



BADGER BONSAI SOCIETY

Promoting and Enjoying the Ancient Art of Bonsai Since 1972

Badger News | A Publication of the Badger Bonsai Society | APRIL, 2010

NEXT MEETING DATE: April 8th, 2010
6:30–8:00 p.m. *(come early, if possible, to get set up)*
Olbrich Botanical Gardens
3330 Atwood Ave. Madison, WI

MEETING AGENDA: Repotting Techniques
Repotting is done to keep the tree healthy and vigorous. Ron will walk us through the steps. Bring a tree to repot and all the tools (See repotting pg 5).

CLUB OFFICERS:

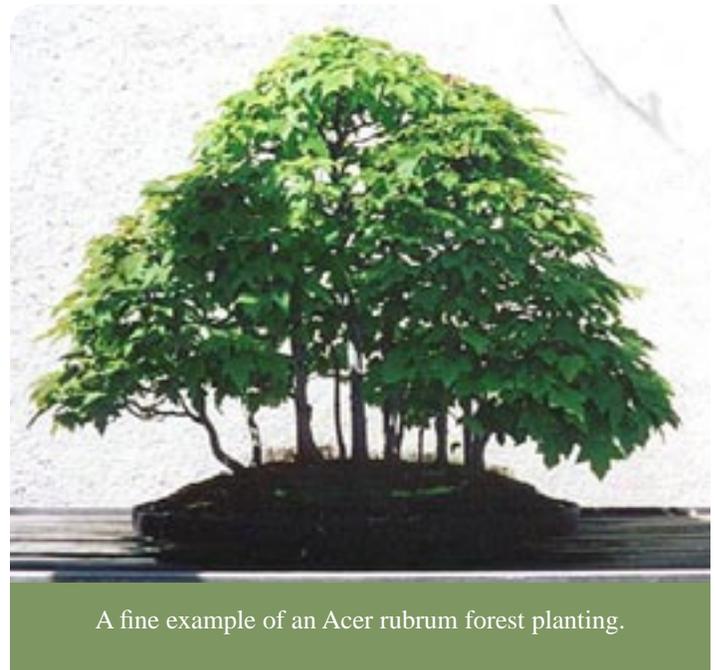
- President Tim
- 1st Vice President Matthew
- 2nd Vice President..... Devon
- Secretary Duke
- Treasurer Gary
- Librarian/Newsletter Greg
- Refreshments Elaine
- Past President Ron

PRESIDENT’S MESSAGE; THINGS TO LOOK FORWARD TO

By: Tim

For those who have signed up, I think we will have a fun forest workshop on April 25. It will be open for the public to watch members of the Badger Bonsai Society get their hands dirty. It will be an opportunity for viewers to see that bonsai is more than those windswept evergreens that people sell at the side of the road.

A further note on last month’s wiring presentation, a person may still wire their trees using copper wire that is not annealed. I do not want to frighten away people who are new to this fine art. Many of us have been doing this for a long time by reusing old scraps of wire that have been taken off a tree. However, if you participate in a workshop lead by an out-of-town master, then you might want to use annealed wire. Annealed wire is easier to use, but not absolutely necessary. The master might say otherwise and bug you enough for you to remember to bring annealed wire next time.



A fine example of an Acer rubrum forest planting.

I, myself, will be behind schedule, but for everyone else, now is the time to start repotting, pruning, and wiring your deciduous trees, including larch. You have a little bit more time for evergreens. There has been some past discussion about major pruning with repotting in the spring. I go along with the recommendations of the major national nurseries. Right now, in my hands, I am holding a Stark’s fruit tree guide that says I need to prune back my bare-root apple trees as soon as I receive them. The basic idea with bonsai and large fruit trees is that transplanting injures the roots. In the case of bonsai, we actually trim and rake out the roots. The fruit trees arrive with broken and some dried out roots. The

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theory is that the top of the tree asks for water and nutrients for all of its parts to enjoy. If some of the

“...now is the time to start repotting, pruning, and wiring your deciduous trees...”

roots are injured or gone, then the request will not be fulfilled. I recommend that you prune at least as much of the top as you plan to do with the roots. I have noticed that with older trees that have been transplanted more than once in bonsai pots, heavy pruning of the top is not as necessary. I have a hypothesis about that, but I do not want to bore you. If you have been successful with a certain technique, then please continue with what has been working for you.

We have some exciting meetings coming up, so I hope to see you all in April.

Your humble servant,
Tim

April Announcements

By: Devon

Style of the Month

We will be having a forest (or group) planting workshop on April 25th.

If you have an example of a forest, please bring it to the April meeting.



Forest Workshop on April 25th

We still have room for 1-2 more folks to participate. For those of you participating in the forest workshop on April 25, the trees have been ordered.

