 2/30=1/15 tsp/gal x 3 = 1/5 tsp/gal.

Why use K-Lite?

If you have subscribed to this newsletter long enough, or have followed my comments online, you know I like to take my orchid culture cues from nature. In that regard, we have two practical sources of information: analyzing the chemical makeup of orchid plant tissues and that of the rain cascading through the tropical forest canopy down onto them.

The former is a bit tricky because what is in the plant doesn't necessarily mean that is what the plant must have. As an analogy, if such analyses were entirely accurate, it would indicate that many of us need a lot of cholesterol! What we do know from tissue analysis is that 95% of the plant is water, and 80 to 90% of the balance is carbon, oxygen, hydrogen, and nitrogen, with all of the other elements making up that final point or two. The carbon, oxygen and hydrogen come from air and water; the rest we must supply via our fertilizer solutions.

If we shift our attention to the rain cascading through the forest canopy and trickling down the branches and trunks of the host trees, we find that those solutions are 1) very dilute (on the order of 15 – 25 ppm), and 2) almost all nitrogen. Most of the other nutrient elements are provided by host tree exudates, collected dust and other detritus, and microorganisms living in and around the plants that decompose dead organic tissue. The nutrients don't vary much either, so why change formulas?

Why not water first, then feed?

In tropical rainforests, when it rains, it pours - literally. Any nutritional value in that is present only in the first few seconds after it starts raining, when those residues and exudates are rinsed from the forest canopy. The velamen on orchids' roots has evolved to capture and hold those nutrients so they won't be washed away by the continuing deluge. If we water first, the velamen gets saturated and cannot as-effectively absorb nutrients applied in follow-up feeding.

Why feed every watering?

That happens every time it rains in nature, so the plants have evolved to expect that, and it's probably better for them to continue with that. Using another human analogy, it is healthier to eat several small meals than to gorge yourself on one huge one, isn't it?

Why feed such dilute solutions?

As mentioned earlier, the nutrient loading of rainfall in the forest is minuscule. The water itself - rain - is nature's version of distilled water, so is contributing no nutrition whatsoever. Again, the plants have evolved to live with that. In the plant world, orchids are very slow-growing, so the nutrient demand is quite low. Doing the calculations based upon the chemical processes going on within a plant, in order to gain one pound of mass - a few weeks for corn, a year or more for a cattleya, or a lifetime for a tiny pleurothallid - a plant must absorb and process about 25 gallons of water, but only about a teaspoon of fertilizer nitrogen.

Two thoughts to wrap this up:

- 1. Fertilizing, while essential for growth and flowering, is not particularly high in the priorities of these "niche" plants. Watering, light levels and temperature are far more important.
- 2. Fertilizer with never fix a problem, and more is never better. If your plants aren't thriving, feeding is one of the last things to consider.

Follow this easy, constant regimen to simplify your orchid care, and focus your cultural attention on those other factors, and your plants will do well for you.

Until next time... Good Growing!

EDEMA: What Are Those Strange Blisters? Text by Sue Bottom / Pictures by Terry Bottom Originally published in ORCHIDS 2015

When I first noticed those corky blisters on the leaves of my orchids, I thought it was some kind of aberrant scale. I tried scratching them off and even tried excising them with an X-Acto knife, though of course it wasn't scale at all. The culprit was edema, also known as oedema; swelling caused by excess fluids.

In orchids, this swelling is caused by improper watering, when the roots absorb more water than can be transpired by the leaves. Typically, this happens during the cooler months in late winter and early spring, especially during extended periods of cool, cloudy weather. If you water on a gray day when the plant is not actively growing or you water late in the day on a day when the nighttime temperatures turn cool, edema blisters may form. The excess water absorbed by the plant causes a swelling of plant cells that produces a blister on the leaf.

Proper watering is the key to preventing edema blisters from forming. During the warm growing season when plants are in active growth and the nighttime temperatures are warm, you can water your plants with wild abandon. You can water in the morning, the afternoon or at night. In fact, when the humidity is very low, many orchid growers find it difficult to properly hydrate their orchids because they dry out so quickly.

