



The Arizona Orchidist

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The Orchid Society of Arizona, Inc.
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1966

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December 2016

NEXT OSA MEETING

The next regular society meeting will be

Monday, December 5th

Meetings are held at the

Training Center

at the

Arizona State Veteran Home

4141 S. Herrera Way, Phoenix.

(Formerly North 3rd Street)

OSA meetings are open to all

plant enthusiasts

Refreshments will be provided

Everyone !

Refreshment Coordinators:

Lou Ann Remeikis (602) 803-6889

Barbara Parnell (602) 451-5952

Joint Board Meeting

**January 22nd at 4 PM
at**

**China Chili's restaurant,
302 E. Flower, Phoenix.**

Grower on Call

Wilella Stimmell
wilellas@att.net

December

Annual December Fund-raising Auction

Our 22nd annual holiday buffet and live auction fund-raiser will begin promptly at 7 PM on Monday, December 5, in Liberty Hall at the Arizona State Veteran Home.

You are cordially invited to join in the fun of our auction. There will be both a live and silent auction of orchid plants and orchid-related items. OSA is a 501 (c) (3) non-profit organization dedicated to community service, and we do NOT accept grant money. Our December auction is one of our major fund-raisers in the year.

We need your donations of plants and orchid-related items. If you don't have anything to donate for the live and/or silent auction, join in the bidding, and perhaps you'll take home one or more plants from your "wish list" or a few orchid-related items to give as holiday gifts. This is your one-stop shopping adventure! Don't forget to **bring boxes or crates** in which you can take home your winnings!

An expanded refreshment table will be provided by OSA members.

Note to guests and new members who are attending their first OSA December auction: NO credit cards are accepted.

November Raffle Donors

Joe Bacik, John Barber, Brad Dana, Dolly Floyd, Bob MacLeod,
Julie Rathbun, Wilella Stimmell, and non-member Mike Sielaff

Thanks for your support !

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From the President's Desk

Julie Rathbun

For those of you who were unable to attend our October 15 and 16 orchid show and sale, Bewitching Orchids, you might like to know the names of the members who helped make our show a financial success:

Joe Bacik
John and Karen Barber
Brad Dana
Dana and Dolly Floyd
Terri Jackson
Gary Law
Bob MacLeod

Barbara Parnell
Ed and Cheryl Perregaux
Randy Ricardi
Lou Ann Remeikis
Willella Stimmell
Dean Toms
and me

Thanks to all of our workers and to the members who brought snacks for our refreshment table! If I forgot to include a few names of other workers, it was **not** intentional. All help was greatly appreciated. **Special thanks to Jonathan Tang**, Acting Therapeutic Programs Manager at the veteran home, for making sure that the maintenance staff provided the tables that we needed for our show, and for introducing himself to us at our show.

We displayed our members' plants on Dean's 3-tier shelf assembly. It was perfect! Also, Dean brought two unique, small structures in which he grows miniature plants in his home.

We've never had a show visitor from as far away as **Israel**, but there's a first time for everything. Elsewhere in this newsletter you will find pictures of our show.

At our November meeting, our election of Officers and Trustees for OSA's 2017 Board of Directors was supposed to take place. I asked Lou Ann, the Nominating Committee Chair, to read the slate before we voted. She was busy with the refreshment table, so she asked me to read it. I read the slate of candidates, but that threw me off base, and the vote didn't happen. **We WILL vote on the 2017 slate at our December 5 meeting.** Just before I read the slate, I had explained why the Fred Rathbun Horse Show, scheduled for Nov. 5, had to be postponed due to a muddy arena thanks to rain. The horse show will be rescheduled for March. That's no excuse for forgetting to go forward with the vote, but...poo happens.

Our speaker for the evening was Chuck Hanson from Sonoita. His PowerPoint presentation on Arid Adapted Orchids was interesting, and we learned information about orchids that most of us have never tried to grow. Joe placed one such plant on the raffle table.

Our popular December meeting is **our annual fund-raising auction** and the last event in this year for us to raise money for our community service agenda. Both a live and silent auction will be held during this meeting. This year our meeting will be held on **December 5. The quilt raffle will not happen during our December meeting.** Due to circumstances beyond my control, I won't have time to finish the quilt before our December meeting.

