



news

Volume 14.2 - March 2002

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The winter doldrums are almost over. The ground hog did NOT see its shadow so spring is on its way. On the West coast we had our dump of snow, a week later we had snow drops and crocuses in bloom. Repotting time is also here, which means more plants to find room for. Mine always seem to divide with no help from me. I am looking forward to the Show and Meeting in Saskatoon. The Show as part of Gardenscape will be an interesting and different venue.

My term as President will end at this meeting, I have enjoyed being part of the C.O.C. and working with an excellent group of people. I am sure the new Executive will make a good team. My thanks to everyone for their help and co-operation. IT'S BEEN FUN!

Lynne Cassidy, President

COC-2002

The Saskatchewan Orchid Society is proud to host the 15th annual Canadian Orchid Congress on March 22-24, 2002 at the Saskatoon Prairieland Exhibition Park

We, the COC-2002 committee, extend a special invitation to all orchid enthusiasts to join us for a few days of information and festivity. Experience the 'Romance' and 'Mystery' of orchids. To date we have had confirmation from thirteen vendors and are excited that many societies are planning to attend.

This Canadian Orchid Congress is held along side a large spring horticultural extravaganza called Gardenscape. All registered delegates will have unlimited access to the show at no additional cost.

Visit our website at www.saskco.com/sos and make plans to attend COC-2002.

Happy Blooming,
Tracey and Faithe
COC-2002 Co-chairs



Nominations

Committee member, Jeanette Arthurs, and I wish to propose the following slate of officers for the 2002-2003 year.

President - Ingrid Ostrander
Vice-President - Margaret Blewett
Treasurer - Janette Richardson (incumbent)
Secretary - Terry Kennedy (incumbent)

These persons have agreed to have their names stand for election.

Sincerely
Marilyn Light, Chair, Nomination Committee

Dear COC Representative

Re: C.O.C. Annual General Meeting.

I would like all representatives to discuss with your executive the ideas and comments that you would like to air at the meeting. It is through ideas from the societies that will make the C.O.C. stronger and work better for you.

Please bring your society's ideas and concerns to the meeting. It would be very helpful if you could e-mail or write me prior to the meeting, so these items can be included in the agenda. If you are unable to attend, please send either by e-mail or letter to me.

Look forward to hearing from each society.

Best Regards,

Lynne Cassidy,
President, C.O.C.

Speakers Tour

The tour by Andrea Niessen has been cancelled. The time frame could not be accommodated. If possible we will try to come up with another speaker.

Agenda

CANADIAN ORCHID CONGRESS
ANNUAL GENERAL MEETING
SASKATOON, SK. - MARCH 24, 2002

1. Roll Call
 2. Minutes of the 2001 AGM.
 3. Business arising from the Minutes
 - i.....President's Report - Lynne Cassidy.
 - ii.....Treasurer's Report - Janette Richardson.
 - iii.....Newsletter and Web Site Report - Jerry Bolce.
 - iv.....Education - Ross Otto.
 - v.....Awards & Pins - Ken Girard.
 - vi.....Conservation Report - Marilyn Light.
 - vii.....Poster.
 4. New Business
 - i.....Discuss sharing proceeds of COC auction equally between COC and Host Society.
 - ii.....Discuss future Speaker Tours. Should the tours be divided by region.
 - iii.....Discuss expanding Slide Program.
 5. Other
 6. Elections
 - i.....Nomination Committee Report - Marilyn Light.
- Adjournment.

C.O.C. Auction

A reminder to societies that each society attending bring an item for the auction. A plant or item would be appreciated. Please include a sheet giving the name of the society, a minimum amount and space for bidder name and amount.

DENDROBIUMS

This large and diverse genus of orchids gives the orchid growers many options for growing. Flower forms, colors, sizes from miniature to giant, easy to grow or difficult, Dendrobiums have it all. Under the diverse indigenous conditions Dendrobiums may be found growing on snow covered mountains of Japan or down to sea level tropical climates. All Dendrobiums are found in SE Asia, Japan and down to NE Australia.