American Red Maple (Sp. *Acer rubrum*, AKA, Swamp Maple), bare-root 2-year seedlings, \$1.20 each. A \$10 down payment is requested at the next meeting. Please pay Tim. If you will require a training pot to get your forest started, please contact me before April 7 at info@badgerboinsai.net and I will make arrangements. Pots are an additional \$8.45. Of course, if you have your own you can use that. Style suggestion for a forest pot is shallow and oval.

Repotting on April 8th

Hopefully everyone has a tree they can repot at the next meeting. Participants will need to bring:

- Plastic or a large bath towel to cover their work area
- Tools to repot style the tree
- Root hook or chopsticks to assist in repotting
- Fresh soil and a new pot (if required)
- Garbage bag or tub for refuse left over

NOTE: If you are purchasing a Burning Bush from Ron for the May workshop, you are highly encouraged to purchase and repot that tree at the April meeting. By May, the trees will be completely leafed out and subsequently to risky to repot at that time. *More on that info below...*

Burning Bush Workshop on May 13th

The Burning Bush Workshop will include:

- One Dwarf Burning Bush - *Euonymus alatus* ‘Compacta’
- One plastic pot appropriately sized
- Bonsai soil
- Screening to cover the holes in the pot
- Wire to secure the tree in the pot
- Wire to style the tree
- Cut paste to cover open wounds
- Assistance to style and repot the tree

All for the low cost of \$25.00! Those interested in purchasing a burning bush should to contact Ron at aabonsai@charter.net before April 7 to make arrangements for repotting at the April 8 meeting.



Just a couple of the Dwarf Burning Bush - *Euonymus alatus* ‘Compacta’ available.

Greg's Little Green Grotto

By: Greg

APRIL is a devilish month, tempting us with wonderful bright sunny days, and then in an instant we get bombarded with snow, ice, and sleet, laughing at us as if spring is a long way off. I hope that by now you have checked over your supplies of pots wire and soil, as well as tools, and replenished them if needed. If not do so soon as time is running out.

I tend to over-winter most of my trees in my unheated garage, with only the "Guardian of the Trees" to watch over them and keep them company. These last two weeks have seen many changes in the condition of the trees. As the weather warmed the buds swelled, a few started to open. Repotting took a hurried approach, and most seemed to go well, and they were moved to a sheltered bench outside to get a little sun. Then this cold spell hit, supposed to get down to 19 tonight. The trees are actively growing, sap is flowing, leaves are unfurling, and this frost could now kill them or severely damage them. I hope that I was not the only one to hustle the majority of the trees back inside. I know the "Guardian" is happy he has some company again. One note of caution, the afternoons are going to be getting warmer and this could lead to the trees flushing out more tender growth, and this could also be harmful to the trees and/or the bonsai design itself. Keep windows and doors open to keep the inside cool, closing them at night to keep the trees warm. This

warm/cold temperatures are not only harmful to the plants but it can also effect pots as well. Last year at this time I lost an expensive pot to this weather. It would be warm during the day and freezing at night. One night I left the trees outside and it froze, the next morning I had a nice pot split in two. The tree survived, and I made two toads very happy by having two new houses for them to move into. So be wary of the weather at this time, protect your plants and pots.

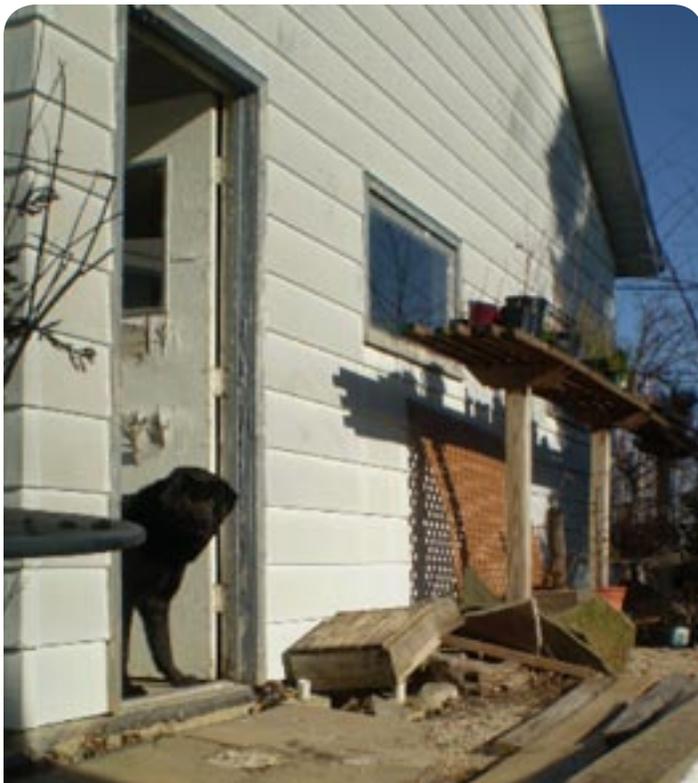
The repotting went well, I gathered together all my tools, wire, mesh and soil, (glad I mixed up a couple of hundred tons of the stuff last fall.)

