

**Journal of The Ottawa Bonsai Society**  
**Journal de la Société de bonsaï d'Ottawa**



**March / Mars 2004**

[www.ottawabonsai.org](http://www.ottawabonsai.org)

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**February meeting! Rencontre de février!**

On a cold winter evening the club faithful and a few new faces gathered for the February meeting.

The main topic of the meeting was a very informative presentation by Joe St. Lawrence on various methods of propagating Bonsai. Furnished with trees and equipment he enlightened us with his knowledge on growing Bonsai from seed, cuttings and layerings, providing helpful tips he had acquired from trial and error. He cited the advantages and disadvantages of each method. It was a very informative presentation that was enthusiastically received.

Like the seeds Joe taught us to plant, Spring will sprout upon us soon, starting the busiest time of year for bonsai enthusiasts. The Society has a number of exciting activities planned. We have another Beginners' Course happening in March and a Beginners' Workshop in April.

The big news announced at the February meeting is that David Easterbrook, the Curator of the Japanese Gardens section of the Botanical Garden in Montreal, will be here for an intermediate workshop on May 29. The workshop will be limited to 12 participants, so sign up early for the chance to work with this fascinating and gifted artist.

Ottawa Bonsai Society  
 P.O. Box 4254, Station E"  
 Ottawa, Ontario  
 K1S 5B3

Société de bonsaï d'Ottawa  
 B.P. 4254, succursale E  
 Ottawa (Ontario)  
 K1S 5B3

## Ottawa Bonsai Society Events Calendar



**The next meeting will be on Monday, March 15 at 7:30 p.m.**

**Prochaine rencontre mensuelle: le lundi 15 mars à 19h30**

- |  |   |
|--|---|
| <p>1- Report on, and discussions about, future events and upcoming meetings;</p> <p>2- Presentation on deciduous bonsai by Ian McRae;</p> <p>3- Break (buy your tickets for the draw in April of the Juniper re-styled by Barney Shum at the January meeting).</p> | <p>1- Rapport et discussion à propos des événements à venir et des prochaines rencontres;</p> <p>2- Présentation sur les bonsaïs à feuilles caduques par Ian McRae;</p> <p>3- Pause (occasion d'acheter vos billets pour le tirage en avril du genévrier taillé par Barney Shum lors de la rencontre de janvier).</p> |
|--|---|

### Bonsai Course for Beginners and Workshops for Beginners and Intermediates

Since our Annual Exhibition at the Japanese Embassy last September, our Society has been enriched by a total of 28 new members.

This is an exceptional result which has greatly helped to revitalize our club, as witnessed by the large attendance at all our monthly meetings since last October. Our new members, as well as longer standing members and even non-members have shown an eagerness for information and hands-on experience about the secular art of bonsai. Our Beginners' Course given last November 29 attracted 14 people. The success of that course was such that we have received numerous requests to give the course again before Spring. As well, we have responded to pressing requests for workshops for beginners and for intermediates. Here then, is where matters stand as regards those upcoming events:

**1. Beginners' Course on Saturday,  
March 27, 2004, Building #72,  
Central Experimental Farm,  
from 9:30 a.m. to 3:30 p.m.**

This is a course on the fundamentals of Bonsai Design & Technique. It is the same course that was given last November 29 and will follow the *Bonsai Design Level 1* course as developed by Barney Shum and Lynn Edmonds. The course provides the essential knowledge required to begin to develop bonsai appropriate for our climate zone. Vianney Leduc will be the main instructor and lecture notes on the topics to be covered during the course and on many others will be provided and are included in the cost of the session. The cost of the course is \$15 per person. Ten people have already confirmed their participation and up to ten more could be accommodated (see at bottom).

