



The

Arizona Orchidist

Published monthly by
The Orchid Society of Arizona, Inc.
Founding Editor- Clarence S. Lindsten
1966

Volume 44

March 2008 Number 3

NEXT OSA MEETING

The next regular society meeting
will be **Monday, March 3, 2008**
at **6:45 P.M.**

Meetings are held at the
Encanto Park Clubhouse
2605 N. 15th Ave., Phoenix, Arizona
North of Encanto Blvd. on 15th Ave.

Phone (602) 261-8993

OSA meetings are open to all
plant enthusiasts

Refreshments will be provided.

Snacks by

Sarah Heberling and Bob MacLeod

Beverage by

Lou Ann Remeikis

Refreshment Coordinators:

Barbara Parnell (480) 948-0714

Mary Gannon (623) 878-4173

OSA BOARD MEETING

Board Meetings

are open to all members

The next Board meeting will be

Sunday, March 30, 1 PM

at the home of

Julie Rathbun

GROWER ON CALL

Bob MacLeod – (623) 935-4059

March Program

REMEMBER MEETINGS NOW BEGIN AT 6:45 PM

TIME TO REPOT – WITH WHAT & AND WHY?

Orchid medium to be used with our precious plants is as diverse as anything can be, and confusing, too! At our meeting on March 3rd, I'll try to explain the various materials that can be used with orchids. Do you find yourself asking if fir bark is enough? Should you add other components (vermiculite, perlite, sphagnum moss...the list goes on)? There are pros and cons to various potting materials, and you will learn what will or will not work for you.

If you have already determined what orchid mix you like to work with (or don't), please join in and share your experiences with the group. Membership in OSA provides the opportunity to learn about orchids together, and from each other.

Happy Growing –

Lou Ann Remeikis

FEBRUARY RAFFLE DONORS

Bob MacLeod, Julie Rathbun,

Lou Ann Remeikis, Wilella Stimmell,

and the Family of Ken Gettys

IN THIS ISSUE

FROM THE PRESIDENT'S DESK	Julie Rathbun	Page 2
COMMUNITY SERVICE PROGRAM	Wilella Stimmell	Page 4
DNA 'BARCODE' IDENTIFIED FOR PLANT	Science Daily	Page 5
ENVIRONMENTAL STEWARDSHIP	Marilyn HS Light	Page 6
CHOOSING POTTING MEDIA	Ray Barkalow	Page 7



Julie Rathbun

For those of you who missed our February 4th meeting, you missed an excellent PowerPoint presentation on Paph culture by Blaine Maynor, owner of Orchids for the People, our speaker from McKinleyville, CA. (For those of you who have no idea where in CA, McKinleyville is located, it's 100 miles from the nearest "city" [Redding], and it's at least a 3 hour drive from his home to the Oakland airport! McKinleyville is near the Oregon border.) Blaine's program included photos of his greenhouse, a view of how close he lives to the ocean, and photos of the two youngest Maynors - his 2 year-old daughter, LAELIA, and his 5 year-old son, Quinn.

Thanks to Willie for picking up Blaine at the airport which usually is a "zoo", but because it was Super Bowl weekend, airport traffic was especially heavy.

It was my pleasure to host Blaine in my home for three days. My Yorkies enjoyed the extra attention, and Blaine took photos of the dogs so that he could show the pictures to his children. He also toured my greenhouse and complimented me on the health of my plants. His comments were greatly appreciated because Blaine is an expert on plant culture. He also saw the potting mix which I use for my orchids and which we use in all of our repotting programs, and he was impressed with the quality of the mix.

A few tips that I remember from the program are: Blaine uses Super Thrive and Epsom Salts on his plants. However, he also mentioned that his water supply is 99% free of salts (unlike the water we have in the Phoenix Metro area).

Blaine was highly complimentary of our members and said that he would like to return to speak to us. With luck, the next time he returns, the temperature will be warmer, and it won't rain as much as it did when he was here.