Brought all the stuff into the house and sat down next to the TV, (if the wife had seen me doing this I would be spending the nights with the "Guardian") and started teasing roots and packing trees in new pots. Got the vacuum out and the house was back to normal before the wife came home. There is still a lot of time to repot, check the buds, not all trees need to be repotted at this time. Maple, birch, quince, honeysuckle, and others need to be potted soon. Beech, crabapple, larch, and ginkgo can wait a little while. Saving evergreens; pines, spruces, firs till later.

Some things to remember, Maple and birch to not like to be pruned before the buds swell and open, (think Maple Syrup production) sap is flowing at a high rate at this time and the trees could 'bleed' out. Once these trees leaf out they can then be pruned, also larches do not care to be pruned or wired until their buds begin to swell.

Some of the trees that I repotted were bought bare-root from International Bonsai (www.internationalbonsai.com), with the hopes of making some forests, but I placed these all in pots, some were too big and some needed to be filled out. I will wait until next spring to try some forests, but I will not have to wait that long. SUNDAY APRIL 25th we will be conducting a forest workshop, yes that is on a Sunday and during the day, I do not have the time but this should be interesting as there will be plenty of people wandering about the gardens while we try to work. We will get some bare-root Red Maple seedlings to make our own forest plantings. So come to our next meeting on April 8th and watch Ron's demonstration, and sign up for the forest workshop. In May at our meeting (May 13th) we will be having a Burning Bush workshop so sign up for this also. The cost for this will be \$25.00, this includes both a pot and one Burning Bush. I have seen the plants and this workshop should be fun and informative.

Good Luck,
Greg



"The Guardian of the Trees"



Matthew G, Badger Bonsai Society 1st VP

At last month's meeting we had a discussion of wires and wiring from our president Tim. During the meeting I snapped this photo of one of our members Matt hard at work and in deep concentration wiring one of his trees. *Greg*

Bonsai Knowledge Quiz

Quiz found at Bonsai Boy of New York

www.bonsaiboy.com

Question 1:

What does Bonsai literally mean?

- A. Japanese Art
- B. Tree often planted in a small pot
- C. Little tree that looks old

Question 2:

Where does Bonsai originate from?

- A. China
- B. Japan
- C. Europe

Question 3:

What is Akadama?

- A. A Bonsai style
- B. Fertilizer
- C. Ground mixture

Question 4:

What is the best time to prune the roots?

- A. Spring
- B. Summer
- C. Winter

Question 5:

Where does the Cascade-style descend from?

- A. From old trees
- B. From trees who live in cold areas
- C. From trees who live in rocks

Question 6:

What is the best time to collect trees from forests?

- A. The Spring
- B. The end of the Summer
- C. The Winter

Question 7:

What is the Japanese name for the Broom-style?

- A. Kengai
- B. Hokidachi
- C. Chokkan

Question 8:

What is the best spot to place deciduous trees?

- A. In the sun
- B. Out of the wind and always in the shadow
- C. Not too much sun, and out of the wind

Question 9:

What is special about the Bunjin-style?

- A. Only a small number of branches shapes the tree
- B. Only Pines are used for this style, the tree is always planted in huge pots
- C. The trees are very small, and placed in very small pots

Question 10:

The Double-Trunk Style

- A. Has two small trunks, both leaning and with the same length
- B. Stands in large pots
- C. Has two trunks, varying in thickness and height

Question 11:

What isn't correct?

- A. The first branch is usually on 1/3 of the trunk
- B. You must trim a Bonsai once a week
- C. Bonsai doesn't have to be small

Question 12:

Bonsai trees grow only when the soil is ?

- A. Dry
- B. Damp
- C. Wet

1.B, 2.A, 3.C, 4.A, 5.C, 6.A, 7.B, 8.C, 9.A, 10.C, 11.B, 12.B

Repotting & Root-Pruning Bonsai

Adapted from: <http://www.bonsai4me.com/Basics.html>

Why Repotting is Essential to Bonsai

As plants of all kinds grow, their root systems become larger and more extensive in order that they can supply their ever-expanding canopy of foliage with the necessary quantities of water and nutrients. Trees and shrubs grown in the ground can have root systems that extend beyond the shadow of their own foliage canopy in a search for water and nutrients. On the other hand, containerised plants are limited by the size of their pot as to how far they can extend. They need to be constantly supplied with food and water on which to survive. Their root systems however, continue to grow in tandem with their leaves and branches above the surface of the soil.

After a period of time that varies between different plants and plant species, the root systems of all pot-grown plants fill their containers, and become 'pot-bound'. Under these conditions, new fine feeder roots that are so essential to the uptake of water and nutrients in a plant have little room to grow, the soil structure deteriorates and the plant starts to suffer.