**2. Bonsai development Workshop for Beginners on Saturday, April 17, 2004, Building #72, Central Experimental Farm, from 9:30 a.m. to 3:30 p.m. approx.**

This is a hands-on session during which participants will use the knowledge gained in the above session to begin developing their own bonsai using nursery-grown stock (Japanese garden juniper). The plant material, a suitable pot and all necessary supplies will be provided. Vianney Leduc will lead the session, and other experienced members will be present to provide assistance and tools as required. The cost of the workshop is set at \$55 per person. Ten people have already confirmed their participation and up to five more could be accommodated (see at bottom).

**3. Intermediate Workshop led by  
David Easterbrook, Saturday, May 29, 2004, Building #72, Central Experimental Farm, from 9:30  
a.m. to 3:30 p.m. approx.**

David Easterbrook, a renowned bonsai artist and Bonsai Master based in Montreal who has frequently lectured and given demonstrations here in Ottawa, has agreed to lead this intermediate level workshop for OBS members. On his last visit to our club in May 2002, Mr. Easterbrook led a similar workshop that was nothing less than fabulous. All those who participated were impressed by Mr. Easterbrook's easygoing style of teaching and explaining. What makes the upcoming workshop particularly interesting is that Mr. Easterbrook will himself secure the plant material (hardy conifers, probably in 5-gallon containers) on which members will work, a guarantee of quality trees with lots of character to be turned into first class bonsai. The cost of this workshop is set at \$125 per person. This includes the tree (worth \$60), the bonsai soil, the wire (but not the pots) and the professional assistance of Mr. Easterbrook. Participants will need to bring their own bonsai tools. Vendors will be on hand with a variety of bonsai pots and other supplies that might be required. This workshop will be limited to twelve participants (four members have already confirmed their participation).

**If you have not already done so and would like to register for any of those three events, please contact our treasurer Yvon Bernier, by E-mail ([ycbernier@infonet.ca](mailto:ycbernier@infonet.ca)), by phone (819-684-0586) or at forthcoming OBS monthly meetings.**

**Cours sur les bonsaïs pour débutants et ateliers pour débutants et intermédiaires**

Depuis notre Exposition annuelle de septembre à l'ambassade du Japon, notre Société s'est enrichie de 28 nouveaux membres. Ce résultat exceptionnel a revivifié notre club, comme en font foi les assistances nombreuses à nos rencontres mensuelles depuis octobre dernier. Nos nouveaux membres, tout autant que plusieurs de nos membres plus anciens et même des non-membres sont avides de connaissances et d'expériences pratiques à propos de l'art séculaire du bonsaï. Le cours pour débutants donné le 29 novembre dernier a attiré 14 participants. Le succès de ce cours fut tel que nombre de personnes nous ont demandé de le donner à nouveau avant le printemps. De plus, nous avons donné suite aux requêtes d'organiser des ateliers pour débutants et pour intermédiaires. Voici où nous en sommes à propos de ces événements à venir:

**1. Cours pour débutants, le samedi****27 mars 2004, édifice #72, Ferme expérimentale centrale, de 9h30 à 15h30.**

C'est un cours portant sur les principes de base de l'art et de la technique du bonsaï. Ce cours, qui fut donné une première fois le 29 novembre dernier, repose sur les enseignements du manuel *Bonsai Design Level 1* écrit par Barney Shum et Lynn Edmonds. Il fournit les éléments de base qui permettront à ceux et celles qui le suivront de commencer à former et à entretenir des bonsaïs dans nos conditions climatiques. Le manuel de base est rédigé en anglais et le cours sera donné dans cette langue, mais l'instructeur principal, Vianney Leduc, est un francophone qui saura répondre aux questions qui lui seraient posées en français. Le manuel autour duquel le cours est structuré est inclus dans le prix du cours qui est fixé à 15\$ par personne. Déjà, dix personnes ont confirmé leur participation et nous pourrions en accommoder jusqu'à dix autres (voir au bas du texte).