Some selectively water in the evenings after the sun has set so their plants will stay wet overnight and soak up water Fertilizer shouldn't be applied in the evening hours. Darkness, plus water, plus nutrients is a formula for fungal and bacterial growth. Most orchids grow in a nutrient-poor environment so even though the plants may be wet at night from heavy dews and rain, there is insufficient food to fuel roots and the like in nature. If you decide a nighttime watering regime is right for you, water at dusk and then apply your fertilizer in the early morning.

My go-to guy, Courtney Hackney, recommends nighttime watering during periods of low humidity and warm nighttime temperatures and notes some of the additional benefits from this approach. Your plants will be well hydrated so you will not have to worry about fertilizer toxicity. The roots will be ready to take up fertilizer as their surface condition has changed from hard and stiff to soft and pliable. If you live in an area with hard water, salts that accumulate in the medium, pots and roots will become soluble overnight, allowing them to be flushed out the next morning while fertilizing. Once the humidity rises or nighttime temperatures drop below the 65–70 F (18–21 C) range, you should resume the more conventional morning watering regime.

Watering during the cooler months is quite different than during the main growing season. Many orchids go through a winter resting period and some an outright dormancy, so the orchid's need for water and fertilizer is at a minimum. Your frequency of watering will be perhaps a quarter or a half of your summertime watering frequency. Water early in the morning, finishing before noon or so. Do not water on gray or rainy days, even if it is your



"scheduled" watering day.

Orchid growers spend a lot of time worrying about different pests and diseases that might be afflicting their plants. I have come to believe that there are more physiological and cultural issues that cause problems with your orchids than those caused by pests and diseases. If you have access to the AOS Guide on Orchid Pests and Diseases, read or reread Tom Sheehan's discussion on physiological disorders caused by improper watering, light, nutrition, potting faults and other conditions (Sheehan 2002). His comments are as true today as the day they were written.



This bifoliate cattleya (above) has just developed edema. The blisters are always raised. Sunken spots would be suggestive of a bacterial infection causing a collapse of the cells. Sometimes edema is mistaken for scale, though scale can easily be rubbed off with alcohol and a cotton swab.

The raised blisters are clearly displayed on this phalaenopsis leaf (left). Some of them are translucent, and some have taken on a corky appearance (image sent to www.staugorchidsociety.org for diagnosis).



AOS CORNER





The End Page

GLOS 2020 SHOW UPDATE - Submitted by Pete Ostlund, this year's Show Chair

The dates for our 37th orchid show are February 22 -23, 2020. Planning for the show is already underway. Please mark your calendars. We'll need volunteers for various duties for the show dates and for the 2 days prior (February 20 and 21).

The Show Planning Committee is coming together. All the people listed have agreed to head up the following activities. Anyone else interested, please contact Pete.

- AOS Judging Lynn O'Shaughnessy
- Art Exhibits, Orchid-Related Carol Ann Stuht •
- Classes for Public Mike Underwood •
- Flver/Handouts Dot Potter Barnett •
- GLOS Exhibit Bill Cadman
- Hospitality Teresa Lewis Fowle •
- Information Table/Membership Mary Henman •
- Judging Activities/Registration Doris Asher •
- Kids' Corner Diane Zoellner and Michael Bukala •
- MSU Liaison Ioana Sonea •
- Orchids-in-Use Competition - Jenny Bond and Sue Wittick
- Parking Permits/Signage Ioana Sonea •
- Publicity (not TV) Ioana Sonea •
- Television Publicity Pete Porciello •
- Vendor and Exhibitor Liaison Pete Ostlund •

If you'd like to help out and learn about any of these activities, or perhaps take over one of these roles, please contact me.

More information about the show will be coming out in future months. But we need volunteers to make the show a success. Please mark your calendars for February 20 – 23 so you can help out at the show and avoid other conflicts. Thanks!