

news

Volume 13.2 - April 2001

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Congratulations to Ingrid Ostrander, President, and members of the Victoria Orchid Society, the show was outstanding in all respects. Our thanks to the Society for being such gracious hosts.

The C.O.C. Annual General Meeting held at the show went very well. There were a number of issues discussed. The medals will now be mounted on a shield prior to sending to the societies. A change in the color of the was discussed and should be available soon. The pins will be available to the societies, they could then be made available for sale at the local shows.

Ken Girard, due to his busy schedule has resigned as Education Chairman, our thanks for the many years of dedication and hard work. Ross Otto, Past President of Foothills Orchid Society has agreed to fill the Education chair. An amendment was made to the bylaws, the date of the annual dues has been changed from June 1st to January 1st. It was decided the Executive of the C.O.C. should take more responsibility for the organization of the C.O.C. auction at the annual meeting. This would help relieve some of the burden on the host Society. The proceeds of the C.O.C. Auction will be divided equally with the host Society. It will be up to the host Society to advise the C.O.C. Executive what help they require. The slate of officers remains the same as last year.

I would like to thank the Executive for their hard work and co-operation in the past year. A special thanks to Jerry Bolce for editing the newsletter and also for updating our web.

The 16th World Orchid Conference Book of Proceedings will be issued in July. A CD-ROM will be included.

Two more slide programs have been added:

Oncidiums - compiled by Gordon Heaps - Orchid Society of Alberta, member

Terrestrial Orchids & Their Culture - compiled by Bill Bischoff - Vancouver and Fraser Valley Orchid Society, member.

These are both excellent programs.

The next meeting will be hosted by the Saskatchewan Orchid Society in conjunction with their show. The show will be held on March 22 - 24, 2002.

The Co-chairs are:

Faithe Prodanuk - faithep@home.com

Tracey Thue - thue@sask.usask.ca.

I am sure they would be happy to answer any questions.

Lynne Cassidy, President

The Third Annual Summer Orchid Fest

The Southern Ontario Orchid Society is hosting the third annual summer orchid fest. The event is free to members of all orchid societies. Bring your membership card and a dish to share at the BBQ lunch. SOOS provides hotdogs, hamburgers, and drinks.

The speakers have been confirmed: Paul Gripp of Santa Barbara Orchid Estate and Norito Hasegawa of Paphanatics Unlimited will be sharing their expertise.

Paul will be speaking on *Lycastes* with special emphasis on the influence of *Lycaste skinneri* on its progeny. Check out the website www.sborchid.com

Norito will be speaking on Paphs of course, highlighting the newly discovered species.

They will both be bringing plants, so this is another chance to order those special things you have been looking for.

Schedule of events

- 9:00am The day will begin with judging. Bring your summer beauties. See what judging is all about.
- 12:00 - 2:00 Lunch and plant sales
- 2:00pm Paul Gripp *Lycastes*
- 3:00pm Norito Hasegawa The New Paphiopedilums
- 4:00pm on Sales and Socializing

The location is at the Civic Garden Centre, corner of Lawrence and Leslie Streets in Toronto.

For more information check the SOOS website at <http://www.soos.ca/>

Mid America Orchid Congress

The 2003 Mid America Orchid Congress and Show will be hosted on April 3 - 5 by The Southern Ontario Orchid Society at The Inn on the Park at Eglinton Avenue East and Leslie Street.

Guest Speaker at the RBG

George Fuller, retired curator of Pukekura Park in New Plymouth NZ, orchid grower and humorous speaker has been invited to be guest speaker at the AOS Trustee Meeting and Mid America Orchid Congress April 25-29, 2001 in Columbus Ohio.

Thanks to Jim Brasch and the generosity of the RBG Orchid Society, we offer members of nearby orchid societies to come and hear George speak on his work experiences at Sanders and Kew Gardens in Great Britain and Native Orchids of New Zealand. Admission is free!