**2. Atelier pour débutants sur la formation d'un bonsaï, le samedi 17 avril 2004, édifice #72, Ferme expérimentale centrale, de 9h30 à 15h30 approx.**

Ce sera une session durant laquelle les participants pourront se servir des connaissances acquises durant la session mentionnée plus haut pour commencer à former leur propre bonsaï à partir d'un plant de pépinière (genévrier nain du Japon). Ce plant, de même qu'un pot convenable, le terreau et le fil pour ligaturage seront fournis. C'est Vianney Leduc qui dirigera cette session. Les participants auront également l'appui d'autres membres expérimentés de la SBO qui auront à leur disposition les outils de bonsaï nécessaires. Dix personnes ont déjà confirmé leur participation et nous pourrions en accommoder jusqu'à cinq autres (voir au bas du texte).

**3. Atelier pour intermédiaires dirigé par David Easterbrook, le samedi 29 mai 2004, édifice #72, Ferme expérimentale centrale, de 9h30 à 15h30 approx.**

David Easterbrook de Montréal, artiste du bonsaï de grande renommée et fréquent conférencier et démonstrateur ici à Ottawa, a accepté de diriger cet atelier de niveau intermédiaire pour les membres de la SBO. Lors de sa dernière prestation devant nos membres en mai 2002, M. Easterbrook connut un succès extraordinaire. Les personnes présentes apprécièrent son style d'enseignement décontracté. Ce qui rendra l'atelier de mai particulièrement intéressant est le fait que M. Easterbrook choisira lui-même les plants (conifères rustiques, probablement dans des contenants de 5 gal.) sur lesquels les participants travailleront, un gage certain de matériel de choix possédant les qualités nécessaires pour devenir de splendides bonsaïs. Le coût de cet atelier est fixé à 125\$ par personne, ce qui comprend un arbre (d'une valeur de 60\$), le terreau, le fil pour ligaturage (mais non le pot), ainsi que l'aide professionnelle de M. Easterbrook. Les participants devront apporter leurs propres outils. Des vendeurs seront sur place pour offrir une variété de pots à bonsaï et autres articles qui pourraient être requis. Cet atelier sera limité à douze participants (quatre personnes ont déjà confirmé leur participation).

**Si vous ne l'avez pas déjà fait et voudriez vous inscrire pour l'un ou l'autre de ces événements, veuillez contacter notre trésorier Yvon Bernier, soit par courriel ([yvbernier@infonet.ca](mailto:yvbernier@infonet.ca)), par téléphone (819-684-0586) ou directement lors d'une prochaine rencontre mensuelle de la SBO.**

## NEW MEMBERS / NOUVEAUX MEMBRES

A warm welcome is extended to:  
Nous souhaitons la bienvenue à:

**Liliane Brachet**  
**Lily K. CHU & Wing Tin CHU**

## IN MEMORIAM

**Ken McDougall**, a senior member of the OBS, passed away suddenly on February 1.

We will miss his good humour, his zestfulness and his ready willingness to provide advice to one and all.

C'est avec grand chagrin que nous avons appris le décès le 1<sup>er</sup> février dernier de l'un de nos plus anciens membres, **Ken McDougall**. Ken était grandement apprécié de tous pour sa bonne humeur, son entrain et sa serviabilité,

## **How to Germinate Seed** ***by Brent Walston (Evergreen Gardenworks)***

<http://www.EvergreenGardenworks.com>

### Introduction

For years I grew most of my plants from cuttings and bought my seedlings because I had a feeling that seeds of woody plants were another five to ten year learning project just like cuttings. I was right too. I owe a great debt of gratitude to Norman Deno for just about everything I know about seeds. His book on seeds is just as important as Durr and Heuser on cuttings. If you have one book on seed it should be this one: *Seed Germination Theory and Practice*, Norman C. Deno. You have to order from him and I understand there is an update that I do not have yet. The address I have is 139 Lenor Dr., State College PA 16801, USA. Buy the book, we should support people like Deno, who work outside the traditional establishment, but who revolutionize the industry on the sheer strength of their ideas.