With an ordinary pot-plant the solution is to pot the plant into a larger container which allows room for new, fresh compost around the rootball. With a bonsai, the aim of repotting is the same, to allow fresh compost in and around the root system so that it can continue to form fine feeder roots and so that fresh soil can be introduced around the root system. However, with Bonsai, the container, and more specifically, the size of the container is not only part of the design but its size is specially selected to suit the tree. For this reason, Bonsai are root-pruned.

A side effect of root-pruning is that it increases the density of the root ball. From every root that is trimmed, a number of new roots will emerge from the root-tip that was removed. As the rootball is repeatedly pruned over the years, the rootsystem becomes denser and denser. Within a well-developed rootball, dozens of fine feeder roots can occupy the same volume of soil that one unpruned root may ordinarily use. So though the size of the rootball is regularly reduced, the actual volume of root within a certain amount of soil increases, and sufficient to support the canopy of the tree.

Root pruning does not dwarf or stunt the tree in any way. The tree may lose a little vigour for around 6 weeks after rootpruning, as it regenerates its root system (this is more noticeable with evergreen tropicals such as Figs), but after this short period of adjustment, the tree becomes more vigorous than

before as new feeder roots are able to develop in the new soil.

How Often Should Bonsai Be Repotted?

Bonsai need repotting when they become pot bound. A Bonsai is considered to be rootbound when its roots entirely fill the pot and there are long roots circling the rootball or inside of the pot. In some cases, roots will also be seen to be growing out of the drainage holes at the base of the pot.

The time a tree takes to become rootbound varies from one year to five. A number of factors affect the amount of time a tree takes to become rootbound in its pot; different species of tree have different levels of vigour. Fast growing species and individual plants (Figs and Larch for instance) tend to require more frequent repotting and rootpruning. Other factors that contribute to regular root pruning include size of container, development of rootball (a dense established rootball will not require as frequent repotting), and the age of the tree, older trees are not as vigorous and require less frequent repotting.

The rootball should be checked for its condition annually in Spring; gently ease the tree out of its pot and examine the rootball. If the roots of the tree are still contained within the soil, the tree can be returned to the pot and repotting can be left for another year.

When Should A Bonsai Be Repotted?

Bonsai are repotted whilst the tree is dormant, this reduces the stress on the tree as it is not having to supply water and nutrients to its leaves, or in the case of evergreens, the supply of nutrients from the roots is minimal. To repot and rootprune when a tree is supporting a full canopy of leaves and is actively in growth would result in loss of foliage through desiccation, as the roots are unable to supply sufficient water and nutrients to its leaves. Repotting during the growing season is highly stressful to almost all tree species and can often result in death or dramatic loss of vigour.

Therefore, Bonsai require repotting when they are dormant or when there is a minimal requirement for the roots to supply the rest of the tree with nutrients. Another factor that influences the exact timing of repotting a tree is the length of time that injured/trimmed roots will remain exposed to moisture and frosts. The rootsystem will not repair itself fully until the tree starts into growth during the Spring; this means a tree repotted early on in Winter may not repair its roots for a number of months, leaving the root tips open to infection, root rot and frost. By repotting closer to the time that the tree starts back into growth, the less time that the cut roots are left exposed to soil moisture and freezing conditions.

The best time to repot a tree is therefore right at the very end of its dormant period, just as it is about to start back into growth. The tree is still dormant, but, as the tree is about to start back into growth, the repair of trimmed roots is fairly immediate. The exact timing of this varies between tree species, and more importantly, varies according to local climate and individual plants. It is not realistic to expect to find out when to repot a particular species on a certain date as there is so much variation between different climates; as weather conditions subtly change year on year in the same geographical area, it is also not true that a tree is repotted on the same date each year.

Observe each tree to see when it is ready to be repotted. Deciduous species during the Winter, if inspected closely, will be seen to have small leaf buds that are held closely against the branch. As the tree starts to come out of dormancy, these leaf buds will start to extend, ready to open out and reveal their emerging leaves.

Getting Started

Before Removing a Bonsai From Its Pot

Before the process of repotting begins, it is always worth preparing the materials that will be needed, as time spent looking for materials during the course of repotting prolongs the amount of time the roots are exposed to the air. Ensure that the following materials are to hand; sufficient good quality bonsai soil, tools, plastic mesh and wire. If a new pot is to be used for the repotting, prepare the pot.

Preparing The Pot

If a new pot is to be used, this procedure can be carried out before the tree is lifted from its old pot. If the old pot is to be retained, it will need to be thoroughly cleaned with water and prepared after the tree has been removed. Plastic mesh is used to cover the drainage holes of the pot. The mesh stops the soil medium from falling through the drainage holes whilst still allowing the free drainage that is required. 'Butterflies' are shaped from bonsai wire to hold the plastic mesh in position. Lengths of wire or string must also be threaded through the drain-



Take the time to get everything ready before you expose the tender roots to the open air. Dry roots will kill most species.

age holes in a loop to be used for tying the tree into position so that it cannot become dislodged within the pot.