During our February meeting, I mentioned that **beginning with our March 3rd meeting, all meetings held at the clubhouse will begin at 6:45 PM. From 6:30 to 6:45, we need members to set up the tables and chairs so that we can start our meeting 15 minutes earlier than we have in the past. Meetings will end at 8:20 so that we have time to take down the tables and chairs and exit the building by 8:30.**

On Saturday, March 8th, we will participate in the Fred Rathbun Horse Show (aka Equestrian Special Olympics). This is the 8th year that we have volunteered to help with this event which is sponsored by the City of Phoenix, Parks and Recreation Department Adaptive Services, Phoenix Special Olympics Maricopa Area, and the Western Saddle Club. Look for the address of the Western Saddle Club in the Community Service Schedule in this newsletter. Spotters to walk alongside each rider and lunch line volunteers are needed.

Our March 30th Board Meeting will be held at my home. For benefit of newer members, **any** OSA member is welcome to offer to host a Board Meeting.

See you at our March 3rd meeting!

Julie

AOS MEMBERSHIP

The American Orchid Society has asked editors of orchid society newsletters to announce a special membership rate in honor of the World Orchid Conference. These rates are in effect until March 31, 2008.

Individual Membership: One Year \$49.95, Two Years \$99.95
Joint Membership One Year \$64.95 Two Years \$129.95
Student Membership One Year \$35.00 Two Years \$63.00

[Joining](#) the American Orchid Society places a great many helpful resources at your fingertips. Benefits include:

12 issues of [Orchids](#) -- a gorgeous, colorful, 80-page, award-winning magazine filled with informative articles and features, dozens of dazzling photographs, and more advertisements for orchids and orchid products than found anywhere else in the world.

New member coupon worth 50% off the purchase price of one of the following Society publications: *Your First Orchid*, *Growing Orchids*, *Orchid Pests and Diseases*, *Orchid Photography*, and *Growing Orchids Under Lights*.

Discounted admission to [select gardens and arboreta](#) in the United States.

1 copy of the [AOS Orchid Source Directory](#), a compendium of sources for plants and supplies.

10-percent discount on purchases from the [Orchid Emporium gift shop](#) including tantalizing merchandise and informative orchid books and reference materials. Truly a one-stop shop for orchidoholics!

Reduced processing fees for AOS-judged awards.

Free admission to the [AOS Visitors Center and Botanical Garden](#) in Delray Beach, Florida.

Two-year sign-ups receive a coupon worth \$30 off on a retail plant purchase of \$100 or more from one of a more than dozen outstanding commercial firms.

Discounts on [classes](#) held at the AOS Visitors Center and Botanical Garden.

Access to all [Members Only](#) area of the AOS's immensely popular Web site.

Contact with the AOS's experienced and knowledgeable staff and volunteers for advice with your orchids.

The intrinsic knowledge that support of our nonprofit membership organization through dues aids so many other important areas that the Society supports year round -- orchid research, conservation, education, Affiliated Societies, and the like.

Schedule of 2008 Orchid Shows in Hawaii

Wilbur Chang has sent us the schedule of shows for orchid societies on Oahu and neighboring islands. Copies of the schedule will be available at our March meeting. Look for them on the raffle ticket table.

Mahalo, Wilbur!

The *Arizona Orchidist* is published monthly by the

Orchid Society of Arizona, Inc.

Direct Inquiries to our website at:

www.orchidsocietyaz.org

Or to any of the Board Officers or Trustees:

Board of Directors for 2008

President	(602) 843-0223
Julie Rathbun	jandfent@aol.com
First Vice President	(480) 722-9328
Aaron Hicks	ahicks51@cox.net
In House Program Chairman	
Second Vice President	(480) 785-2251
Joe Bacik	bacikj@cox.net
Outside Speaker Program Chairman	
Secretary	(480) 948-0714
Barbara Parnell	birdie552002@yahoo.com
Treasurer	(480) 947-8479
Wilella Stimmell	wilellas@worldnet.att.net
Librarian	(602) 803-6889
Lou Ann Remeikis	remeikis@andiamotel.com
Editor	(505) 898-0975
Keith Mead	kjkm@comcast.net
Trustees	Frank Bopp (623) 937-0019
	fgbopp@cox.net
Marleny Castillo	(602) 441-4050
	corinc@hotmail.com
Mary Gannon	(623) 878-4173
	mggaz@cox.net
Seelye Smith	(602) 404-1013
	sss3301@hotmail.com