Deno at long last establishes a system for understanding the germination of seeds. His theory is that fruit and seeds contain chemicals in their pulp, seed coat or embryo that inhibit germination. Deno is a physical chemist not a botanist so he understands this stuff. These chemicals are barriers to germination and must be removed, often in order for seed to germinate. Forget terms like stratification, they are now archaic. It originally referred to the practice of layering seed in beds that were kept cold, to layer or to stratify. I prefer to use the terms that Deno uses, because they more accurately describe what is going on. These terms are 'germination inhibitors' for the chemicals that must be removed, and 'pre-treatment' for the processes involved. I think it is the least that we can do to honor the man's work.

The chemical reactions that take place to break down some of the germination inhibitors are quite unusual in that they require moisture and temperature within a specific range, not colder or hotter. As a physical chemist Deno has identified this type of reaction and explains how it can happen, although we needn't be concerned about it here. Another inhibitor is broken down at warm temperature, another by a fungus, one by lack of light, and one in the presence of light, although the light triggered ones seem to work in conjunction with the fungus. One type of inhibitor is present in most fruit pulp and must be physically removed. In

addition there are physical barriers that must be broken down such as impermeable seed coats. Deno lists all of these in what he calls the nine principles. I am not going to give you all nine, but I will summarize the most common problems in seed germination.

### **INHIBITORS BROKEN DOWN BY MOISTURE AND TEMPERATURE CONTROL**

First you must understand that seed from different species and even different CULTIVARS is different and may exhibit different inhibitors. Deno is compiling an encyclopedia to identify the the inhibitors for each species he can. Unfortunately for us he is more interested in rock gardening and alpines than woody plants, but there are many references to them and even more in the update, I understand. But by understanding the principles it is quite an easy matter to identify the inhibitors yourself with a simple series of experiments with seeds in moist paper towels.

Some inhibitors are broken down under moist conditions at 70 degrees (Fahrenheit) and others at 40 degrees. Seeds may, and often do contain more than one inhibitor. There is a curve of germination for each species that describes the rate of germination over time, but for our purposes neither of these cycles takes longer than ninety days for the vast majority of plants. If the cycle is shorter than this you can easily determine it by checking the paper towels each week to see if the seed has started to sprout.

Most temperate woody seeds will contain an inhibitor that will require a forty degree cycle followed by a seventy degree cycle. This only makes sense, since it is nature's way of protecting seed from germinating while it is still too cold. Sometimes the inhibitors must be broken down in order, first forty then seventy, or vice versa. The seed will not germinate until this happens. Some species require multiple cycles. That is, there may be more than one forty or seventy degree inhibitor present, and when this happens they are broken down one at a time. Thus you must alternate three months of forty followed by three months of seventy until germination occurs. I have written that *Acer japonicum* requires just such a multiple cycle.

The beauty of using moist paper towels and plastic bags to pretreat seed is that you can do all this work without trying to stick a flat of dirt in the refrigerator. When the seed finally germinates, remove it from the bag and sow, one at a time if necessary, and this is often the case. I prefer to wait until the radicle just emerges and then plant it in a plug tray or cell. This eliminates much of the waste involved in planting seed. You know that the seed you planted is going to come up because it has already germinated! This is particularly nice for rare and valuable seed when you only have a few.

### **FUNGAL AND LIGHT REACTIONS**

Buy the book. But I will tell you that the majority of seed that you and I are interested in do not have these types of inhibitors.

### **INHIBITORS PRESENT IN FRUIT PULP**

Deno points out that these inhibitors are much more common than people believe. We don't see it much because it is common practice to wash seed anyhow or to allow the pulp to disintegrate over the winter. But if you collect fruit to acquire seed it is imperative to follow this procedure to remove any possible inhibitors. Wash the seed to remove all traces of pulp. You can do this mechanically or allow it to ferment so that it falls away. Once relatively clean, wash the seed every day for seven days to remove all traces of fruit and the inhibitor. Most of these chemicals are water soluble, but a very few are oil based and the addition of a very small amount of detergent will dissolve these.