Preparing New Soil For Repotting

There are a very large number of soil mixes that are suitable for bonsai. Indeed, it is a hotly debated subject within bonsai-circles as choosing the right soil-mix for your tree and climate is of the utmost importance. It should be noted that it is essential that the soil that is used is free-draining and does not compact easily.

Removing The Tree From Its Pot

Cut the tying-in wires from the bottom and tilt the tree out of the pot. If the tree is reluctant to come out, try tapping the sides of the pot with your hand to try to separate the soil from the edges of the pot. If this fails to work, run a sharp knife along the inner edges of the pot to release the rootball. Gently, lift the tree to inspect the rootball.



Pot bound roots will cause harm to your bonsai.

Removing Old Soil & Combing Out Roots

After removal of the rootball from the pot, it is now necessary to comb out the rootball. This not only removes much of the old compost but also disentangles any long roots that will need to be trimmed back. Remove as much old soil from around the edges of the rootball as possible, using either a pointed stick or by hand; chopsticks are useful for this job. Metal roothooks are often used by enthusiasts but in my opinion it is too easy to damage roots this way; roots end up being torn and not cleanly cut. Particular care must be taken to protect the nebari.

Rootpruning

After the old soil mass has been removed and the new root growth has been disentangled, excess circling roots can be trimmed back with a sharp pair of scissors or shears. The amount of root that

should be removed depends on a number of variables including vigour of the tree, the density of the rootball and according to tree species. However as a general guideline, aim to remove around 1/3 of the overall rootmass.

The remaining root system should be carefully examined for any root problems that may exist. Remove any dead, decayed or injured roots to prevent or cure problems with root rot. Dead or rotted roots will be black, slimy and their outer bark will slip easily from the root itself; severely rotted roots will be entirely hollow and crumble away. All signs of rot must be completely removed to prevent its spread. Examine the rootball for any other signs of infection or infestation, if found, these should be dealt with appropriately.

After excess circling roots have been removed; check the rootball for faults, particularly around the area of the nebari. If the rootball has become excessively dense, make wedge shaped cuts into the remaining rootmass. This is only necessary on a well-developed, densely packed rootball and ensures that fresh soil is applied to the centre of the rootmass and that water is able to permeate.

Strong, thick, downward growing roots should be removed so that the rootball is flat and can be fitted into the pot. Downward growing roots left without pruning will start to lift the tree out of the pot. Any other thick or straight roots should also be pruned back to a point where there are fine roots branching out. Thick or straight roots tend to rob the vigour of smaller finer growth. At all times when pruning back such roots, it is important that they are inspected carefully to ensure that their removal will not reduce the rootmass to a level where it cannot support the tree. Thick roots should be cut on a slant with the cut facing downward; this prevents water from accumulating on the cut-surface. Cut the roots cleanly with a sharp knife to help prevent rotting and accelerate healing. Thick cuts can be either sealed with cut-paste or preferably dusted

with hormone-rooting powder as it normally also contains a fungicide that will help prevent infection to the root. To accelerate healing and rooting of a thick root that has been cut; it can be worth dressing the cut surface with a thin layer of long-stranded sphagnum moss.

The trunk should have roots spreading radially from around its base; roots that grow upwards or recurve from the base (nebari) are considered ugly.

Repotting

After the tree has been rootpruned, it is then necessary to repot the tree. If the pot has not already been prepared, it should be done so now. Cover the base of the pot with a layer of soil creating a small mound where the tree is to be positioned so that when finally planted, it sits above the height of the rim. Place the tree in the pot and ensure that the correct front of the tree is facing forward. Tie it in firmly with the anchorage wires so that the tree is unable to be rocked about by the wind in the coming weeks whilst new roots are growing. The tree should be held in position by the anchor wires, not by the soil. Add some soil and work it around the root mass carefully so that there are no air pockets. Make sure that the soil is not compressed and take care not to damage the roots. Continue to add soil until the pot is filled just below the rim. When the soil is fully worked in, water the tree thoroughly to ensure that the soil is fully wetted and any remaining air pockets are removed. Watering will settle the soil and it may be necessary to apply more soil to the surface. Re-water until it is certain that the soil has settled fully within the pot.

Aftercare

Most trees will show no reaction to repotting and continue on the through Spring without any problems. Some extra care should be taken however in the six weeks after repotting to ensure the health of the tree; The requirement of water by the tree will be lessened and though the tree should never be allowed to dry out, ensure that it is not overwatered. Avoid exposure to severe frosts, the tree should be regarded as less hardy than normal for six weeks after repotting. Do not place the tree where it is exposed to strong winds or sun. This is particularly necessary with evergreens as the increase in loss of moisture through the leaves as a result of the wind and sun will increase the stress on the newly pruned roots. It is possible under windy or hot conditions for evergreens to lose foliage if the reduced rootball is not able to replace evaporated moisture. If foliage does start to dry out on evergreens, provide a shady position out of the wind and mist the foliage regularly.