Date: Friday May 4, 2001

Time: 7:30 pm

Place: RBG Headquarters building at the junction of Hwy 6 and Plains Rd. in Burlington, Ontario

The Toronto Judging Centre

The Toronto Judging Centre monthly judgments are open to all orchid growers. You need not be a member of AOS or SOOS. You can bring your plants to the Civic Garden Centre before one o'clock on the designated Saturday of each month. Plants are judged for AOS awards in accordance with the Handbook on Judging and Exhibition. If your plant is awarded there is a US \$35 charge by the AOS. Non payment forfeits the right to future judging.

The Centre welcomes interested persons to come and observe the judging. There are opportunities to assist in plant research and administrative chores.

Awards given by the judging center and other information may be found on the Internet at

<http://www.soos.ca/torjudge.htm>

COC Newsletter on the Web

Please mention in your society newsletter that the COC Newsletters are available on the web at:

<http://www.CanadianOrchidCongress.ca/>

Report on the 2001 COC Annual Convention

The Canadian Orchid Congress 14th Annual Convention was held on March 1-4 2001 in conjunction with the Victoria Orchid Society Show

It was a very well attended affair and the sales area proved to be a very busy place.

There were 35 registered visitors to the COC; fourteen of them were delegates.

On Friday, March 2nd, the evening's reception and pre-sales proved to be very popular. The Saturday night banquet with the COC auction had 75 guests and the auction raised \$1300 for the Canadian Orchid Congress. On Sunday, March 4th, the COC annual meeting took place with president Lynne Cassidy in the chair.

The five COC lectures (Native Canadian Orchids, Carnivorous Plants, Orchid Nutrition, Oriental Cymbidiums and The Genus Oncidium) were attended by delegates and members from several other orchid societies.

Registration was on March 1st and came up with 626 entries plus many items just for the show. There were seventeen separate displays and the AOS Judges gave out eight AOS awards plus the AOS show trophy, which went to the Victoria O.S. Display. The trophies for the separate classes were hand-painted orchid flowers on bone china, which depicted the awarded genera. These were handed to the winners on Sunday afternoon, March 4th, just before the show closed.

We were very happy to welcome so many visitors from near and far and thank all for coming and participating, particularly those who came from points farther East, having to return to their homes in the snow.

Next year we hope to see each other again, in Saskatoon.

Ingrid Ostrander, Victoria, BC

Photographs of the show, thanks to Bertha Buhr (berthab@pinc.com), taken with a Sanyo LCD Digital Camera (VPC-G200), are to be found on the COC web site.

COC 2002 Annual Convention

Faithe Prodanuk asked me to e-mail you regarding our hosting the COC 2002. We are hosting the event in conjunction with Saskatoon Gardenscape, an annual gardening show at the Saskatoon Prairieland Exhibition Park that attracted 18,000 people last year. Gardenscape bills themselves as "The Outdoor Living Show" and there are displays on everything from garden tractors and wrought metal lawn furniture to the University of Saskatchewan Horticulture Department, the Saskatchewan Perennial Society, and many more too numerous to mention. We have had a display at Gardenscape for many years now, and every year interest in orchids seems to be increasing. Our display is always well received, and we answer many questions for people who "happened to buy an orchid at Walmart and didn't know what to do with it", etc. Brookside Orchid Gardens has also been at the past few Gardenscapes, and does very well, sales at their booth can be quite frantic at times.

Gardenscape runs from March 22-24, 2002 with setup on the 21st (Thursday). The theme we have chosen is "Orchids - Romance and Mystery" and the show chairs are Faithe Prodanuk (faithep@home.com or (306) 652-8656) and Tracey Thue (thue@sask.usask.ca). We are working on a society web-page currently, and will advise you when it is operational. I will also forward more information as it becomes available to me.

If you have any questions, please do not hesitate to contact myself, Tracey, or Faithe.

Anita Zadorozny
Publicity & Promotions, COC 2002
Saskatchewan Orchid Society

The Importance of Light

By Dr. Carl L. Withner

As a result of photosynthesis, plants manufacture sugars and starches and many other compounds in their green tissues during the day. These accumulate and are translocated about the plant, particularly at night, and are transformed by biochemical processes into all other plant constituents that are necessary for formation of new tissues and growth. The energy for the photosynthesis comes from the sunlight. The energy for maintenance and growth comes from the breaking down of sugars by the process called respiration. Respiration for maintenance occurs constantly in all cells, whether growth is occurring or not; whether they are green and in the light or not.