The Orchid Society of Arizona, Inc. is a non-profit 501 (C) (3) organization dedicated to community service and the study of orchids. It is affiliated with the American Orchid Society, The Orchid Digest Corporation, the Arizona Federation of Garden Clubs, Inc. , and The Nature Conservancy.

COMMUNITY SERVICE PROGRAM SCHEDULE

By Wilella Stimmell, CSP Coordinator

On February 12, FRANK BOPP, SARAH HEBERLING, BOB MACLEOD, LOU ANN REMEIKIS, and I presented a repotting program at the NORTHWEST REGIONAL LIBRARY in SURPRISE. Three of the Phal seedlings used during the program had already started their bloom spikes! Although Julie Rathbun was working that day, before she left home, she had assembled a cart full of display plants and potting supplies which I picked up on my way to the library. We had a very colorful display of blooming plants which were admired by the participants. One of the female participants already had an orchid, described its "problems" and asked for a diagnosis. I suggested that she bring her plant to our March meeting, but her reply was totally unanticipated. The problem with bringing her plant to our meeting is that she lives in TENNESSEE! She was visiting her mother who lives in the west valley. Both mother and daughter repotted a Phal seedling and created milk jug greenhouses for them. They said that they would be comparing notes regarding the progress of their seedlings: our dry climate versus the more humid climate in Tennessee.

On **SATURDAY, MARCH 8**, OSA members will assist with the **Equestrian Special Olympics** which is held annually at the **Western Saddle Club Arena, 12425 N. 7th St., Phoenix**. I will be working on the lunch line, but we need able-bodied members to serve as spotters as the participants on horseback ride around the arena. For benefit of newer members who might wonder about the connection between orchids and this event, there is no direct connection. However, the announcer usually mentions that members of the Orchid Society of Arizona have volunteered their time to help with the event. The publicity is excellent for us; our name appears in the program that is handed out to all parents and participants. And helping others less fortunate than ourselves is also a bonus for us. During our March meeting, Julie will mention the time that spotters need to arrive at the arena. (The event is scheduled for 9 AM – 2 PM.) If any member has any questions, Julie will answer them at our meeting, via telephone, or e-mail.

Feedback to the Article, "Is Tropical Deforestation Really Occurring?" published in the February, 2008 issue of The Arizona Orchidist:

Upon reading the article by Rhett Butler published in our February newsletter, Dr. John T. Atwood, former Director of the Orchid Identification Center in Sarasota, FL, and member of OSA, immediately responded: "I noted the article by Mr. Butler in the OSA Newsletter. He argued against the reality of tropical deforestation. He is correct that as in the temperate regions forests do regenerate in the tropics, but it takes **generations** to return to anything like the original diversity. Indeed, satellite imagery shows a complex system of canals in eastern Honduras which had to have been deforested and have since regenerated. But **deforestation in mountains** can only lead to extinction of narrowly distributed species. Something is just not right with this article, and we can't afford to let up our guard!"

In the February 3rd, 2008 edition of The Arizona Republic, page A21, the article "Deforestation hurts climate: Study links warming with forest depletion" by Edward Harris, Associated Press, is also a rebuttal to the article by Rhett Butler which was published in our February newsletter. The article includes information from the December, 2007 U.N. meeting in Bali and cites an **increased** estimate of deforestation of **32 million acres per year**. For those who missed reading the article, copies will be available at our March meeting.

