

Feb/March
2010



SPRINGFIELD BONSAI SOCIETY

Palmatum Press

Future Tense March Meeting

Our next meeting will be on **March 8th**. On the agenda is Grafting and Repotting. Milt from Cass Bonsai and Roland Folse will lead the meeting.

The recent spring like weather should have gotten you thinking bonsai again. If you have a greenhouse or temperature controlled garage you might have some trees ready to bud out already. This would be an ideal time to repot those trees if they need repotting.

At this meeting you can sign up for the upcoming guest artist workshops. On Saturday April 17th we will have a workshop with Michael Persiano at the Washington Park Botanical Garden exhibit hall. This is a BYOT (bring your own tree!) workshop, so pick out a good tree to work with.

On Saturday May 8th we will have a workshop with Erik Wigert at Cass Bonsai in Edwardsville. This year Erik will be bringing some *Nia buxifolia* in addition to some Helen Johnson Bougainvillea. These trees are around \$75 to \$100. The bougies are around a foot tall and have pretty nice size trunks. There will be a morning session and an afternoon one. Please make sure to specify which one you are signing up for.



All these workshops are free for current SBS members so don't forget to renew your club membership. Some of you have already signed up for the workshops, we thank you for your support.

The membership dues for 2010 remain the same as last year – \$20 individual and \$30 family. Membership includes free admission to SBS workshops and access to SBS bonsai supplies at the meetings.

Past Tense February Meeting

The February meeting was well attended despite ominous weather. John Mori showed slides of the Chicago (Midwest Bonsai Society), Springfield, and Prairie State Shows. John mentioned that the Prairie State Bonsai Society has had trips to BC Bonsai in PawPaw (<http://www.bcbonsai.com/>).

Gary talked about lining up guest artists for 2011. He had prepared a list of possible workshop artists with input from members. The possible artists for 2011 include Matt Ouwinga, Bjorn Bjorholm, Guy Guidry etc.

This year is the 10th anniversary of the UIS/ Ashikaga exchange and UIS is hoping to have a ceremony to celebrate. Gary is working with UIS to include SBS participation.

We are planning to have a show at the Hoogland center in May with a gallery opening. Dates/details TBA.

Our LLCC/WPBG beginners bonsai workshops are set for May 3 and 17. If you know of any family/friends who want to attend this workshop please have them register through LLCC.

If you haven't had a chance please visit our new web site www.bonsaisbs.com Some club members have added their bonsai pictures to the Photo Gallery.

Repotting and Root Pruning by George Buehler, reprinted from GLBS Feb'10 newsletter

SBS Editor: This article is very thorough in its treatment of this timely topic. Since I cannot do better on my own, I will reprint it with permission from the author.

We are fast approaching the time of year when probably the most important bonsai task will need to be done – repotting and root pruning. Because this task is so important, we need to review how it should be done and why it should be done.

Why repotting is essential to bonsai

When plants are grown in the ground, they can have a root system that extends a considerable distance beyond the canopy. The root systems become larger and more extensive in the plants' never ending quest for water and nutrients to supply the expanding foliage.

Unfortunately for our bonsai, due to the pot size, there is only a limited amount of space for the roots to expand. The problem is that the roots on bonsai continue to grow in tandem with their leaves and branches above ground. After a period of time, which varies between different plants (more on that later), the roots eventually fill the pot and the tree becomes "pot bound". As this starts to occur, the fine feeder roots that are responsible for the uptake of water and nutrients stop growing. The soil porosity becomes lower (slowing the soil drainage), causing further problems with the feeder roots. In general, when a bonsai becomes pot bound, the tree starts to suffer, and this can even lead to the demise of the plant.

With a bonsai, the aim of repotting is to reduce the size of the larger roots, promoting a finer root system, and to introduce fresh (sharper) soil into and around the root system. Remember that as a root grows, and comes in contact with the sharp grit, it will divide quicker than if it comes in contact with more rounded grit. A side effect of root pruning is that it increases the density of the root ball. For every root that is trimmed, a number of new roots will grow from the root tip that was removed. As the root ball is repeatedly pruned over the years, the root system actually becomes more dense. Therefore, even though the size of the root ball is regularly reduced, the actual volume of feeder roots within the ball area increases.

How often should a bonsai be repotted?

As mentioned above, the time between repotting and root pruning varies between species as well as with the age of the tree, pot size and environmental constraints. Fast growing plants, such as figs or multi tree forests, may need repotting annually. Others, such as conifers, may not need repotting for three or four years.

