

# NEWS

## Volume 19.4 - September 2007

### Contents

- Pollinate a Ladyslipper
- COC 2008 AGM
- Tree-tapping Orchids
- A Note from the Past
- Where We are Today
- Coming Events

### From the President

Greetings Orchidists,  
I hear the echo throughout the nation, 'where did the summer go?'. About the only good thing about this is that our orchid plants are happy to have us back 'full-time'!

The COC executive would like to have more society involvement. Did your society have a fabulous plant at show'n tell or a local orchid show? We would like to hear about it. Was there a member that took an orchid hunting trip locally or abroad? Pictures? We would like to hear about it as well. I know there are many exciting things going on at the society level that may be of interest to other societies. The newsletter editor would love to have too much material for each newsletter.

The COC is continuing to work with government officials with regard to importation issues. We will provide information as it becomes available.

Start saving you pennies to attend the COC meeting and Orchid Plant Show and Sale in Ottawa in late April 2008. Refer to info in this newsletter for preliminary information and future newsletters for details.

Happy blooming,  
*Faith Prodanuk, COC President*

### Please Forward

Please feel free to forward this newsletter to your society membership.

### Opt for Email Delivery

Do you still need this newsletter on paper? Do you like your photos in color? Save trees and email me with a request to send only the pdf file by email. You can also check the website for a copy.

*Jerry Bolce, COC Editor, [jerry@uwaterloo.ca](mailto:jerry@uwaterloo.ca)*

### Help Wanted

Are you interested in orchid society affairs? We currently have a vacancy for a second Vice President. Contact any executive member for more information about this position. We would love to have you join the group.

### COC Slide Programs

**Huntleyinae** by Ingrid Schmidt-Ostrander

**Cattleyas** - by Ken Girard.

**Oncidiums** - by Gordon Heaps.

**Fragrant Orchids** by Marilyn Light.

**Hardy Orchids and Their Culture** by Bill Bischoff

**Phragmipediums** by Ingrid Ostrander

**Lycastes** by Ingrid Ostrander

**Orchid Pests and Diseases** prepared by Marilyn Light

More information on ordering the slide programs is available on the COC website.

# How does one Pollinate a Lady Slipper Orchid?

**Q:**

Hi, I have about 25 of the pink lady slippers blooming in my back woods right now, (Orono, Maine) and a number of apparently new seedlings perhaps from a recent successful natural seed-set.

I have been searching for information on hand pollination, which of course would dramatically increase success - seems a good idea as I clearly have an appropriate environment at this stage.

I am reasonably experienced in general gardening (20 years in Southern California) but not with orchids per se.

I would be very happy to telephone anyone who might be willing to share some pointers with me, to save them having to type it out.

**A:**

Thank you for your question about pollination of *Cypripedium acaule*.

If one plant appears stronger than the other (ie it is a clump of several stems or has much bigger leaves) then this could be the best seed parent. We cannot tell if it will be a good seed parent until we pollinate it. Likewise, we will not know if any plant will be a good pollen parent until we do the experiment. In my experience, 1 in 5 plants is a poor pollen parent. Once you have seeds, there is no guarantee that any will ever germinate in your location. The best place to sow them will be in the vicinity of the orchids. You can let the seeds self-release when the capsule splits as the majority will drop in that vicinity anyway. Natural seedling production is typically low compared to the number of seeds produced and you will not see seedlings for many years. There is a cost to reproduction. If a weak plant produces a capsule and weather does not favor its growth over that summer then the plant may not emerge the next year or even remain dormant for several years.

If you choose to hand pollinate, use one flower from an apparently stronger plant as the pollen recipient and a flower of another plant as the pollen donor.

Pollinate four days after the flower opens. This is important

Material in this newsletter or on the COC website may be reprinted in society newsletters - just make sure you attribute the author and the COC.

as later pollination may not result in seed production.

There are 2 anthers, one on each side of the column just above where the pollinator would exit. The pollen is mealy, granular and somewhat sticky. It is more difficult to remove during cold or rainy weather but softer and more sticky when it is mild. Use the blunt end of a toothpick to remove the pollen from one anther.

Examine the selected flower before pollination. If you gently press back on the pouch, you will be able to expose the stigma where the pollen is to be placed. The stigma faces toward the back of the pouch and is located between and just below the anthers. The stigma is located opposite the shield-shaped staminode which is a brown structure facing outward just above the pouch.

Gently smear the pollen over the stigma.

Note the flower age at pollination. Place a non-reactive plastic marker close to the pollinated plant. You can check about one month later to see if a fruit has developed.

You might find this article of use.