Our annual fund-raiser is lots of fun! An added attraction is our expanded refreshment table. It features a smorgasbord of assorted foods. All OSA members bring a food item of their choice. Guests are not expected to bring food...unless they really feel the urge to contribute.

Our joint board meeting of retiring and newly-elected Officers and Trustees will be held on Sunday, January 22 at 4 PM at China Chili's, 302 E. Flower St., Phoenix. (N. 3rd St., south of Indian School, on the east side of the street.)

At our October board meeting, we looked at the **2017** calendar and decided that **3** monthly meetings will need to be cancelled. **Please make note: Due to interference of holidays, there will be no meeting on January 2; no July 3 meeting; and no September 4 meeting.**

For future board meetings, we welcome any OSA member to volunteer his/her home as the host location for a board meeting. Also, our board meetings are open meetings, and any non-board member is welcome to attend.

See you on December 5!

Julie

**Instructions for those donating plants
or orchid-related items for the
December auction**

Although our December 1 auction will begin promptly at 7 PM, **members bringing donations need to arrive by 6:30** at Liberty Hall and do two things:

1. A minimum bid should be CLEARLY written on the item so that if it's an item for the **LIVE** auction, our auctioneer will be able to **READ** the minimum bid. Items that don't fetch minimum bid will be returned to the donors **ONLY** if they write **ON** the item – "return to (name) if the item does not receive a minimum bid". The items so marked will be left on the live auction tables. It will be a donor's responsibility to retrieve unsold items at the end of the meeting.

2. Members arriving later than 6:30 and who have items for the SILENT auction, need to physically take the items to the silent auction tables. (See #1 regarding items that do not receive a minimum bid.) An OSA member will be stationed at the silent auction tables.

Membership Renewal Time

It's membership renewal time again. OSA's calendar year ends on December 31st.

At your earliest convenience, please complete all areas of the renewal form and return it with your 2017 membership dues to the Treasurer's address that is listed on the form, or bring your completed form with cash or check to our December or January meeting. **Please** do not pay your dues without completing your renewal form! When you pay your membership dues, if no information has recently changed for you, at **least please write your name, the date, and "No changes" on the renewal form.**

If you don't receive a renewal form, contact our newsletter Editor, Keith Mead, at orchidsinabq@gmail.com or...check the culture sheet box at our meetings. We always have extra copies of membership applications/renewals on hand.

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Direct Inquiries to our website at:
www.orchidsocietyaz.org

Or to any of the Board Officers or Trustees:
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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 Arizona Federation of Garden Clubs, Inc. , and The Nature Conservancy.

BEWITCHING ORCHIDS

Photos Courtesy of Joe Bacik and Ed Perregaux



A Rather Humorous Discussion on Plant Hormones

(From: Shmoop.com/plant-biology/plant hormones)

Teenagers aren't the only ones with raging hormones. Plants are full of hormones too, but luckily for them they don't get pimples. In plants, hormones are responsible for all sorts of things, like helping the plants sense light, forming lateral roots, and triggering flower development and germination, just to name a few. If a plant had a Facebook account, it might write updates like "OMG my axillary branches are shooting up so fast" or "just tricked a bee into pseudo-copulating with my flower, lol." However, plants don't have Facebook, so they rely on hormones to be their messengers. Hormones are signaling molecules that are produced in small amounts and sent to other parts of the plant's body, like tiny messengers running around.

Why should anyone care about plant hormones? Plant hormones are really important in creating the green world around us, and providing the fruits we eat and other plant products we enjoy on a daily basis.

Many things about plant hormones are still unknown, so it is a great field for a budding plant biologist (no pun intended...well actually it was, sorry).

Here we will discuss five types of plant hormones:

- **Auxin**
- **Cytokinins**
- **Gibberellins**
- **Abscisic Acid**
- **Ethylene**

Scientists were interested in how plants respond to light; if plants don't have eyes, how do they sense where light is and which way they should grow? It is a common observation that plants grow toward light, but for a long time no one knew why. One of the first people to experiment with this concept was Charles Darwin, who along with his son, Francis, was interested in figuring out how plants respond to stimuli (in this case, light).