The more than 1500 species are divided into several distinct groups according to their culture or flower form. They are sympodial orchids, mainly epiphytic in nature. Pseudobulbs range from small roundish and 5cm. tall to canelike and 1.5 m. in height. They may be deciduous or evergreen with some species requiring several months of dormancy.

The flowers are also quite variable in size and lasting time. They may be open for a single day while other species may last several weeks. Flower colors, shapes and sizes are diverse as well. Tiny flowers of 1cm. or very large flowers up to 15 cm. in diameter. Petals may be twisted like corkscrews, undulated or flat.

There are fourteen distinct sections within the Dendrobium genus with some being very easy to grow while others need very diverse and difficult conditions to grow or flower.

The general culture of this large group of orchids is as varied as the areas that they are found in. They are orchids and therefore they require the standard conditions of all other orchids: AIR, LIGHT, WATER, NUTRITION, TEMPERATURE, and HUMIDITY. Each condition varies with each species. It must be noted that the climate or indigenous growing conditions must be met to have success with this genus.

Dendrobium phalaenopsis and its many hybrids: (Cooktown Orchid)

This group (section) of the Dendrobiums is the easiest group to grow and the most common because of the many beautiful hybrids. *D. phalaenopsis* has an arching inflorescence with many brightly colored flowers. They are evergreen orchids with cylindrical canes (pseudobulbs) of 60cm. – 120cm. The number of inflorescences and the number of flowers on each inflorescence increase with the age of the plant. (Phalaenopsis means moth-like)

Potting: best left undisturbed in smaller pots.

Standard mix of bark, literock, charcoal and perlite.

Extra drainage holes in the pot is desirable

Light: Direct filtered light

Some summer shade may be necessary

Temperature: 18C-20 C are acceptable

These temperatures can be adjusted down slightly in the winter.

Watering: Thoroughly soak each watering

Dry before the next watering

Fertilizing: A balanced fertilizer program of 20-20-20

Avoid the use of high nitrogen fertilizers

Feed every watering

Leach every 5th watering

Humidity: 50% is fine

Avoid water on the foliage

Lots of air movement

Problems: Fungal spots

Spider mites

Development of Keikis

Dendrobium kingianum

There are two species in this group, *D kingianum* and *D. delicatum*. These species have many color forms, shapes and sizes and are easy to grow with the plant size increasing rapidly. Found in Australia, growing lithophytically in large clumps of tangled canes frequently on rocks overhanging creeks or streams.

Potting: this lithophytic orchid does not like being mounted

Fine mixture, same ingredients as phalaenopsis type Dendrobiums

Light: Full sun is necessary

Temperature: ranges from 25C summer to 5C in the winter.

D. kingianum must have dormant period of at least 100 days

Watering: Likes lots of water during the growing period

Water only 1/3 as frequently during dormancy

Fertilizer: A heavy feeder during new growth (after flowering)

20-20-20 is okay.

10-52-10 before dormancy

Humidity: 50% to 80% are acceptable levels

Winter dormancy periods need high humidity levels

Problems: a good one, keeping the plant at a reasonable size and shape.

Scale and mealy bugs.

Dendrobium bigibbum

Another large group of Dendrobium with many hybrids that is easily grown in the home environment. Some of the hybrids can obtain 1m. to 2m. in height but there are many windowsill size plant. *D. bigibbum*, *D. compactum*, *D. phalaenopsis* are hybridized into many of our most popular and easiest Dendrobiums to grow.

Culture: same as *D. phalaenopsis*.

Dendrobium thrysiflorum, farmeri, guibertii, densiflorum, griffithanum.

This group of Dendrobiums is probably the showiest of all orchids when they are in flower, unfortunately the flowers do not last very long. Large, cascading inflorescence with brilliant orange or yellow flowers. India, Nepal and the Himalayan Mountains are home to this exotic group.