<http://www.cypripedium.de/forum/pollination.pdf>



# COC 2008 Annual Meeting



The Ottawa Orchid Society is pleased to host the 2008 Canadian Orchid Congress Annual Meeting in conjunction with our 27<sup>th</sup> ANNUAL SHOW on April 26-27, 2008. We hope that many members of the COC and affiliated orchid societies will take this opportunity to attend the COC meeting, and partake in the Symposium of exciting speakers that we have planned, and enjoy the Ottawa Orchid Show. Perhaps you will pick up a few interesting plants offered by vendors at the Show. As an added bonus, if the weather cooperates, there may be the beginning blooms of our famous tulips which form the core of our annual Tulip festival two weeks later in May. There is always a blaze of colour in our city parks and along the Rideau Canal and Dows Lake. So come and enjoy Ottawa in the spring and the Orchid Show in particular!

We are planning an exciting program with six invited speakers on a variety of orchid topics. A brochure and registration form will follow in November along with the list of confirmed speakers, the schedule of events and an outline of what you can expect during the weekend. At this time also we will be listing hotel information. On the Saturday night, there will be an Awards banquet, so plan to enjoy a good meal and Ottawa hospitality. As is the custom, there will be an auction following the banquet with proceeds shared with the Canadian Orchid Congress. We hope your society will help us with a donation for the auction.

We also invite societies and individuals to enter our Show. Details on pre-registration of plants and cut flowers will be given early in the new year, but it is useful to plan ahead and start thinking about your display now. Please visit our website at [www.ottawaorchidsociety.com](http://www.ottawaorchidsociety.com) where you will find lots of information about the society. The website is updated frequently, and you will find full details on the Show with more information as the April date draws near.

Remember to reserve the last weekend of April for what promises to be a very exciting Ottawa Show.

For more information please contact:

Rick Sobkowicz, OOS President and Show Co-chair:  
613-825-0827 [ricksobkowicz@rogers.com](mailto:ricksobkowicz@rogers.com)

Dave Cooper Show Co-chair:  
613-256-2853 [orchidae@allstream.net](mailto:orchidae@allstream.net)

Jean Hollebhone, COC rep and COC meeting and Symposium organizer:  
613-226-2395 [jhollebhone@sympatico.ca](mailto:jhollebhone@sympatico.ca)

The poster below is available on the COC website for distribution to interested members of your society.

**ORCHIDOPHILIA**  
27<sup>th</sup> Annual Orchid Show


presented by the  
Ottawa Orchid Society

In conjunction with the  
Annual Meeting & Symposium of  
the Canadian Orchid Congress

- ✦ Orchid Vendors
- ✦ Orchid Displays
- ✦ Art Gallery
- ✦ Invited Experts

April 26 & 27, 2008  
Saturday ☼ noon ~ 5:00 pm  
Sunday ✨ 9:00 am ~ 5:00 pm

Nepean Sportsplex  
1701 Woodroffe Ave.  
Ottawa ON



Design & photo: ramedland

# Tree-tapping by our Native Orchids

This article appeared in the publication Die Orchidee 58, 2007 - 2

Translated (somewhat freely) by I. Schmidt-Ostrander  
Mr. Dietmund Klärner had earlier published an article about this in the Feuilleton of the Frankfurter Allgemeine Zeitung, # 275, under "Nature and Science" 24.11.2004, p.34.

He calls to our attention the fact that aside from tropical epiphytic orchids, there exist not only semi-parasites like our European Mistletoe (*Viscum album*) but he includes terrestrial orchids from our temperate forests like *Cephalanthera*, *Epipactis* and *Neottia* for instance, which utilize food sources in the soil and what can be gained from the roots of tall trees and shrubs.

With over 20,000 species, the orchids represent the largest plant family. But even though they are so varied in their appearances, the continued existence of each one depends on fungi. In order to grow to maturity, each seedling must secure such a partner. From then on, the plant lives in close relationship with its fungi. Like many other plants, they form mycorrhiza: a web of fungus-threads surrounds the root tips. (According to Strasburger 2002, the ectotrophic mycorrhiza of trees can also serve as symbionts for the endotrophic mycorrhiza of orchids) and there can exist a metabolic exchange. Only a few orchids will need the carbohydrates supplied in this manner. After all, most of them have green leaves which, in sunlight, will photosynthesize to supply their own supply of carbohydrates.

Scientists at the University of Berkeley, California and at the University of Bayreuth, Bavaria, have found that there are other variations in orchid feeding. There are orchids that grow terrestrially in deep shade and do have green leaves. But instead of only depending on their own ability to photosynthesize, they accept a part of their sugars via their fungal partners, which are in contact with tree roots. Thus these orchids tap into the supply of tree food.