Editor's Note: Conservation International has several current and interesting articles about climate change and deforestation on the CI website. One of them is:

<http://www.conservation.org/FMG/Articles/Pages/01310802.aspx>

DNA 'Barcode' Identified For Plants

ScienceDaily (Feb. 7, 2008) — A 'barcode' gene that can be used to distinguish between the majority of plant species on Earth has been identified. This gene, which can be used to identify plants using a small sample, could lead to new ways of easily cataloguing different types of plants in species-rich areas like rainforests. It could also lead to accurate methods for identifying plant ingredients in powdered substances, such as in traditional Chinese medicines, and could help to monitor and prevent the illegal transportation of endangered plant species.

The team behind the discovery found that DNA sequences of the gene 'matK' differ among plant species, but are nearly identical in plants of the same species. This means that the matK gene can provide scientists with an easy way of distinguishing between different plants, even closely related species that may look the same to the human eye.

The researchers made this discovery by analysing the DNA from different plant species. They found that when one plant species was closely related to another, differences were usually detected in the matK DNA. The researchers, led by Dr Vincent Savolainen, dual appointee at Imperial College London's Department of Life Sciences and the Royal Botanic Gardens, Kew, carried out two large-scale field studies: one on the exceptionally diverse species of orchids found in the tropical forests of Costa Rica, and the other on the trees and shrubs of the Kruger National Park in South Africa. Dr Savolainen and his colleagues in the UK worked alongside collaborators from the Universities of Johannesburg and Costa Rica who played a key role in this new discovery.

Using specimens collected from Costa Rica, Dr Savolainen and colleagues were able to use the matK gene to identify 1,600 species of orchid. In the course of this work, they discovered that what was previously assumed to be one species of orchid was actually two distinct species that live on different slopes of the mountains and have differently shaped flowers adapted for different pollinating insects.

In South Africa the team was able to use the matK gene to identify the trees and shrubs of the Kruger National Park, also well known for its big game animals.

Dr Savolainen explains that in the long run the aim is to build on the genetic information his team gathered from Costa Rica and South Africa to create a genetic database of the matK DNA of as many plant species as possible, so that samples can be compared to this database and different species accurately identified.

"In the future we'd like to see this idea of reading plants' genetic barcodes translated into a portable device that can be taken into any environment, which can quickly and easily analyse any plant sample's matK DNA and compare it to a vast database of information, allowing almost instantaneous identification," he says.

Although Dr Savolainen concedes that such technological applications may be some years away from realisation, he says the potential uses of the matK gene are substantial: "There are so many circumstances in which traditional taxonomic identification of plant species is not practical - whether it be at ports and airports to check if species are being transported illegally, or places like Costa Rica where the sheer richness of one group of plants, like orchids, makes accurate cataloguing difficult."

The matK gene may not, however, be able to be used to identify every plant species on Earth. In a few groups of species, additional genetic information may be required for species-level identification because hybridization - where species cross-breed and genetic material is rearranged - may confuse the information provided by matK.

Journal article: 'DNA barcoding the floras of biodiversity hotspots' Proceedings of the National Academy of Sciences, Online Early Edition, Monday 4 January 2008.

Authors: Renaud Lahaye, Michelle van der Bank, Diego Bogarin, Jorge Warner, Franco Pupulin, Guillaume Gigot, Olivier Maurin, Sylvie Duthoit, Timothy G. Barraclough, Vincent Savolainen.

This research was funded by the Defra Darwin Initiative, the Universities of Johannesburg and Costa Rica, the South African National Research Foundation, the Royal Botanic Gardens, Kew, and the Royal Society.

Adapted from materials provided by [Imperial College London](http://www.imperial.ac.uk).

Reprinted from Science Daily <http://www.sciencedaily.com>

Step Softly: Environmental Stewardship

Marilyn H.S.Light
Gatineau, Quebec, Canada
mlight@igs.net

Spring is in the air! Native orchid enthusiasts are gearing up for another year of discovery and enjoyment of their favorite blooming beauties. Photographers are hoping to find the species that eluded them previously. Others including myself are looking forward to initiating or continuing long term tracking studies. Now is a good time to consider the relative impact of all those feet on the orchids and their environment.

