Platinum Coast Orchid Society

The Rhyzome

November 2015 Edition

Many thanks to Vern Bloch for sharing his knowledge with us at the October meeting. Member Charlie Scholes will give a short talk in November before he gives away some of his orchids to the winning ticket holders. Don't forget to sign up for the Holiday Dinner at the November meeting.

Please look over the slate of officers below. We will hold our election at the November meeting. We will also vote on the 2016 Show Theme. If you haven't already sent your entry to Patti, please do so by midnight on Halloween. **BOO!** Not more than two entries per person, please. They will be presented for a vote by ballot. No additions after the ballot has been prepared.

SUNSHINE

Get well wishes to Sally, Al, and Camille.

SLATE OF OFFICERS FOR 2016

President	Dave Colchin
Vice President	Jodi Kittleson
Treasurer	Margaret Croucher
Secretary	Elaine DeRiso
Directors	Maria Maloney
	Walter Bryant
	Clive Gay
PP/5th Director	Nadine Kern

(JoAnn Amos remains for the second year of her 2 year term as director.)

The election will take place at the November meeting.

CALENDAR

Nov. 11, 6 pm Board Meeting

Nov. 11, 7 pm General meeting/election

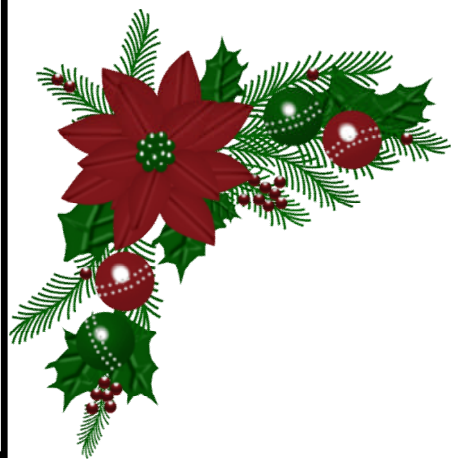
Program—Charlie Scholes has been dividing his orchids. Show up for a chance to win one and to learn about his methods for growing them.

DEC. 9TH, 6PM

HOLIDAY DINNER AND CELEBRATION AT THE COCOA-ROCKLEDGE GARDEN CLUB.

6:00-6:30 APPETIZERS AND PUNCH

6:30 DINNER



You are welcome to bring your own spirits, if you would like.

Please sign up at the meeting or let Patti know that you are coming and what dish you will bring.

A LITTLE ABOUT OUR PCOS PROJECT…….

In September, Holly brought in some flats of Habenaria quinqueseta, A Florida native terrestrial. Many in attendance took a plant and are trying to establish a local colony. A colony of this deciduous plant was discovered near Gainesville, and we are trying to reestablish colonies in Florida. Those who took plants should have copied the Botany Specimen Report so they can record the necessary data.

There appears to be a symbiotic requirement for germination with conifers, so planting them under pine trees is helpful. Some participants who do not have pines in their yard have used pine mulch. As the plant is in its resting period leaves will probably totally disappear. They will make a seasonal appearance around May. Its low, flat, elliptical and subtly striped green leaves erect a bloom structure in late June. By August, the mature plant will display 12 inch high stalks with 8-12 white, 5 bristled, slightly fragrant flowers.

It creates juvenile pea-size bulbs at the ends of certain of its thick slightly furry roots which will, hopefully, create a colony. You should have planted yours in a shady location, in organic soil with good drainage. Water in droughty periods when the plant is visible. When dormant, rainfall is enough.

GOOD LUCK TO ALL WHO ARE PARTICIPATING IN THIS PROJECT.

Vern Bloch (at left), our speaker in October, happily answered questions and gave advice. His program on "Blue Cattleyas" was very interesting. At right, members have a hard time making a decision about which orchid to take home.