The researches collected for their examinations samples of leaves and roots from different orchid species in Bavaria, Germany. They identified the fungi on those roots through molecular-genetic testing. In wet meadows, the researchers found the regular orchid-fungi on *Dactylorhiza* and *Epipactis*.

However, in nearby forests, they found on six out of seven orchid species those fungi which are regularly found on tree roots. For instance, *Cephalanthera* had contacts from *Inocybe* and *Cortinarius* (both terrestrial, mycorrhizal fungi occurring world-wide); on *Epipactis* they found *Inocybe* and Truffle fungi.

The fact that all six of these orchid species receive a part of their carbohydrate supply via the fungi can be deduced from the presence of the carbon isotope 13. The plants' leaves contain this isotope in somewhat higher concentration than neighbouring plants. The nitrogen isotope 15 is remarkably high in these orchids. Of course, the highest concentration of these two isotopes was found in *Neottia nidus-avis*, which is a plant without any chlorophyll and lives as constant parasite.

From the presence of the two isotopes, the researchers were able to estimate the contribution of mycorrhizal fungi in other orchids. In those from the wet meadows it was found that the orchids received a good 25% of their nitrogen through the fungal threads. They were found to be autonomic in their production of carbohydrates. It is assumed that they even donate some products of their photosynthesis to their fungus partners. Forest dwelling orchids, living close by the trees, appear to be more dependent on their fungal partners for all their nourishment. They receive not only two thirds of their nitrogen supply but also up to one third of their sugars from their partners. The boundaries between self-sufficient orchids and those that are completely dependent on fungi are therefore not solid. How much an individual plant manages to produce for itself is not only dependent on which species it is, but also on how much light is available to each plant.

It is not a peculiarity of the green-leaved orchids living in Bavarian forests to utilize their neighbouring trees' fungal partners. The scientists found the same thing going on in Great Britain and in North America from Quebec to California. Those orchids which are partially nourished via tree mycorrhiza can flourish even under a dense canopy of trees without much access to sunlight. This can of course also be a negative arrangement. When the forest and its fungi begin to change, the orchids will also have to suffer the changes. As a result, a number of those forest growing terrestrial orchids are now on the endangered list

## A Note from the Past

It is my pleasure to provide you with this second issue of our newsletter. As mentioned by Peter in his message, I'd need every thing I can lay my hands on to make up this newsletter. These pages can only be as interesting as the stuff you'll be providing me with. If you know of anything that you feel can be interesting to your society's members, this stuff can be just as useful to other orchids enthusiasts across Canada. This is YOUR newsletter, I just put it together. If you don't send in your articles, there just won't be anything to print. I hope that every single society will send me their own newsletter so I can extract material from it. Any original material is also welcomed.

Your material can be sent as printed material. It can also be sent via computer disk if you have access to a computer. Computer work would make things that much easier on me by saving me the extra typing. If you use or have access to a Macintosh, I can use your diskette directly whether they are 400K, 800K or 1.4MB. Your documents should be saved as TEXT file. If you use MS Word (any version) or MS Works or MacWrite (any version), you can save your documents in this format. If your document has graphics or pictures, they can be saved in any of these format: PICT, PICT2, TIFF, EPSF or PAINT.

If you use a MS-DOS machine or compatible, the only way I can use your material directly is if you use 3.5" diskettes formatted in either the 720K or 1.44MB configuration. Your documents should be saved as ASCII files. My disk drive can handle these formats and I have a file translator to convert your file to Mac files. I must confess that I never had the opportunity to do it yet, but I know it does work and I'm ready to try it out. In any case, your diskette will be sent back to you right away. Your material should be sent to: Laurier Nappert, 200 Jean Gauvin, Ste-Foy, Qc., G2E 3L9.

It is hoped that every society will circulate this newsletter to their members or at least make it accessible through their library or bulletin board. Each society is provided with one original copy in order to enable them to make good photocopies for their members.

The next issue should come to you at around Christmas time. In the meantime, send your dated material before November 1st if at all possible.

*Laurier Nappert, COC Editor, Fall, 1989*

## Where We are Today

The article "A Note from the Past" gives an idea of how much things have changed. At one time the orchid hobbyist looked to a book or an orchid society for the source of information. The newsletter was expected to be a guide to the world of orchids, especially a guide to culture and how to find orchid sellers.

The web has changed things a lot. Want to know something? - simply google it. (Not too many years ago that phrase would have been meaningless. Do you know what the origin of "google" is?<sup>1</sup>) Information is widespread and readily available. Need a question answered - look to the many discussion groups or mailing lists.

Most societies produce an electronic newsletter and can easily distribute it widely. Any society newsletter can be emailed to any other society membership that wishes it. Also each society is encouraged to produce a website to advertise the society and to assist their membership.