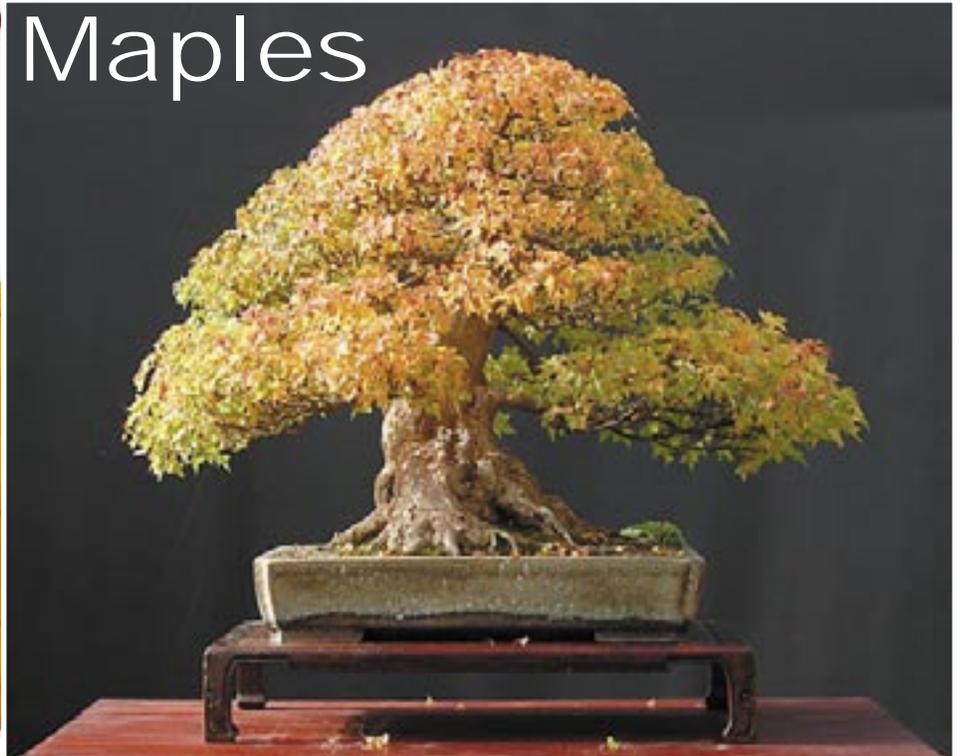


Trimming the roots is an essential part of bonsai cultivation.

All About Maples

Toronto Bonsai Society

by Reiner G



Maples – a rhapsody of colours and textures in spring and fall, majestic when in full foliage in summer, and even in winter, they delight us when they reveal their branch structure and twiggyiness. Not only does each plant offer continuous change, but the species has so many varieties with outstanding and differentiating characteristics, that one could easily build a collection containing nothing else, and yet still offer great variety.

I admit it, I am partial to maples. I've found them to be:

- easily adaptable to life in a pot
- vigorous and fast growing
- responsive to wiring and pruning techniques
- suitable for any style, with the possible exception of bunjin
- making respectable bonsai even with relatively young material
- reasonably hardy, and
- a little fickle when it comes to sun and wind

Most of the maples grown as bonsai are “Japanese maples”, which is a very loose term generally applied to varieties of *Acer japonicum* and *Acer palmatum* of which there are some 250. Many of these make excellent material for bonsai culture, and here is a short list:

ACER PALMATUM

- *A. palmatum Kashima* - dwarf form, rich green leaves, short internodes, hardy

- *A. palmatum Kiyohime* - small leaves, vigorous grower, gorgeous spring colour
- *A. palmatum Kotohime* - smallest leaves, twiggy growth habit, somewhat ‘ratty’ looking
- *A. palmatum Okushimo* - small green leaves on bright red petioles upright growth habit, golden colour in fall (frowned upon by bonsai purists because the leaf segments are curled but don't listen to them - it's a gorgeous plant)
- *A. palmatum Seigen* - bright crimson spring foliage, small leaves, multibranching
- *A. palmatum Deshojo*, Shindeshojo, Chishio, Chishio improved - bright red spring foliage
- *A. palmatum Higasayama* - spectacular spring buds, unattractive (in my view) variegated foliage that will “burn” off if exposed to full sun and make room for regular green palmatum leaves on second growth, very short internodes resulting in excellent twiggyiness

ACER JAPONICUM

- *A. japonicum aureum* - Golden Full Moon Maple- has yellow leaves that turn orange and red in the fall, very desirable specimen, slow growing, branch structure angular
- *A. japonicum Junihitoye* - smallest leaved of the japonicums, twiggy growth habit, brilliant orange fall colour