At the so-called "compensation point", only enough sugar is produced during daylight with its particular temperature and light intensity and duration, to provide the amount of energy (sugars) for maintaining the plant in a living conditions Respiration just balances photosynthesis. There is nothing left as a reserve, or for the formation of next cells and tissue, or to produce flowers or seeds. The problem is thus to increase photosynthesis to a point where it will not only provide for maintenance respiration but will also provide a reserve to be stored that will not be respired and will enable maximum growth to occur. Most growth, incidentally, takes place at night.

An easy way of aiding the growth process is to have lower temperatures at night than during the day. This slows down the rate at which reserves are respired by plant parts and conserves them for growth function instead of just burning them up to form carbon dioxide and water. Lowering the temperature slows down respiration faster than it slows down growth. For similar reasons, when weather is dull and light is at a premium, it is possible to help the plants along by lowering even the day temperatures at which they are grown. Since photosynthesis is first of all a photochemical process not immediately affected by temperature, the decrease in temperature preferentially influences respiration and provides a more favorable balance for growth and reproductive processes. Respiration, in other words, is more affected by temperature than growth or photosynthesis and this difference may be put to advantage.

A question arises about the optimal temperatures to use and the best light intensities and durations to give the plants. Trial and error can teach you a lot, but there have been a few studies on orchids that can give you guidance. These

were mostly done in air-conditioned greenhouses at Cal Tech, under the supervision of Professor Frits Went. They are written up in Went's book, "The Experimental Control of Plant Growth".

Most plants, including orchids, may be divided into sun or shade plants, according to the conditions under which they grow best. Phalaenopsis and Paphiopedilum are shade plants with optimal light intensities of 700-750 foot-candles saturating the leaves; whereas Cattleya or Cymbidium are sun plants requiring about 1000 fc. to produce full saturation of leaves. And with sufficient air-conditioning the Cattleya may be grown in "full" sunlight (12-15,000 fc.) if there is efficient cooling of the leaf tissues.

But various factors complicate the situation. Those fc. values refer only to individual leaves under ideal conditions. Greenhouse conditions may make the actual required intensities greater. The optimum light intensity may only be present for a short while each day, and upper leaves or crowded leaves can shade those lower down or to the side. The leaf position is also of importance - horizontally placed leaves receive little morning or evening light, but will receive fuller intensities at noontime; vertically, if leaves face east or west, about 4,000 fc. all day; or facing south, leaves will receive the available light all day in summer, relatively higher intensities around noon in winter. The ideal situation, of course, is to light-saturate all of the photosynthetic tissue of each plant for the optimal length of time. Practical experience long ago indicated that staging, or hanging plants near the glass, as well as orienting the greenhouse in a NS direction had merit.

Went states, "...the more light a plant receives, the more layers of leaves it can maintain... one of the main differences between the photosynthesis of shade and sun plants is that sun plants produce more layers of leaves, whereas shade plants have most of their leaves in one layer. Another possibility is that shade plants have a larger proportion of their leaf surface to total weight of the plant than sun plants, which would mean also that they have a smaller loss of weight at night by respiration than plants with a larger proportion of non-green tissue...." Naturally, the more tissue a plant possesses, the more respiration that must go on to maintain the tissues. The most efficient plant is the one with the greatest

photosynthetic ability coupled with the smallest bulk, and that mostly in leaf surface.

The effectiveness of different colors of light is of direct importance only when artificial light is being used. Under artificial conditions best growth has been obtained by using a combination of red (6-7,000 angstroms) and blue (4-5,000 angstroms) fluorescent bulbs. This combination was much better than growth with "warm white" bulbs which were next in effectiveness. The "daylight" bulbs were poorer yet. Results, even so, were always improved when 5-10% of the visible radiation came from incandescent bulbs used along with the fluorescents. This latter effect is not exactly understood. Ultraviolet and infrared radiations are without beneficial effect on plant growth and are not required for normal development. The whole visible spectrum, with the exception of green light, does however, seem to be necessary for normal growth and reproduction. Greenhouse grown plants, supplemented with lights, can be superior to ordinary plants. They may have better light intensities for longer periods of time, especially in poor cloudy weather.