They noticed that coleoptiles, which are sheaths that protect grass stems as they germinate, bend toward light. They tried covering the coleoptile with foil and found that when covered, the coleoptile didn't bend. When uncovered, it bent again! From this the Darwins concluded that the tip of the grass coleoptile senses light.

Even though it doesn't seem very exciting now, in the 1800s this was just as scandalous as Lady Gaga's meat dress. The idea that plants could do something as brilliant as respond to their environment was shocking in an age when Man was exerting control on all things, wild!

Later work by another scientist, Frits Went, determined that the signal responsible for bending toward light was a mobile chemical, and Went went ahead and gave it the name auxin.

These days, auxin is sometimes referred to by its chemical name, indoleacetic acid (IAA).

Auxin

Auxin does a couple different things in a plant, but its main role is to work with another type of hormone (cytokinins) to stimulate elongation of stems. If auxin is helping cells elongate, it is likely found in a place where a lot of new cells are forming. Where would that be? The shoot apical meristem, of course!

The shoot apical meristem is a major source of auxin, but not the only one. Developing seeds also produce auxin, which leads to fruit development. When fruits such as tomatoes are grown inside greenhouses where there are no insect pollinators, synthetic auxins are used to help fruits develop normally.

Another commercial use of auxin is in the vegetative propagation of plants from cuttings. Instead of planting seeds, people can grow some plants by just cutting a leaf or stem; spraying the detached leaf or stem with auxin induces root production, and a whole new plant is formed.

Continued from page 5

Cytokinins

Auxin helps cells elongate, but it doesn't work alone. Auxin's partner in crime is a class of hormones called cytokinins.

Cytokinins promote cell division (cytokinesis) and are produced in roots, embryos and fruits, or wherever there is actively growing tissue. However, cytokinins need auxin to induce cell division. The ratio of cytokinins to auxin determines where cells will develop. If cytokinin levels increase, shoots form; if auxins increase, roots form. By themselves, cytokinins don't cause any new tissues to form. Cytokinins do a couple other things too:

they help delay aging in plants by increasing the amount of new protein that is made and decreasing the amount of old protein that is demolished. Because of this, cytokinins are sprayed in flower shops to keep leaves green and cut flowers fresh.

Gibberellins

Gibberellins are most important in stems, fruits and seeds. In stems, they work with auxin to cause stem elongation.

Gibberellins and auxin also work in concert when fruit is developing. In fact, green seedless grapes are usually sprayed with gibberellins to make them bigger. Maybe that's what Snooki (a Chilean-American reality television personality) sprays on her hair, too.

Seeds have the problem of not knowing when conditions are right for germination; after all, they don't come with calendars and thermometers. Lucky for the seeds though, they do have lots of gibberellins, which are released after seeds take up water (perhaps after a heavy spring rain). After gibberellins are released, the outer layer of the endosperm releases digestive enzymes that break down nutrients in the endosperm. These nutrients feed the embryo as it germinates and grows into a seedling.

Abscisic Acid

It looks like a scary name, but abscisic comes from the word abscise, meaning to cut off or to fall away. On a plant, both leaves and fruits fall off, and abscisic acid (ABA), got its name because scientists originally thought that ABA caused leaves and fruits to fall off. It turned out later that other hormones (see ethylene, below) are mainly responsible for abscission, but the name stuck.

ABA does do some important things, even though it doesn't do what it's named for. ABA slows growth, and is the main player in seed dormancy. Since plants can't exactly nurse their young and sing them lullabies like humans can, seeds have to be a bit more independent than a lot of animal babies. In fact, seeds are so good at taking care of themselves, they don't even start growing until conditions are right (temperatures are warm, or there is a lot of rain, or they get free tickets to Disneyland). The abscisic acid in a seed keeps it dormant (sleeping, basically). Certain things, such as water, light, or even prolonged cold temperatures, cause the ABA to break down and cue germination of the seed.

ABA has another important role in plants: drought tolerance. When water gets scarce and leaves start wilting, ABA production is cranked up in the roots. ABA moves up the plant to the leaves.

As it accumulates in the leaves, ABA causes stomata to close, preventing more water loss. When water is plentiful again, the ABA breaks down and stomata reopen.