A sure sign of the tree becoming root bound is when, during watering, the water pools on top of the soil rather than draining quickly. This is only an indication, albeit a fairly good one. The tree should be checked annually in the spring. Gently ease the tree out of the pot and examine the root ball. If the roots of the tree are mainly contained within the soil, ease the tree back into the pot and wait another year. However, if you see a large amount of roots on the outside of the soil growing around the pot, then it is time to repot.

What time of year a bonsai should be repotted

This is somewhat of an enigma. If the plant does not drain well, or if upon examination of the root mass, there are a large amount of roots growing on the outside of the soil, then it is time to repot. If, as the root mass gets larger and denser and water drains slower, you may actually reach a point where the tree begins to suffer. If the tree is showing signs of stress and there are not other visible signs of problems and the root mass is "over grown", it is better to simply slip the tree into a larger pot and wait another year to root prune. Root pruning and repotting a suffering tree can cause irreparable harm. The best time to repot and root prune is when the tree is dormant, just prior to leaf bud. However, if you have a number of trees, waiting for this time can cause a lot of frustration trying to get them all done at the same time. In general, when I see the first sign of leaf budding, I begin the repotting process. In some instances, I have begun the repotting process in late January or early February before any sign of leaf bud. For my conifers, I try to wait until I see definite signs of leaf budding. This is harder to do since you have to inspect the tree through the normal foliage. I must admit that I have repotted several conifers in mid-May (due to time constraints) with no apparent adverse effects. This was definitely past the prime time. For my tropicals, I repot in mid summer. I guess this may be counter to the theories; but I find if I transplant in the 'so called' dormant period of the indoor

winter months, the trees shed a large amount of leaves and take a long time to recover. When they are transplanted in the heat of the summer, they seem to recover quickly.

The repotting process

Prior to beginning repotting, I set my trees on a turntable and decide if the front that was previously chosen is still at the same position. Quite often the tree will need slight adjustments to placement or angle. If I decide that adjustments need to be made, I put a piece of masking tape on the trunk with a mark for the new angle or front adjustment. Later, when you are putting the tree back into a pot, you can quickly and accurately see how the tree should be placed. This is also a good time to decide if the pot is the "correct" one.

If you decide the tree needs a new pot or even if you would like to see how a different pot would look, you can place a new pot in front of your tree to get an idea of how it would look. In general, you should always lean toward a larger pot rather than a smaller one if you are going to change pots. Choose your pots carefully. Take your time. The pot is supposed to compliment the tree. The selection of the "right" pot is much more important for the older, more finished tree since it will stay in that pot for a long time. If you are pre planning all your tree repotting (and that I recommend), use a piece of masking tape with the tree name on the new pot so that you remember when the actual flurry of repotting time comes.

Don't forget to make sure you have plenty of SIFTED soil. If you are trying to develop a good root mass, use a slightly coarser soil. Make sure to sift out the majority of fines – this will only clog your good draining soil. You will also need wire and plastic mesh for the drain holes. Whether you are using the existing pot or switching to a new pot, always make sure it is thoroughly cleaned. I use a mild dish washing liquid to clean my pots - making sure to clean off any salt crust if it is a used pot. A 50/50 mixture of vinegar and water, along with a stiff bristle brush, generally will take off the salt crust. Once you have scrubbed the pot with the soap solution, make sure to rinse, rinse, rinse. You don't want to leave any soap in the pot. As a final step, I disinfect the pot using a bleach solution – one cup bleach to about ½ gallon water. I let the pot soak in the bleach solution and agitate it slightly to ensure that the solution gets into any pores in the pot. After the disinfect step, it is rinse, rinse, rinse again. If this is a new pot, I will let it air dry; otherwise, I use a clean towel to dry the pot.

If the tree is going to be put back into the same pot, some people simply rinse out the pot to try to maintain any natural mycorrhizae left in the pot. Unless you have a fungus on your trees, this is probably ok. I purchase mycorrhizae and add it to my soil as I replant the tree. This may not be as good as using a tree specific mycorrhizae, but it seems to work in my systems. Now back to the actual repotting—

Another thing I need to mention is that I always let the soil in the pot dry down prior to repotting. I find that the soil comes out easier if it is somewhat dry. Also, you will tear less of the fine feeder roots if the soil comes off easily. If the tree is root bound, more care will have to be taken to avoid tearing a lot of roots as it is removed from the pot. Make sure that all the wire used to tie down the tree in the previous repotting has been removed. I also cut any wire used to hold the plastic screen to the pot since, in many cases, roots have grown into or around the plastic mesh. Tap the sides of the pot to see if that will loosen the tree from the pot. Otherwise use a trowel or plastic knife to loosen the tree. Gently working the knife/trowel around the edge of the pot will loosen the tree enough to facilitate removal. I usually push the plastic mesh from the bottom to help removal.