OTHER MAPLES

- *A. buergerianum* - Trident maple - one of the classic bonsai plants, shiny green leaves that reduce well under bonsai culture, noted for excellent surface roots in mature plants, good fall

colour of orange and red, twiggy growth habit

- *A. ginnala* - Amur maple - leaves similar to Trident, not as shiny, excellent fall colour, readily available at local nurseries, h-a-r-d-y even in King City. If you don't want to fuss a lot with winter sun and wind protection - this is the maple for you! The "ginnala" in the name translates into "Little mule", and it sure is stubborn when it comes to surviving
- *A. circinatum* "Little Gem" - small leaves, green with a touch of red, orange and crimson in fall, short internodes

Styling

Although maples can be trained into many different styles, the most common styles are informal upright and broom, the styles normally adopted by their full-size brothers, and they look equally good as single trees or multiple tree groves. Their root system easily adapts to shallow pots and becomes quite fibrous after several years of bonsai culture.



Maples are ever ready to produce new buds on old wood. This tendency is of great help in the design of the tree. It may take some patience while the metamorphosis from bud to twig to branch takes place, but your patience will eventually be rewarded by a better design. The production of these so called adventitious buds is encouraged by pruning.

Pruning

Most maples are vigorous growers and lose their shape very quickly unless kept in check by a regular pruning routine. New shoots should be allowed to develop four or five mature sets of leaves before being cut back to one set. New growth will break from the buds in the axils of the last set of leaves remaining on the branch or twig. The new shoots will have shorter internodes, which is very desirable because it will ultimately result in a twiggy branch structure.

Maples, when pruned in fall or early spring, will bleed profusely from the wounds. This is more unsettling to the viewer than the tree. If you can't bear the bleed-

ing, wait with your pruning until May or June.

In the Toronto area, there will be two, maybe three, growth spurts that have to be pruned back in a growing season. The decision on how far a particular shoot should be cut back will also depend, of course, on how it fits into the shape desired for the plant. If a shoot develops in a spot where a branch is required, the shoot should be allowed to elongate until it reaches the dimension desired for the branch.

Occasionally, a maple will grow sucker sprouts. These are excessively vigorous shoots with internodes up to three times further apart than on the rest of the tree. Such sprouts should be pruned out as soon as they are recognized, because they only take away energy from regular growth and their coarseness rarely adds to the design.

Leaf Pruning

Leaf trimming or pruning is carried out on maples for three reasons:

1. to reduce leaf size,
2. to increase twiggyness, and
3. to improve fall colour

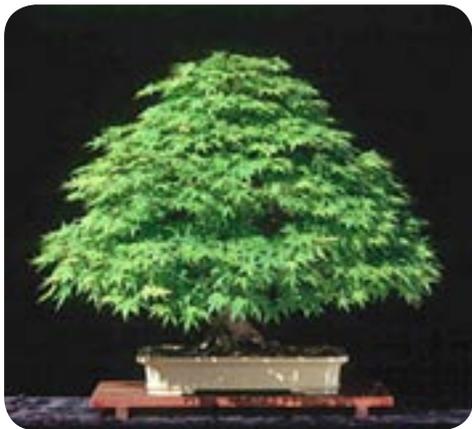
Leaf pruning is carried out on healthy trees when the first crop of leaves has hardened off in late spring, which in Toronto will be some time towards the end of June. It is very important that the tree be vigorously growing at the time this procedure is carried out, because it puts great strain on the plant and may do it serious harm if it is not in the best of shape, horticulturally speaking. To give it the vigour it needs, it should be well fertilized during the preceding period.



The procedure itself consists of cutting off each leaf, leaving the petiole on the branch or twig until it (the petiole) falls off naturally after two to three weeks. The petiole will continue to nourish the tree for a while. The result of the procedure is that the tree will break out again not only at the axils (the point at which the old petioles were attached to the twigs), but also all along the trunk and branches.

The popping of buds all over the tree is quite spectacular, but should be curtailed to avoid unwanted growth. The buds that would result in undesirable branches should be rubbed off - before they open and elongate into branches - in order to avoid pruning scars.

After the leaves have all been cut off (which, incidentally, can be quite a job on a reasonably mature specimen), the tree should be exposed to full sun. The sunshine will encourage the growth of new leaves. Since the tree has lost its organs of evaporation, it should be protected from excessive moisture until the new crop of leaves is ready to fulfill its functions. If the soil is allowed to remain soggy during the defoliated stage there is a chance that the roots may suffer damage.



Although I find maples gorgeous all year round, I like them best in spring. And therein lies another bonus of leaf pruning: you get to experience the joys of spring twice - that in itself would be reason enough to practice this technique, even if it does seem like cheating on Mother Nature. Now - if I could only figure out a way to get two falls out of them!