This has worked very well for me with Dogwood, (*Cornus*), Ginkgo, and *Prunus mume*.

### **IMPERMEABLE SEED COATS**

There are a few woody species that have hard seed coats that will not allow water to pass to begin the pre-treatment process, or the embryo to expand. If seed is collected fresh and moist you have already solved the moisture problem. You can temperature pretreat and then nick the seed coat afterward to allow the kernel to break out.

## HOW TO EXPERIMENT

Take SOAKED seed and place it in paper towels and place in thin plastic bags such as baggies and fold over the top. It has not been demonstrated, but it is entirely possible that oxygen is necessary for the reaction to proceed. Keep it at seventy degrees for ten days to two weeks if you don't know whether or not a forty degree inhibitor is present. In my experience, if no 40 inhibitor is present and the seed is fresh, it will begin to germinate right away.

If you get nothing at the end of two weeks put it in the fridge for three months, checking it each week for signs of germination. Often fresh woody seed will begin germinating after one month. At the end of three months and no germination takes place, then a seventy degree inhibitor is most likely present. Keep the seed at about 70. For most woody seed the inhibitor is broken down quickly and it will begin to sprout in a week or two. If not, hold it at 70 for three months. If nothing happens, a second 40 degree inhibitor is present (assuming of course that the seed is viable). Back to the fridge, repeat the cycles until germination occurs, you have a fit, or the seed rots.

You can of course, run multiple experiments if you have no information at all on your seed. One bag in fridge, one at 70, etc.

A few notes on care. The seed must stay moist INTERNALLY throughout this process. Deno doesn't talk about this much, but my experience with woody seed is that it can stay a lot drier on the outside than most people would believe. Keeping it this dry eliminates a lot of the fungal problems involved with long storage times. This is why I am so particular about getting fresh seed that has not been dried, it already has internal moisture and if an impermeable seed coat is present it won't make any difference.

Some tips on determining the proper moisture: Know the difference between moist and wet. If a film of moisture is on the seed or the plastic bag it is wet not moist. The paper towel should feel almost dry. If it starts to get stiff during the process, it is dry, and a very few drops of water should be added or a single spritz from a spray bottle.

For seed that does not take long to pretreat such as Cedrus I don't even use paper towels or other media, I soak the seed, dry it in the sun for about fifteen minutes until the outer husk feels dry to the touch and put it in a baggie and into the fridge. The seed is very fleshy and retains adequate water for the month that it must stay in there. Cedrus is VERY sensitive to excess water and will rot in an instant (see my Cedrus article for more info).

If your seed does get very moldy but has not yet cracked the seed coat you can wash it with a ten percent bleach solution. Let dry, then return to storage in fresh bag and towels. Deno points out that sound seed has natural antibodies for most fungi, and this is true. But keeping seed too wet is just too risky. Once you get a pathogen it seems like you have it for life and precautions are in order.

## FRESH SEED

I can't overemphasize how important it is to get fresh or properly stored seed. Deno has get fun pointing out that a lot of seed arrives fresh from the supplier and DOA, dead on arrival, simply because it has been dried. The most notorious example is Acer rubrum. It cannot be dried whatsoever and must be collected fresh and moist from the trees in the spring and sown immediately. It germinates in about ten days without any pre-treatment.

I have spent hundreds of dollars on Acer palmatum seed without a single seed germinating until I finally got smart and collected my own in Oct and Nov. The best seed will still have some color to the wings and the fleshy part will still be a little moist. If the seed is collected at this stage and refrigerated without further drying it will keep for some time, but most companies don't bother doing this. Other problem seed like this is Carpinus, and Fagus. I use to think that over drying the seed put it some state of deep dormancy, but now

based on Deno's work, I think it either kills, as in the case of *Acer rubrum*, or allows the seed and seed coat to dry and harden and become semi-impermeable so that you cannot get water to the embryo no matter how long you soak.