The Blue Cattleyas

2015 PCOS OFFICERS & CHAIRS

PRESIDENT

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Camille Theobold

Nadine Kern

Margaret Croucher

MEMBERSHIP

Joyce Schofield

NEWSLETTER EDITOR

Patti Scholes

LIBRARY

Sally Pancoast

SUNSHINE/AOS LIAISON

Betty Adamson

PLANT FORUM

Betty Adamson

GREETER

Christina Rovira

PROGRAMS

Judy Law

PHOTOGRAPHER

Jan Castillo

RAFFLE

Karen Snee

PUBLICITY

Ann Colchin

REFRESHMENTS

Kathy Jacobson

HOLIDAY PARTY

Set up/Decoratiing: Nadine Kern

Shearer Kennedy

Patti Scholes

Betty Adamson

PLEASE START THINKING ABOUT WHERE YOU AND YOUR TALENTS FIT INTO YOUR CLUB. PLUS THERE ARE MANY OPPORTUNITIES TO HELP AT GENERAL MEETINGS:

Come early and help Kathy set up refreshments or carry them to and from her car.

Come early and set up chairs and tables or help put them away after the meeting.

We will need a publicity chair and someone to do the raffle.

There is a place for everyone to help with the show.

GREAT PLACES FOR MEMBERS TO FIND INFORMATION ON ORCHIDS:

1. Programs—Take notes—someday they will make sense

2. AOS Magazine articles. "Orchids" is available at every meeting. Check out the great AOS article in this newsletter.

3. Members— Ask longtime members about orchids, but realize that your yard and potting choices are key. We all use trial and error to succeed.

4. Internet sites—**www.aos.org**—This AOS site has the answer to almost any question.

5. Rambles at members' homes to help you identify the best way to grow your orchids.

UPCOMING SHOWS:

Oct. 30-Nov. 1 Delray Beach Orchid Society Show

Old School Square Gymnasium

51 N. Swinton Ave., Delray Beach

Nov. 7-8 Deerfield Beach Orchid Society Show

Emma Lou Olson Civic Center

1801 Northeast 6th Street, Pompano Beach

Many thanks to Betty for accepting the position of PCOS show chairman. Set aside these dates: 4/27—5/1.

PCOS is an affiliate of the **American Orchid Society (AOS).** There's an abundance of information on the AOS website. For the last few months, a selection of the articles available on the AOS website have been featured in our newsletter. Please visit www.aos.org for articles, advice on growing orchids, and lots of free information.

Check out the Orchid magazine at our meetings, so you can see the benefits of being an American Orchid Society member.

Ask Betty Adamson for an application if you're interested in joining.

For all current members, remember that your renewal notice will arrive in the Orchid Magazine prior to your month of renewal.

www.aos.org

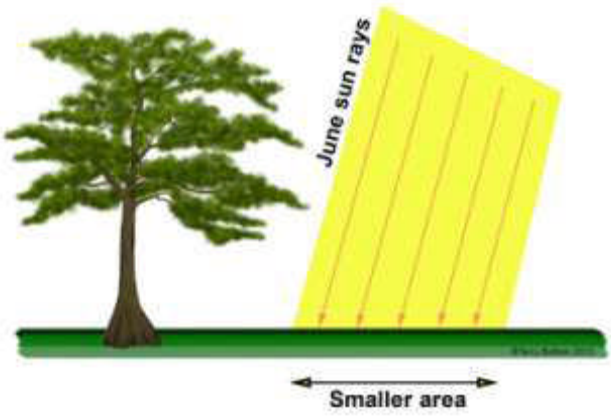
Seasonal Changes in Light

by Sue Bottom

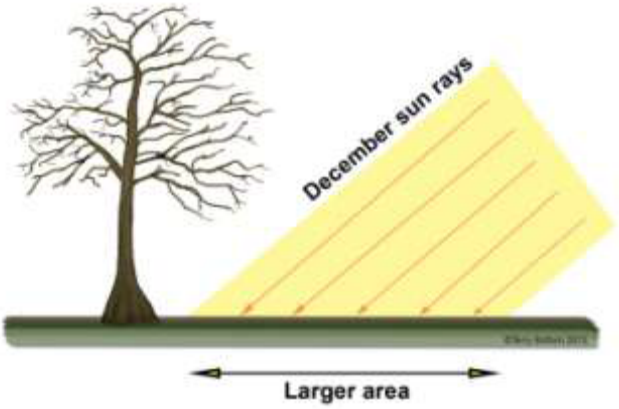
Thank you to Sue Bottom for permission to reprint this article for our newsletter. Sue and her husband, Terry, are active in the St. Augustine Orchid Society. Sue maintains the society's website and publishes its monthly newsletter. Check out the STAUG Orchid Society website and the AOS magazine, ORCHIDS, for more of Sue's articles.