"When growing conditions are poor, for instance, in low light intensities, the actively growing new shoot completely inhibits flower development on the mother shoot, but in high light intensity, both flower development and new growth can occur on the same shoot. This makes it seem

as if there is active competition for photosynthesis by vegetative growth and developing flowers. When photosynthesis exceeds the demand for carbohydrates by storage organs or growing shoots, the excess sugar is excreted as liquid droplets on flower-stalks, flower-sheaths, and leaf-blades" In addition, leaves may also develop a red color on the back or along the veins or margins.

These data in the table below have been given by Went as optimal for the mentioned genera.

Seedlings of *Cattleya* and *Cymbidium*, in their younger stages are usually grown as shade plants with conditions similar to those for *Phalaenopsis* or *Paphiopedilum*. Perhaps it would pay to reread Hager's article in the February 1954 AOS BULLETIN. By taking maximum advantage of the *Cattleya* growth possibilities, he was able to raise seedlings to flower in 21/2 years! He used high light intensities up to 4,000 foot-candles, 16-hour days, and a continued high level of humidity, water and nutrients.

A thorough discussion of light also raises the question of an ideal greenhouse shading material - a pigment reflecting heat rays and all those but the reds and blues mentioned above. How could this most effectively be produced?

Editor's Note: The above article was written for the Society by Dr. Withner in October, 1959, and is reprinted with his kind permission.

		Day Temp.	Night Temp.	Day Length	Saturating Fc. per Leaf
Paphiopedilum seedlings (cool)		68	58	16 hrs.	700
	adult plants	62-66	54	8	700-750
Phalaenopsis	seedlings	68	68	8-16	700
	adult plants	68	68	8	700
Cattleya Trianae	adults	63-86	58-68	8	1000 plus
Cymbidium lowianum	adults	68	58	16	1000 plus

UPCOMING EVENTS

2001

April 28-29: The Ottawa Orchid Society show, Nepean Sportsplex, 1701 Woodroffe Ave., Nepean

http://tor-pw1.netcom.ca/~orchidae/oos_home.htm

May 4-6: The Vancouver Orchid Society at the Richmond Winter Club at 5540 Hollybridge Way in Richmond. Public hours are 9:00AM to 5:00PM May 5 and 9:00AM to 4:00PM on May 6.

Regular charge is \$6 and there are \$1 coupons available at various garden centres.

<http://www.hedgerows.com/Canada/clubbrochures/VancOrchidSoc.htm>

May 12-13: Kingston Orchid Society show, Centre 70 Community Centre, 100 Days Rd. (at Front Rd.) Kingston Info: Joe Stertz, 613-548-3613

Sept 29-30: Central Ontario Orchid Society, the lower level of the University Centre Building at the University of Guelph, Guelph

Nov 10-11: Niagara Region OS, Queen Elizabeth Centre, Facer St. (QEW and Niagara St), St Catherines

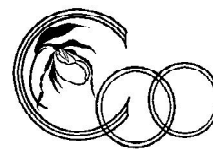
2002

March 22-24: The Canadian Orchid Congress Annual Meeting is being held in conjunction with the Saskatchewan Orchid Society orchid show.

The Co-chairs are: Faithe Prodanuk - faithep@home.com

Tracey Thue - thue@sask.usask.ca

**COC Web Site - <http://www.CanadianOrchidCongress.ca/>
Please send in your show information - date, location, contact, etc.**



news

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The purpose of COC news is to inform members of the meetings, policies of the COC, to profile members, and to provide technical information regarding happenings, trends and techniques in orchid cultivation across the country and around the world.

We welcome your suggestions and contributions. Deadline for each issue is one month before the issue dates previously announced.

Recipients of this newsletter are strongly urged to pass a copy on to other members of their society

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