Once the tree is out of the pot, set it aside; and, if you are going to reuse the pot, clean it as outlined above. Cut pieces of plastic mesh to cover the drain holes and secure them with wire. After the pot is cleaned and ready to use, use a chopstick to loosen the soil around the roots. At the same time, I try to comb out the roots with the chopstick. Although a number of references recommend use of a root rake to loosen the soil, unless the soil is really compacted, I prefer to stick with the chopstick. My reasoning is, although you will be trimming the roots, the root rake may tear some of the feeder roots you may want to save. Once I get the majority of soil out of the root mass, I use running water and a chopstick to remove the rest. Using this method, I can tease out all the long roots. I used to leave some soil in the root mass, following recommendations from several references. Now, except for some unusual circumstance, I remove all the old soil. My reasoning is that if you leave the old soil, you are leaving fine, rounded, and degraded soil. This compacted soil will not drain freely as mentioned above. When all the roots are straightened, examine the root mass; and, if the taproot is still there, cut it off, or at least shorten it. If I cut the taproot, I generally put some cut paste over it to keep it from resprouting or rotting. If I cut any roots that are over about ¼ inch in diame-

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ter, I also use a very thin layer of cut paste to seal them to prevent them from drying too quickly. For roots that are on the soil surface, only, cut that portion that will be below soil level in the new pot and only do that if you want to slow the roots growth. If I do trim these roots, I will apply a layer of rooting hormone to encourage growth of feeder roots rather than further elongation.

I typically remove about 1/3 to 1/2 of the root mass. The amount to remove is very dependent on the amount of feeder roots and larger roots present. If the tree is young and has only a majority of larger thicker roots, then remove less during this go-round. If the mass is made up of a majority of feeder roots, you can take off more. Ideally you should cut the tip of every root to encourage further feeder root growth. Also, if the root is over about 6 inches long I will trim that one back to about 3 inches.

Another important point is to ensure that you are using sharp shears or root cutters. If your tools are not sharp, you will either crush the root or leave jagged edges, both of which are detrimental. A crushed root will not continue to grow, defeating the purpose of the root pruning. A jagged edge can lead to root rot.

One final point in this part of the process is to make sure the roots don't dry out. Since I wash out the soil, this is not generally a problem. However, things can happen that cause delays in getting the tree back into soil. For this reason, I take two precautions. The first is that I have a tub of water which can be used to immerse the roots if there will be some long delay. For shorter delays, I keep a spray bottle filled with water handy. You don't want the roots to dry out while you are working on the tree. However, you also don't want to have the roots soggy when you are trying to work the soil back around them. So you will need to have a balance. Just watch the appearance of the roots and if there is moisture around them, they should be ok. Otherwise give them a misting with the spray bottle. It is better to err on the safe side.

Putting the tree in the pot

Next to root pruning this is probably the most critical step. This is the time to take it **slow** and make sure you do it correctly. Don't forget that once the tree is in the pot, it may be a number of years before you can correct any mistakes you make at this time. With the pot cleaned, disinfected, dry, and mesh installed over the drain holes, install tie down wires through the drain holes. Depending on the size of the pot and the size of the tree, the number of tie downs may be two or more. I like to use 1.5 mm wire for the tie downs because it is easy to work with. Although I have never tried it, I have read that some people use a heavy twine as a tie down. They say that this doesn't scar the surface roots; and as the root mass grows, the twine will degrade and allow the root mass to expand. I see some problems with this method since trying to tie down the tree with the twine appears to be difficult; but, as stated, I have not tried it. I also have some plastic tubing (obtainable from several home supply centers or some medical supply houses) to thread over the wire where it crosses over the surface roots. This keeps down any scarring, and later the tubing can be removed with the wire and reused next time.

Add the sifted soil to the prepared pot, mounding it up in the center of where you will locate the tree. I always add a small amount of mycorrhizae spores to this initial soil, mixing it well with the soil in the pot. (The mound of soil should be at least the height of the pot). Set the tree in the pot on top of the soil. Make certain that the front you previously chose is facing out and the correct angle is used. Once you are certain of the placement and angle, move the tree back and forth to work some of the soil into the roots, but make certain the tree base is at least even with the top of the pot. Check again that the placement and angle are what you want, then use the wire previously threaded through the drain holes to tie down the tree. At this point the wires should be just tight enough to hold the tree in position. Reexamine the way the tree looks in the pot. If it doesn't look just right or if the placement needs to be adjusted, now is the time to do it. Remember that the tree should be placed off center of the pot, both side to side and front to back.