So where does that leave the COC newsletter? There is little point in republishing what is already in a society newsletter. Any article a society would produce and publish is already available to all the other societies either to redistribute or to republish. Culture material, vendors and no end of material is easily available on the web.

The COC newsletter should provide a progress report on the activities of the COC. Bringing plants back from the USA is a big issue. Why go to the WOC if your plants will be confiscated at the border. If a friend you are visiting gives you a plant, what can you do? How about conservation? What other groups are there and what are they doing? Make people aware of what resources are available out there on the web.

What would you like to see in the COC Newsletter? At one time Canada was split into regions and the societies in each region were expected to produce content for an issue. It worked for a while but eventually died. Try again?

The COC website is a more permanent repository of information. Should it replicate material out there already or should it become a major resource? What would you like to see? What would you provide?

For discussion - *Jerry Bolce, Editor*

<sup>1</sup> The name Google was chosen to represent the gigantic amount of material available on the Web. It comes from "googol;" the number 1 followed by 100 zeros. ie 10<sup>100</sup>

# COMING EVENTS

2007

**October 27-28:** Fraser Valley Orchid Society Show & Plant Sale will be held at the Langley Civic Centre, 20699 - 42nd Ave., Langley, B.C.  
"http://www.orchidbc.ca/"

**Oct 27-28:** Eastern Canada Orchid Society at the Days Inn Hotel, 1005 rue Guy, in Downtown Montreal. Phone 450-467-4795  
"http://www.ecosorchids.ca/"

**Nov 10-11:** Niagara Region OS CAW Hall 124 Bunting Rd, St. Catharines, Ont Contact: Jodi Shannon, Show Chairperson  
Phone: 905-641-1934 "http://www.niagaraorchidsociety.org/"

**Nov 14-17:** The Second Scientific Conference on Andean Orchids, Loja, Ecuador <http://www.andeanorchids2007.org/>

2008

**Jan 23-27:** World Orchid Congress, Miami, Florida  
<http://www.19WOC.com/>

**Feb 9-10:** The Southern Ontario Orchid Society at the Toronto Botanical Garden, Edwards Gardens. "http://www.soos.ca/"

**March 1 - 2:** The Orchid Society of Nova Scotia at the Nova Scotia Museum of Science, Halifax.  
"http://www.chebucto.ns.ca/Recreation/OrchidSNS/"

**March 15 - 16:** London Orchid Society at the Western Fair Special Events Building, London, Ontario For show information:  
<http://los.lon.imag.net/losshows.asp>

**April 19-20:** The Annual Toronto Artistic Orchid Association Show, Chinese Cultural Centre, 5183 Sheppard Ave., East (Markham Road) Phone: 416-292-9293 Email: Louisa Fung [louisafung@rogers.com](mailto:louisafung@rogers.com) "http://www.taoa.ca/"

**April 26-27:** The Ottawa Orchid Society show in conjunction with the COC Annual Meeting and Symposium, Nepean Sportsplex, 1701 Woodroffe Avenue, Nepean, Ontario. Contact David Cooper, Show Chairman, at [orchidae@allstream.net](mailto:orchidae@allstream.net).  
"http://www.ottawaorchidsociety.com"

**Sept 26-29:** Western Australian Orchid Spectacular and Conference "Living with Orchids"  
"http://members.iinet.net.au/~emntee/WAOS.html"



news

2001 - 6 Willow Street,  
Waterloo ON, N2J 4S3  
Phone: 519-885-1888  
email: [jerry@uwaterloo.ca](mailto:jerry@uwaterloo.ca)

Editor: Jerry Bolce

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

## Officers of the Canadian Orchid Congress

President      Faithe Prodanuk  
250-542-0248  
[faiethep@shaw.ca](mailto:faiethep@shaw.ca)

Vice-President Jean Hollebhone  
613-226-2395  
[jhollebhone@sympatico.ca](mailto:jhollebhone@sympatico.ca)

Vice-President Terry Zdan  
204-488-8988  
[tzdan@gov.mb.ca](mailto:tzdan@gov.mb.ca)

Treasurer      Janette Richardson  
306-543-0560  
[dale.richardson@sasktel.net](mailto:dale.richardson@sasktel.net)

Secretary      Ms Robin McLaughlin  
416-778-0014  
[robin@ravenvision.ca](mailto:robin@ravenvision.ca)

Education      Mark Elliott  
604-501-2136  
[melliott@mrl.ubc.ca](mailto:melliott@mrl.ubc.ca)

Conservation   Marilyn Light  
819-776-2655  
[milight@igs.net](mailto:milight@igs.net)

Past President Margaret Blewett  
905-687-9205  
[mblewett37@cogeco.ca](mailto:mblewett37@cogeco.ca)

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