I have probably forgotten about a half dozen things, but this should get you started germinating your own seed. Seed from bonsai is a very long term process, five years for even very small bonsai, so don't let this be your only strategy. But, it can be very rewarding as part of your overall plan of plant material acquisition.

*Other reference on growing trees from seeds:*

*Dumroese RK, Landis TD, Wenny DL. 1998. Raising Forest Tree Seedlings at Home: Simple Methods for Growing Conifers of the Pacific Northwest From Seeds. Moscow, Idaho: University of Idaho, Idaho Forest, Wildlife, and Range Experiment Station Contribution Number 860. 56 p.*

*It can be obtained in eight parts in PDF format here:*

<http://www.uidaho.edu/seedlings/howtogrow/manual-menu.htm>

*It is an excellent and comprehensive reference for anyone who wants to grow seedlings on a small or large scale.*

**Ottawa Bonsai Society**  
**Société de bonsaï d'Ottawa**

## **Meeting Location / Lieu de rencontre**

**2003/2004 Executive**

**Exécutif 2003/2004**

**Treasurer / Trésorier**

Yvon Bernier  
208, avenue des Explorateurs  
Gatineau, QC J9J 1M9  
(819) 684-0586

Nos rencontres se tiennent à l'édifice #72 de la Ferme expérimentale centrale. Pour vous y rendre, prenez la direction sud sur la promenade Prince of Wales jusqu'au rond-point à l'intersection National Capital Driveway et Prince of Wales (qui est aussi l'entrée principale de la Ferme expérimentale et de l'Arboretum), où vous prendrez la direction Est menant à l'Arboretum. Une courte distance plus loin, à la première fourche, Prenez la route de gauche qui mène directement à l'édifice #72 (vous verrez une affiche juste en face de l'édifice, de l'autre côté du chemin, qui dit «Friends of the Farm»). Le stationnement est situé de part et d'autre de l'édifice.



**Librarian /Libraire**

Mike O'Connor

**Steering Group****Comité d'organisation**

Yvon Bernier

Duart Crabtree

Al Fournier

Vianney Leduc

Arne Ojaste

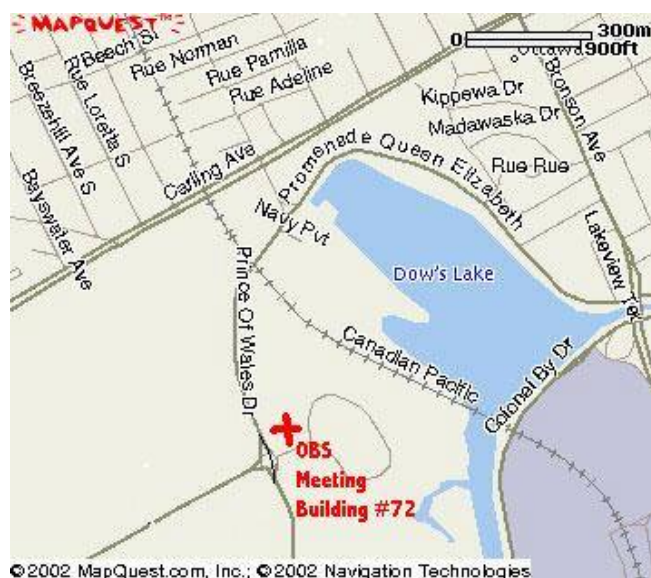
Art Phelan

Barney Shum

Gordon Williams

Murray Wilson

Matt Yakabuski



Our meetings are held at Building #72 at the Central Experimental Farm. Heading south on Prince of Wales, at the traffic circle at the intersection of the N.C.C. Scenic Drive and Prince of Wales, the major entrance to the Experimental Farm and the Arboretum, exit east into the Arboretum. After a very short distance, where the road divides, turn left to Building #72 which will be down a short distance on your left. There is parking just before or just after the building. The entrance is on the street side (east side) and there is a sign reading "Friends of the Farm".