Potting: into orchid clay pots with extra drainage
Mixture of bark, literock, charcoal, and spongerock

Under potting is desirable.

Light: High light requirements are necessary.

Do not shade at any time during the year.

Temperature: Very accepting of warm or cool condition
Flowering and growing period, 18C to 25C
Dormant periods, September to December, 14C to 16C

Water: Evenly moist during growing periods
Water only ½ regular amount during dormancy.

Fertilizing: Heavy to medium rates of 10-52-10 after flowering

20-20-20 during dormancy

7-11-27 to break dormancy December, January.

Humidity: 50%-70% year round

Problems: Leaf spots are common during dormancy if foliage is wet.

Mealy bugs love the terminal growth.

Dendrobium aggregatum, lindleyi, capillipes.

A very unique and beautiful member of the Dendrobiums found in south China and Burma. More difficult to grow than other Dendrobiums because of specific dormancy periods. These Dendrobiums have short pseudobulbs, cascading inflorescences of yellow or orange flowers in the spring. They are deciduous orchids so leaves will shrivel as water is reduced.

Potting: mounting on cork is best.

Very well drained mixture if potting.

Light: High light year round.

Temperature: Intermediate to cool temperatures required.

10C to 16C during the winter months.

16C to 22C summertime

Water: Lots of water during growing periods, especially if mounted.

Dry during the winter.

Do not let the pseudobulbs shrivel.

Fertilizing: 20-20-20 during summer growth.

Humidity: Maintain at least 60% during dormancy.

Dendrobium chrysotoxum, moshatum, pulchellum, chryseum and fimbriatum.

Interesting "eye" Dendrobiums from South China and the Himalayas to Burma, Thailand and Laos. They are usually tall canes with deciduous foliage and two eyes on the lip giving the impression that they are peeking out from the petals. The plants themselves are quite unattractive as they are devoid of leaves except on the new growth but when in flower the inflorescences come from the tips of the "dead" canes.

Potting: Well-drained mix with extra drainage hole in the pot.

Some form of support will be necessary.

Wire Tomato cages work well.

Light: High light year round is necessary for success.

Temperature: Warm growers, 18C to 25C year round.

Water: Because of the need to be well drained, dry between watering.

Add lots of water when the new canes are

forming.

Dry slightly in the fall and winter period.

Fertilizing: 20-20-20 is satisfactory

Humidity: Maintain approximately 50%

Problems: Keeping the plants upright because of their height.

Mealy bugs and scale.

Dendrobium canaliculatum, gouldii, stratiodes, antennatum and lineale. (Antelope Dendrobiums)

These New Guinea Dendrobiums are grouped together with the name Antelope because of the prominent upward growing petals that resemble Antelope antlers. Frequently these plants can reach heights of 180cm or more, but there are some species within the group that are miniature or smaller. (*D. canaliculatum*, *D. antennatum*). They will generally grow well in the house at normal temperatures but be careful to obtain the smaller species or hybrids.

Potting: mix must not be allowed to become stagnant.
Sphagnum and sponge-rock mixed in even proportions.

Keep them pot bound for best results.

Light: Filtered to bright light year round

Temperature: Tropical heat.

18C to 25C.

No dormant period is needed.

Water: Copious amounts of water are needed.

Do not dry between watering but make sure the mix is draining.

Fertilizing: 20-20-20 is okay year round.

Leach every fifth watering.

Fertilize half strength every watering.

Humidity: 70% or higher are preferred by this group.

Problems: Soggy stale mix will cause root loss.

Dendrobium lawesii, atroviolaceum, bullenianum, bractiosum, apertum, wentianum.

A unique group of mainly deciduous Dendrobiums found on the Fiji Islands and New Guinea that have canes descending from the crown of the plant. These orchids have nectaries that are basically sealed from insects with a springy lip that closes over the pollinia and nectar reserves. Birds are the sole pollinators of this group of Dendrobiums. The "type" Dendrobium on this group is *D. lawesii* or the Christmas Bell orchid as it flowers at Christmas time. All the orchids in this group produce clusters of flowers from the dormant canes that may last for months. They are easy to grow if you can handle a mounted plant and provide the cool conditions necessary.