The real orchid food is light, not that blue stuff that comes in a jar. Solar radiation, the energy that comes from the sun, fuels the photosynthesis process by which the chlorophyll converts carbon dioxide and water into sugars and carbohydrates that are used by the plant to grow. If your plant produces a sufficient reserve of food, it will have the energy to produce lots of flowers when the time comes. Fertilizer contains the mineral and trace element nutrients that are used by the plant when it is in active growth, but as a rule, light rather than fertilizer is the limiting factor for growth. Understanding seasonal changes in light levels and duration can make you a better orchid grower.

A long time ago, in a galaxy far, far away, we learned that the reason we have seasons is because the Earth is tilted on its axis by 23.5 degrees. The angle at which the sun's rays strike the Earth's surface determines the amount of solar energy received per unit surface area.



The sun's rays are most intense in the summer because they impact the earth at a more direct angle so they are spread out over a smaller area.



The sun's rays are least intense in the winter because they impact the earth at a more oblique angle and are spread out

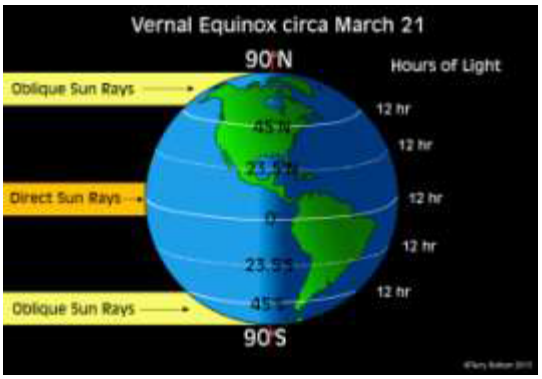
The solar radiation is the greatest when the sun's rays are directly perpendicular to the Earth's surface. When the sun's rays hit the Earth at a more oblique angle, the light is spread out over a larger area so there is less energy per unit area. The direct sunlight is more intense causing the Earth to warm in the summer, and the oblique sun rays allow the Earth to cool in the winter. Varying lengths of day light and darkness also trigger growth responses in orchids and many other plants.

During the winter solstice, the most direct sun rays fall on the Tropic of Capricorn in the southern hemisphere at a latitude of 23.5o S.

Winter Solstice. Since the summer solstice, the days have gotten shorter by a minute or two each day. The sun is getting lower in the sky so the sun's rays are hitting the Earth at an oblique angle causing the light to be less intense. On the winter solstice, we have the lowest amount of incoming solar radiation (insolation) received on any day of the year, less than half of what we receive in the summer in St. Augustine. The shorter day length and reduced insolation cause the Earth in the northern hemisphere to cool. The direct sun rays are impacting the Tropic of Capricorn at 23.5oS in the southern hemisphere where they are enjoying summer.

Is it any wonder that our plants are resting during the winter? In the winter, our plants may still be growing but at a greatly reduced rate because the insolation is much less intense and the hours of daylight (and potential photosynthesis) are at the lowest level of the year. We try to align our watering and fertilizing habits to match our plants' reduced growth rate, so we water and fertilize probably half as frequently and the fertilize dose is cut in half from our summer levels.

Vernal Equinox. After the winter solstice, the days lengthen by a minute or two each day as the sun rises higher in the sky and the sunlight slowly increases in intensity. On the vernal equinox circa March 21, the sun's rays are most direct and therefore most intense at the equator. In St. Augustine, we receive about 87% of the solar radiation received at the equator. The day and night lengths are the same across the Earth, there are 12 hours of light and darkness everywhere.