Believe me, even one person moving carefully through the forest has an impact. Several people following in those same footsteps multiplies the trampling effect. Damage to fragile ecosystems such as bogs and fens may be more quickly apparent but all habitats are vulnerable to foot traffic. Ironically, it is the recent popularity of the 'great outdoors' that exacerbates the problem. The very orchids that interest us may disappear as a result of our forays unless we consider the impact of what we do (Penskar and Higman, 2000; Meleg, 2003). Studies in Finland, Ireland and Switzerland have measured the effect of trampling on forest trees, tree seedlings, ground cover plants and on the soil microbial community. The first plants to disappear are tender herbs like mosses. "With only minimal trampling 20 peatland species are lost" (MacGowan, 1996). In a Finnish study, the microbial community structure of the humus layer in an urban forest was affected by a cascade of events beginning with trampling then extending to changes in vegetation and litter quality which ultimately affected humus pH (Malmivaara-Lämäsa and Fritze, 2003). The Swiss study by Waltert et al. (2002) investigated the impact of trampling on the mycorrhizal roots of seedling and mature trees. Not only did they report that trampling caused considerable damage to forest floor vegetation but it especially affected seedling trees and their mycorrhizal fine roots.

We do not yet have a measure of the indirect effect of trampling on orchids but there are reports of the deleterious effect of leaf damage and removal. When leaves of *Dactylorhiza maculata* and *Tipularia discolor* were removed in whole or in part experimentally, plants became progressively smaller and were less likely to flower the following year (Whigham, 1990; Vallius and Salonen, 2000). Effects of human visitation and touch on plant growth and herbivory have been documented for species other than orchids (Cahill Jr., Castelli and Casper, 2002; Hik et al. 2003). Because we do not yet know enough about the impact of human visitation on orchids, we must minimize disturbance when we visit sites to photograph or otherwise study them. We must take care.

So how do we minimize any damage we may cause?

- A. Consider the habitat and its relative fragility. Wetlands are especially vulnerable and should be visited with great caution and preferably not in large groups.
- B. Consider the orchid and its rarity. While we may want to see the 'rare' ones, it might be best to leave a fragile site or a small population completely undisturbed. When in doubt, please don't.
- C. Consider the orchid and its ecosystem. Orchids do not live in isolation. They have a complex life cycle and a reliance on particular habitat conditions to survive. Human visitation can lead to soil compaction, changes to the soil microflora and loss of vulnerable species.
- D. Walk softly and carefully. Even common orchids like the Helleborine (*Epipactis helleborine*) deserve our consideration and respect if we expect to learn something meaningful about their behavior. Ever since I began a study in 1985, I have limited my visits to the absolute minimum needed to gather data, have walked on exposed rocks wherever possible to minimize disturbance, and have resisted moving companion plants that were spoiling my view. I wear running shoes which are less potentially damaging than hiking boots. Be an exemplary environmental steward. Stay on paths and walkways where they are provided and especially where the park respectfully requests that you do so.

Reprinted with Permission

CHOOSING POTTING MEDIA

One of the more common media ingredients - used alone or in blends - is **fir bark**. Good quality bark is getting harder and harder to find, but the stuff that is available is typically steamed to extract the resins that could be toxic to your plants. The removal of that resin increases the water-holding capacity of the bark, but also shortens the life of it. The irregular shape of the pieces of bark can lead to excess packing, which may reduce the airflow to the root system. Fine grade is often used for small seedlings, and the coarser grades for large plants. Before using bark, water it with boiling water to facilitate wetting, then let it cool.

Coconut husk chips (CHC), made from the pithy covering outside of the spherical, hard coconut shell, is gaining popularity as a replacement for fir bark. It is readily available, relatively cheap, and wets and rewets better than bark. It also tends to be more regular in shape - chunks or cubes as opposed to coarse flakes - so facilitates better air flow throughout the root mass. CHC holds a lot more water than bark, so keep that in mind when using it. It lasts considerably longer than bark as well, often going three years before decomposition becomes an issue, as opposed to a year for bark. A word of warning: despite claims otherwise, most CHC has a fairly high salt content when you get it, so it pays to soak and rinse it several times prior to use.