Ethylene

Where would we be without ethylene? We would have many unripe fruits, for starters. And without ripe fruits we would have no strawberry milkshakes, pineapple-mango smoothies, or Fruit Ninja. Ethylene helps fruits ripen by making them softer, through the breakdown components of the cell walls, and sweeter, through the conversion of starches to sugars. Unlike the other plant hormones, ethylene is actually a gas and is distributed through the air, not through the plant body. One of the coolest things about ethylene is that it is released in a positive feedback loop: a little bit of ethylene causes more to be released, which causes even more to be released, and so on.

A benefit of this fact is that you can take an unripe fruit (a pear, plum, or peach, for example) and put it in a paper bag with riper fruit (bananas work well for this) and ethylene will accumulate making the unripe fruit soft and sweet.

Worldwide, billions of dollars of produce spoils every year before it is eaten. Thanks a lot, ethylene.

Special Thanks to Joe Bacik for finding this article.

Monthly Checklist for December

Cattleya

Growers of just about every level of expertise will have begun to notice autumn conditions by now. Days are becoming shorter, hence cooler; the sunlight has less intensity as a result of the sun's lowering angle, nights are longer and generally cooler. Plants are responding by slowing and ripening their growth in preparation for winter.

The first cultural change noticed should be a reduced frequency of watering, as the plants dry out more slowly. This is a function of both the reduced day length and lower temperatures, as well as the plants' slowing growth rate. Reduced water needs signal a reduced need for fertilization. Note that the key word is reduced, not eliminated. Feed less frequently and at lower dosage, but feed. Growths, made during summer's heat, and relatively soft and green, will be ripening -- hardening -- in preparation for a brief period of rest (in many cases).

Many of these ripening growths will have a sheath, presaging the coming winter or spring flowering season. In some cases, these sheaths will have been evident since as early as July. (Early sheath development does not mean early flowering on plants with winter-spring seasons.) You may notice that some of these sheaths are showing signs of yellowing. This is not abnormal. Autumn's more pronounced temperature fluctuation can lead to water condensation inside the sheath, hastening the normal process of senescence, so yellowing sheaths can be left on the plant only so long before they must be carefully removed to preserve the bud primordia within. Water condensation left unchecked can rot the bud primordia. The sheaths can be safely removed by slitting open and peeling down toward the pseudobulb.

Paphiopedilum

The flowering season for the "toads" or "bulldog" paphs is just getting underway. These cannot be grown everywhere, but where cooler summer nights allow their growth, there is no longer-lasting or more exotic display than these. Paphiopedilums are, in general, not heavy feeders, and it is especially important with this type to reduce nitrogen levels now for best flowering and spike length. Be watchful for water accumulating in the growth around the sheath, or for the late-season warm spell, either of which can lead to the sheath's rotting. As the spikes emerge, do not change the orientation of the plant toward the light, as this can lead to a crooked or twisted spike

While paphiopedilums rarely like to dry out entirely, water needs are significantly reduced beginning now. Overwatering at this time of year can quickly lead to root rot or erwinia problems. Now is the time to practice good sanitary practices in your greenhouse or growing areas, as pest and disease problems have a way of multiplying rapidly in the darker and more crowded conditions that generally mark the winter growing area. With paphiopedilums, especially, "cleanliness is next to godliness" and if the growing area is littered with old foliage, weeds and dying flowers, keeping the plants alive and flowering will be next to impossible.

Phalaenopsis

Shortening days and cooler nights are the signals for inflorescence initiation in phalaenopsis. A reduction in nitrogen levels will go a long way to giving the best possible spiking, as will a boost in potassium and phosphorus. In other words, a "bloom booster"-type fertilizer is definitely indicated in the next few months. Disease and pest problems are best dealt with now, especially as mealybugs hide in the bracts and flower buds. Once they have established themselves, they are difficult to eradicate, and flower damage or crippling results. Potential disease problems can be dealt with by the application of a copper-based compound to control/alleviate rot problems before they start. There is nothing more frustrating than to have shepherded your plants through a growing season, only to have them decline before your eyes.

OSA December 2016 Calendar

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3 Connie Cromwell Randy Ricardi 
4	5 OSA Meeting 7 PM	6	7	8	9 Shirley Engberg 	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24 Karl Wyant 
25 	26	27 Janella Bacik 	28	29	30	31



Orchid Society of Arizona

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