Potting: mount on cork only

Light: low to medium light levels.

Masdevallia type conditions.

Temperature: Cool growing year round.

10C to 15C.

Water: Give plenty of moisture during the growing of the new canes.

Dry thoroughly for two to three months prior to flower buds forming.

Fertilizing: Light feeding during cane growth, do not feed during the dry period.

Humidity: Higher levels during the winter, as this is the only moisture they will get.

Dendrobium nobile.

This lone species has hundreds of color forms and hybrids that make up this group of orchids.

Brilliant long lasting flowers are formed on the mature canes in-groups of two or three after the dormant

period, usually in January. A difficult orchid to grow because of its demanding cultural requirements but well worth the effort if you can match the conditions. These orchids are found at elevations of 1500m. in India, China, and Thailand. *D. nobile* is probably the most cultivated of all Dendrobiums because of its huge diversity of colored forms.

Potting: well-drained mix of bark, lite-rock, charcoal.

Worth trying in a sphagnum and sponge-rock mix

Clay pots would be desirable as they are more stable than plastic.

Light: High light is necessary year round.

Temperature: Intermediate to cool March to August.

Cool temperatures August till March.

Water: Evenly moist during flowering and new growth.

DO NOT water during dormancy.

NOT AT ALL till the buds are visible.

Leaves will turn yellow and drop off the plant. At this point the plant will start bud growth.

Keikis will grow instead of flowers if too much water is added.

Fertilizing: 20-20-20 during the growth period.

7-11-27 as soon as the flower buds appear until the new canes start.

Humidity: Not critical on these orchids.

Problems: Getting them to flower.

High light is critical.

Cold and dry during dormancy.

Dendrobium loddigesii, pierardii, primulinum.

This delicate group of pendulous orchids is native to Laos and south China. They are deciduous with narrow pseudobulbs and delicate pink flowers with fimbriated lips. Flowering occurs in the spring after a dormant dry period. Because of this dormant period the plants look almost dead just prior to the bud formation. Careless watering during dormancy will in fact cause serious root problems or extensive keiki growth instead of flowers.

Potting: This group of orchids prefers to be mounted.

Light: High light is required during the pseudobulb growth.

Filtered light during flowering and dormancy.

Temperature: New growth period can be 15C to 18C.

Dormancy should be only 10C to 15C.

Water: As with other dormant requiring Dendrobiums, reduction of watering is necessary.

Water only enough to keep the pseudobulbs from withering.

Growing period requires water daily if mounted.

Fertilizing: Fertilize with 20-20-20 during pseudobulb growth.

As soon as the buds are visible use 7-11-27.

Humidity: high humidity during dormancy as this is the only water they will receive.

Problems: Excessive Keiki growth resulting from over watering during the winter.

Root rot, not enough drainage.

Dendrobiums as you can see are a very diverse genus with untold combinations of watering needs, dormancy requirements and flower inflorescence initiation. The best advice to successfully grow these orchids is to become familiar with their indigenous habitat.

Gordon Heaps

Gordon Heaps Horticultural Services

Good Orchid Growing, or the Concept of Stress on Plants

Why are some orchid growers more successful than others - I mean, in growing fine plants with beautiful flowers? They produce the kinds of plants that show maximum qualities, the kinds of specimens you know are possible but that you can never quite achieve. Why do some people have a "green thumb" and others have only what is termed in some parts of Brooklyn the "dreck effect"? Well, my wife says I think like a plant, and although I'm reputed by some to have a green thumb, I know that others can grow much better plants than I do. This puts me under some stress, but the main problem is that my plants don't or can't improve their situation. Eventually you compromise between what you know and what you do - I'm starting to write this now about the stress on the grower, when what I wanted to do was write about stress on the plants.