I now add more soil and, using a chopstick, work some of the loose soil into the root mass. I also tap the pot to help the soil settle. Continue working soil into the root mass, adding additional soil as needed. Once you have worked the soil into the roots, the wire can be twisted to tighten the tree into the pot. During this process, continue to reevaluate the tree's position to ensure that it is in the right place and the height of the tree base is at least even with the top of the pot. Continue pushing the soil into the root mass using your fingers and the back end of the chopstick. When you have added almost enough soil to reach the top of the pot, gently move the tree to make sure it is secured to the pot. There should be no movement of the tree when you rock the tree back and forth. If there is, you need to tighten the wires more – the tree needs to be firmly attached to the pot. If you raise the pot, you can use a pair of pliers to twist the wire on the bottom to add additional tightness to the tree. Continue working the soil into the roots, adding more fresh soil. Use your fingers and chopstick and vibrate the pot to work the soil in. Fill the pot up to about 1/4 inch from

the top of the pot edges. The soil ideally should taper from the bottom of the tree base to the ¼ inch below the pot edge in a straight taper.

After I think I have enough soil added, I slowly submerge the pot into a large plastic container with water in it. This will have to be done slowly to allow the air to escape while not allowing the soil to raise out of the pot. The level of water in the plastic container should be slightly lower than the edge of the pot. Once the pot is sitting on the bottom of the plastic container, I let it sit there for awhile and periodically raise the pot out of the water to help settle the soil. After three or four dunkings, I push down on the soil with my fingers to ensure settling.

Let the pot drain thoroughly and, once again, gently rock the tree to make certain it is firmly attached to the pot. If it is, the pot should be placed in an area where it will not be exposed to strong winds or direct sun. It should be left in this location for about two to three weeks and then slowly exposed to full sun. You will have to watch the moisture level in the pot. In general it will not use a lot of water the first few weeks and you must be careful not to over water. However, you must ensure that it does not dry out either. I don't use any fertilizer for about six weeks after repotting. Repotting and root pruning is not a massive task as long as you follow a fixed procedure and take your time. It is a necessary task that benefits the tree.

References:

Root Pruning – Brent Wilson

Repotting and Root Pruning – Bonsai4me web site – author unknown

Repotting – Dave Bogan

The Bonsai Handbook – David Prescott

Obituary

Carolyn Applebee, wife of long time SBS Member and Treasurer Tom Applebee died on Tuesday, February 23, 2010 at Barnes Jewish Hospital in St. Louis, MO. A memorial service was held on Monday, March 1, 2010 at Kirilin-Egan and Butler Funeral Home. Please visit Carolyn's online life story at www.butlerfuneralhomes.com



March Bonsai Care Tips

Disclaimer: This is a general guide. Times can vary as much as a month depending on the weather trends. Some species of trees do not follow the general category guidelines of deciduous, evergreen or tropicals. Know your trees!

- Repot deciduous trees in early part of month or at first signs of root and bud growth. Repot junipers and spruces toward end of month. Continue protecting newly repotted trees from hard frosts.
- Prune deciduous trees as buds begin to swell. Thin out fine growth.
- Place covered trees outdoors as buds begin to burst.
- Do not feed newly repotted trees until buds are open.
- Check junipers and spruces for signs of spider mites and aphids. This is the last month that dormant oils can be applied to the outdoor trees. If you had aphids or spider mite infestations last summer, you may want to apply the dormant oil to prevent them this year.
- Check your supplies. Do you have enough soil, wire, drain hole mesh, fertilizers and pots to complete repotting?



SPRINGFIELD BONSAI SOCIETY

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Upcoming Events

March 8, Monday 7 pm SBS Meeting – Grafting, Repotting. Milt Ciskowski, Roland Folsie. MS. A long drive but great trees and great workshops.

March 20, Saturday 8 am, "Gardener's Day" at the University of Illinois Extension Building #30, Illinois State Fairgrounds, Springfield, IL. Registration starts at 8:00 a. m. with the first seminar at 8:45 a.m. and the event concludes at 12:05 p.m. Many topics, including "Native Plants for Your Yard" by Janine Catchpole

May 15 - 16 - Midwest Bonsai Society Spring Show Chicago Botanic Garden, Exhibition, Workshops, Vendors.

May 28- 30 Brussel's Rendezvous, Olive Branch,

June 25-27, MABA Convention, Grand Rapids Michigan www.wmbonsai.org. Another long drive but some more Bonsai workshops, demos, exhibit and vendors. Kathy Shaner, headliner.

Administrivia

Your 2010 Officers are:

President – Gary Trammell 217-741-4849 (M)
Vice President – David Kerwin
Treasurer – Tom Applebee
Secretary – Manish Sumant 217-652-9619 (M)
& newsletter editor

Annual membership is \$20 (family \$30).

Email msumant1@netscape.net to sign up or visit <http://groups.yahoo.com/group/BonsaiSBS/>