Before I leave the subject of leaf pruning, I should mention that some varieties of *Acer palmatum* do not take kindly to this treatment. Maples belonging to a variety of *A. palmatum dissectum* (the ones with the deeply divided, lacy leaves) are not genetically vigorous enough to withstand the shock of losing all their leaves for no good reason, and may not break out again. Such a result would only be desirable if your favourite maple viewing season is winter: if you do not care for all that watering and fertilizing during the growing season, and if your aim is to produce kindling for the fireplace.

Wiring

Maples respond very well to wiring techniques. However, because of their generally vigorous growth habit, they have to be subjected to frequent close scrutiny to be able to take corrective measures before the wire cuts into the bark, which will be

within three to four weeks during the active growing season - May, June, July. Damage caused by wire will be visible for years and should, therefore, be avoided at all costs, at least in those parts of the tree that are not hidden by the hopefully luxuriant foliage. But if you treasure the view of your tree in full frontal nudity, wire welts can be very distracting and it is worth avoiding them even in areas "normally" hidden by leaves.

Old branches are best wired in late winter (February and March) while they are bare. New shoots can be wired as they emerge and once they have elongated sufficiently. I try to wire new shoots somewhat loosely to give them some room to expand while the wood hardens and takes on the desired shape. If you merely wish to change the angle of a branch, the guy wire approach is good: the wire touches the branch in only one spot, which can be protected by a piece of felt or rubber.

I cannot overemphasize the necessity of keeping a close watch on wired branches. No better way to prove that your maple is actually growing than to wire it in spring and forget about the wire until summer. Or fall! When I wired a maple for the first time and did not take a close look at it for about a month, I was more inclined to believe that the wire had shrunk in the rain than that the tree could have grown that much!



Another problem is that the bark of maples is very easily damaged in the process of applying the wire. Books recommend that you paper-wrap the wire to be used on maples. I had never seen such a papered wiring job until Chase R's workshop last month, when John B wrapped his wire in green florist's tape. It seemed simple enough. Another solution might be to use wire within its plastic coating - although the plastic coating precludes the wire from being annealed.

The plastic might also offend the bonsai purists, especially if it is pink or purple. Since the wire is going to be on the tree for a short while only anyway, you can probably arrange it that no one else will

see the tree during its period of degradation. Should another bonsai enthusiast drop by unannounced after all, you can always explain the misdemeanor as a horticultural experiment. This explanation gains in credibility if you use wire with at least five different colours of plastic on the same tree. If you photograph your trees in their various stages, don't use colour film for a maple wired thusly.



Potting

Maples should be potted or repotted in early spring when the buds have swollen and are about to break out. They are not fussy as to soil, and I use my standard mixture of equal parts of humus, sand and haydite, adding an extra bit of humus. The root ball must be tied to the pot to stabilize the tree. Unless tied to the pot, the tree is likely to be uprooted in the first spring storm to come along.

Maples look best in shallow pots, either glazed or unglazed; if glazed, the colours of the glaze should harmonize with the foliage of the tree. Generally, blue, green, brown or cream glazes look good.

Since maples are vigorous growers, even mature trees will require repotting every two years, and young trees should be repotted annually.



Placement

All of the maples mentioned, with the exception of Trident and Amur maples, do not tolerate exposure to full sun without leaf burn. It is therefore recommended to place them in a position where they are

protected from the afternoon sun. They are also susceptible to damage from wind, and their positioning should therefore be such that they are protected against excessive air movements.

While Tridents can withstand full sun without leaf burn, they will nevertheless not achieve their natural deep green leaf colouration unless they receive some shade in the afternoon. In all day full sun exposure, the leaves tend to be on the yellow side. In winter, it is prudent to provide Japanese maples with some sort of protection against the elements. All of the maples mentioned should survive in cold frames. I have personally wintered Full Moon, Trident and Kiyohime in window wells without problem. Higasayama survived dug in outside, although that was in a relatively mild winter. I wintered in a garage, they tend to jump the gun during a mild spell in January.

Fertilizing

Maples should be fertilized regularly during the growing season like all other bonsai. Only after potting should there be a three or four week period during which they are not fertilized.

Further Reading Material

I have found the following books contain excellent information on maples as bonsai:

- **“Japanese Maples”** by J. D. Vertrees - a must for everyone interested in maples. Beautifully illustrated, with detailed descriptions of foliage colouration in spring and fall, growth habit, horticultural requirements, hardiness, etc..
- **“The Art of Bonsai”** by Peter D. Adams - good illustrations of pruning and wiring techniques, well illustrated throughout
- **“The Japanese Art of Miniature Trees and Landscapes”** by Yuji Yoshimura and Giovanna M. Halford - most noted for an outstanding short summary of bonsai data for 340 plants commonly grown as bonsai, giving their Japanese, English as well as Latin names.