The idea is that whenever you have less than perfect conditions the plants are under stress and respond with less than maximum growth. Perhaps this is just as well, for if we all grow such plants, bursting with vigor, who would have room for them all anyway? All orchid greenhouses are too small (they're built that way, it would seem) and that produces the first sort of stress - from overcrowding. One of my friends says he specializes in growing orchids back into their pots, but I don't really think that is his intention. Few people, apparently, have the courage and determination to keep their greenhouses with sufficient "lebensraum" for every plant. Sooner or later, one plant begins to shade another; flower spikes are broken or distorted; petals are crumpled; roots grow into other pots, and sure enough, something behind something else dies because it wasn't watered, or you didn't notice that the roots had rotted off from lack of repotting. Each plant obviously needs its own niche for exposure to a proper environment for maximum growth and flower production.

We are involved here with what is called in biological circles the principle of limiting factors. This idea may be stated by saying that whenever any process, such as growth, is controlled by a variety of factors, any one of them can be limiting at any given time. At one time it may be the amount of light, at another the temperature, or in turn any one of many other environmental or internal factors may be involved. Whenever the balance among factors is not optimal, the plant is placed under stress. If the stress is too great, it may die, or alternatively, produce smaller growths, not flower, produce fewer or poorer flowers, lose leaves, form blind sheaths, or just plain rot.

Light is most often a critical factor, one that can easily cause stress. If individual leaves are not saturated by light, each does not make the food that is possible through photosynthesis. This means fewer reserves for cellular respiration and maintenance processes in the plant and it may mean a lack of sufficient additional reserves for growth and flower production. When reserves are plentiful, multiple growths may break, leaves and bulbs may turn a healthy shade of red, and sugary nectar droplets will be formed on the sheaths and flowers, even on the leaves of some orchids. Since new growths depend upon the vigor and reserves of previous growths with good root supplies, continued lack of stress from sufficient light is critical.

Light, along with production of food, has other effects on the plant, namely, the production of heat. This occurs within the tissues of the plant, as well as within the greenhouse which is really an infra-red trap. Each plant, according to its origins in nature - on low savannah or high cloud forest - grows best within a particular temperature range. Exceeding this range can slow down the rate of metabolism and growth or, in other words, produce a

stress that prevents maximum results. So while increasing the light for photosynthesis, be careful to control heat buildup.

But we are not finished with the light and its detrimental heat effects. Excess light causes a deterioration of chlorophyll, yellowing the leaves, and eventually causing them to fall from the plant prematurely. The heat also causes an increased water loss from the leaves so that they become collapsed, soft, and pliable, and bulbs become wrinkled and ridged. One immediately proceeds, as an average response, to overwater the plants to make up for this obvious dehydration - only to kill the roots and worsen the total picture. Decrease the heat by increased air movement; diffuse the light; increase humidity to prevent excess water loss; don't overwater the roots. Be patient if the plant is new until it makes one or two growths under your specific conditions and has had a chance to adapt.

At this point you are beginning to see the interrelationship of all these variables and how the principle of multiple factors gets to work. Everything from cuticle thickness (relating to humidity and conditions the plant was grown under previously) to the type of flower pot used plays a role in the total process. Orchids grow slowly, and they die the same way, so fortunately, you usually have an opportunity to change whatever is not optimal and alter their deterioration.

Orchid roots need lots of air and a certain humidity to stay alive. The velamen does not cover the very apex, and if humidity is low such tender tips have difficulty in surviving, particularly if nutrients in the water, or its pH, are not favorable. Good green roots continuing their growth into the air without stunting or stopping are a fine measure of proper humidity and good general conditions. Since roots absorb water at a given rate, only a certain amount can enter them within a stated period of time. If water loss through leaf or flower surfaces is excessive because of heat or low humidity, the plant loses turgor, gets soft and wilted with shrunken pseudobulbs. This condition is not cured by additional watering. There cannot be any faster uptake by roots, particularly if they are waterlogged, so the resolution of this stress involves heat and humidity control.