From the winter solstice through the summer solstice, the sun rises higher and higher in the sky and the day length increases a minute or two each day.

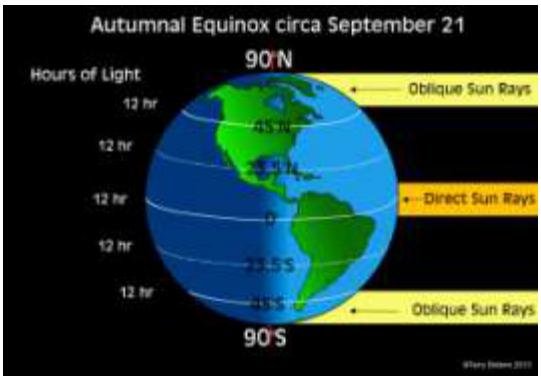
The lengthening day length and higher sun angle are causing spring to bloom. By the vernal equinox, the plants have gotten the message and are increasing their rate of photosynthesis in response to the increase in solar radiation. We respond by increasing the frequency of watering and dosage of fertilizer to match our plants' growth rate. By the end of April we have moved our orchids to their summer homes and added an extra layer of 30% shade cloth to the greenhouse. This shade cloth will protect the plants from the intense summer sun and shade them to prevent excessive leaf temperatures and sunburn.

Summer Solstice. The days continue to get longer by a minute or two each day until the longest day of the year on the summer solstice circa June 21. The sun rises higher in the sky and the sun's rays are more intense as we move to the summer solstice where the direct sun rays impact the Tropic of Cancer at 23.5$_{o}$ north of the equator. The amount of insolation we receive in St. Augustine is about 30% greater than what we receive at the vernal equinox and more than twice the amount we receive at the winter solstice. We get about 14 hours of daylight and 10 hours of darkness on the solstice. The increased insolation and day length cause the Earth to warm.

During the summer solstice, the longest day of the year occurs in the northern hemisphere where the sun's most direct rays fall on the Tropic of Cancer at 23.5$_{o}$N.

Watering and fertilizing frequency is increased to accommodate the increased light intensity and duration throughout the summer. As long as you are seeing green root tips, you should be watering and fertilizing heavily. In the dog days of summer, you may slow down just a little bit because the plant metabolism seems to slow down when ambient temperatures are above 95^{o}F. Sometimes the solar radiation is so intense that it can cause the leaves to burn. Sunburn is really a thermal effect, because the leaf temperature has gotten too high, sometimes far in excess of the air temperature. We protect our plants with extra shade cloth to reduce insolation, increasing air movement to cool hot leaves with fans and spraying water under benches and on clay pots to cool them.

Autumnal Equinox. After the summer solstice, the days begin to shorten by a minute or two each day. The sun rises lower in the sky and the sunlight slowly decreases in intensity as we approach the autumnal equinox in September. This allows the Earth to start cooling once the retained heat from the summer sun dissipates. The sun's rays are the most intense at the equator The solar energy we receive in St. Augustine is slightly greater than our average annual rate. The day and night lengths are the same across the Earth, there are 12 hours of light and darkness everywhere.



From the summer solstice through the winter solstice, the sun angle becomes progressively lower each day and the day length decreases by a minute or two each day.

We get a second growth spurt in the fall when the temperatures moderate and we water and fertilize freely through October. With the fall comes a decrease in day length, solar radiation and temperatures that translate into a slower growth rate for our plants. We remove the extra 30% shade cloth after the autumnal equinox to increase light in the greenhouse for the remainder of the fall and winter. We gradually add days in between watering events and cut the fertilizer addition rate in half to accommodate the lower winter growth rate. We can then kick back and enjoy the blooms from all the energy our orchids stockpiled throughout the long growing season!

Citations: Pidwirny, M. (2011). "Earth-Sun Relationships and Insolation". Fundamentals of Physical Geography, 2nd Edition Retrieved from http://www.physicalgeography.net/fundamentals/6i.html

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