Coconut husk fiber is the wiry result of stripping and shredding the interior of the coconut husk, rather than chipping it. It is springy and flexible, and is often matted to form liners to hanging baskets, but it can also be use straight as a medium for plants that really like to dry out fast. If fairly tightly compressed, water will stay in pockets in the mass for a longer time period.

Coir, sometimes called "**Coco-Peat**," is the result of grinding the husk into coarse powder. It is often used as a substitute for peat moss in blends, but can be used alone for seedlings that like to stay damp.

Peat moss and its commercially available blends, such as **ProMix HP**, are sometimes used in the so-called "mud mixes," which hold water really well. Like coir, it can be blended with other ingredients to produce a good medium for terrestrial and semi-terrestrial species.

Osmunda fiber, the roots of a number of ferns from the genus *Osmunda*, used to be a staple in the orchid-growing community, but it is now difficult to find a high quality fiber.. It is tough and springy, and requires vertical alignment in the pot to ensure proper drainage. It almost totally ensures that the plants' roots get all of the air they need, and as it decomposes, is an excellent source of nutrients, requiring little or no supplementation via fertilizers.

Tree fern fiber - the "trunks" of tropical tree ferns - has replaced most osmunda in orchid culture. It is very stiff and airy, and can be obtained as shredded fibers, chunks or slabs. It has little moisture holding capacity, so aerates media blends very well. The slabs are often used for mounting plants directly.

Redwood fiber, or "**Palco Wool**" as it is sometimes known, is a light, fluffy wood fiber that does not decompose, and is added as a moisture-retention aid and as a means of increasing the acidity of media blends.

Sphagnum moss is pretty much a standard in the orchid growing community, whether by itself or as a blend additive. Available in a wide range of quality - from the expensive New Zealand "Primo" and it's close-but-less-expensive counterparts from Chile, to some really lousy stuff (short strands, no "fluff"), - the good stuff is a great medium for plants that love constant moisture. Learning how to attain the proper packing density is a challenge, as it holds so much water that it can become sopping pretty easily. Generally, sphagnum becomes sour and in need of replacement in the 6- to 9-month range, although that can be extended by blending it with charcoal.

Hardwood charcoal is a very long-lasting medium ingredient having a moderate-to-low moisture holding capacity. Many growers of vanda-ceous plants use the coarse grade as the sole medium. Some claim that the charcoal "sweetens" the medium by absorbing some of the foul chemicals produced in the decomposition of other media components, or excess salts from fertilizers.

Perlite, often referred to as "**sponge rock**" for the coarser grades, is expanded volcanic glass, and is a great aerator of blends, but still holds enough moisture to be a fairly good substrate for Semi-Hydroponic culture.

Pumice is similar in nature to perlite, but with a higher density and lower moisture-holding capacity.

LECA, standing for "Lightweight Expanded Clay Aggregate," is a general term for any number of more-or-less spherical terra cotta pellets that were originally designed to be the aggregate in lightweight concrete formulations, but later diverted to horticultural use. There are many brands available, including Aliflor, Hydroton, PrimeAgra and others, and they vary greatly in their properties and applicability to orchid culture.

Diatomite is calcined diatomaceous earth muds. It is highly porous, and holds a tremendous amount of water. While it seems to be just too wet for Semi-Hydroponic culture, it has seen good application by itself for pot culture for plants that appreciate a damp root environment.

Reprinted with permission of and thanks to Ray Barkalow www.firststrays.com

OSA March 2008 Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 <i>Sarah Heberling</i> 
2	3 <i>OSA Meeting 7PM</i>	4  <i>Wilella Stimmell</i>	5	6	7	8
9	10	11	12  <i>Chris Gubler</i>	13	14	15
16	17  <i>St Patrick's Day</i>	18	19	20	21	22
23  <i>Sean Bacik</i>	24 31	25	26	27	28  <i>Julie Rathbun</i>	29
30 <i>Board Meets</i>						



Orchid Society of Arizona

c/o Keith Mead

5425 Thomas Drive NE

Albuquerque, NM 87111

March 2008 Newsletter