Proper humidity has remarkable effects on orchids, aside from keeping root tips alive. It seems to produce a real change in vigor and growth. The leaves expand more fully, flowers open to larger size and stay in good condition for longer, leaves last for an extra year without falling, bulbs don't shrivel, more buds break for new growths. Everything goes better with humidity, even petal spotting and root rotting, unless you also have buoyant air as well. The humidity and good air go hand in hand, and many times the lack of them, it seems to me, causes more stress than lack of proper light and temperature.

The factor causing least stress under average conditions is nutrient availability. Because of advertising and convenience it is easier to provide fertilizer than high humidity, proper temperature, or proper watering. In bark, with its lack of nutrients, this factor may become critical because of the almost total lack of necessary ions. With other media - osmunda, moss, or tree fern - the stress may be decreased as natural nutrients are available in degree. Of course, the balance of the chemical compounds, the pH of water, presence or absence of sodium, carbonates, etc. can complicate this picture unbelievably.

How is it then that the plants can grow at all - each with its season to grow, another to rest, a period of flowering? I'm always impressed by the adaptability of orchids and their tolerance of greenhouse, windowsill, or under light conditions. The question is, how close do we come? How many plants from various niches do we try to grow together? And which environmental factors are at work producing stress conditions and limiting the growth or flowering of individual plants? As your "green thumb" develops, you'll begin to know at a glance, or at least you'll have some definite ideas, and what will you do about them? The more ideal your conditions, the fewer fluctuations in their supply at critical times, the less stress your plants will have. They will begin to look better and produce the fine flowers you deserve.

Carl L. Withner
Brooklyn, N. Y

UPCOMING EVENTS

2002

March 9-10: London Orchid Society Orchid Show, London. For show information: "<http://los.lon.imag.net/losshows.htm>"

March 16-17: Les Orchidophiles de Montreal Show, College de Maisonneuve, 2700 Bourbonniere St., Montreal, Quebec. Info:450-653-5416 "<http://orchidophiles.qc.ca/>"

March 22-24: The Canadian Orchid Congress Annual Meeting in conjunction with the Saskatchewan Orchid Society orchid show. The Co-chairs are: Faithe Prodanuk - faithep@home.com, Tracey Thue - thue@sask.usask.ca

March 23-24: Orchid Society of the Royal Botanical Gardens, 680 Plains Rd., Burlington, ON. Contact: Jim Brasch at jbrasch@mcmaster.ca. Show chair is Alma Hasler 905-823-5285. "<http://www.chebucto.ns.ca/Recreation/osrbg.html>"

April 4-7: Victoria Orchid Society Orchid Show. It will be in the Student's Union Building of the University of Victoria. Contact: "Ingrid Ostrander" email: ifl@telus.net 250-652-6133 "<http://www.members.home.net/bearman1/>"

April 5-7: The Manitoba Orchid Society. Email: mosorchids@home.com "<http://members.home.net/mosorchids/Index.htm>"

April 24-May 2: The 17th World Orchid Conference is being held at Shah Alam, Selangor, Malaysia. For information check "<http://www.orchid2002.com.my/>"

April 27-28: The Ottawa Orchid Society show, Nepean Sportsplex, 1701 Woodroffe Ave., Nepean "<http://www.ottawaorchidsociety.com/>"

May 4-5: The Vancouver Orchid Society at the main branch of the Vancouver Public Library, right downtown Vancouver. Regular charge is \$6, \$1 off with coupon. "<http://www.hedgerows.com/Canada/clubbroschures/VancOrchidSoc.htm>"

Sept 28-29: Central Ontario Orchid Society, the lower level of the University Centre Building at the University of Guelph, Guelph "<http://retirees.uwaterloo.ca/~jerry/orchids/coos.html>"

COC Web Site - <http://www.CanadianOrchidCongress.ca/>

This newsletter may be found there.

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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