August 2009

Springfield Bonsai Society

SPRINGFIELD BONSAI SOCIETY

Palmatum Press

Future Tense August Meeting/Workshop – now on Aug 17

As you might know from our email updates our regular Aug 10th meeting has been canceled to accommodate a Fall Workshop with Andy Smith on Aug 17th. Originally we had Michael Persiano lined up, but he had to cancel due to health problems. Gary is talking to Michael and we might have him back in Spring of next year!!

Andy Smith is well known for his collected Ponderosa Pines and other trees from the Black Hills region. Andy will be in the area for Chicago's Midwest Bonsai Show around that time and will have a trailer full of trees with him!

Tree prices will vary but the workshop is free for all SBS members. Fee for non-members is $20. You can bring your own tree but Andy requests that you choose a conifer as he is more experienced with those species. Bring your own tools. Wire will be provided. No repotting will be done as its the wrong time of the year for that!!

Since the workshop is on a Monday we plan to start early - 5:30 pm. The workshop will be held at the Washington Park Botanical Garden Exhibit Hall. Someone from the gardens will be there around 5 pm so you are welcome to come early and help with setup!

News Flash!

Fall Bonsai Extravaganza
Saturday October 24 Free Admission
@ Lincoln Memorial Garden Visitor Center
Bonsai Display 10 a.m. to 4 p.m. + Bonsai Auction 1 p.m.

Past Tense – July Meeting on Tropical Bonsai

At the **July 13th** we had the pleasure of seeing a variety of tropical trees brought in by Jim Reynolds. Some of these trees were picked up at regular nurseries down in Florida. Tropical trees look good in colorful pots of various shapes. Jim found some of his interesting pots on eBay. Even if they were not originally bonsai pots, all he had to do was carefully drill some irrigation holes in them. Other members brought in trees to work on as well.

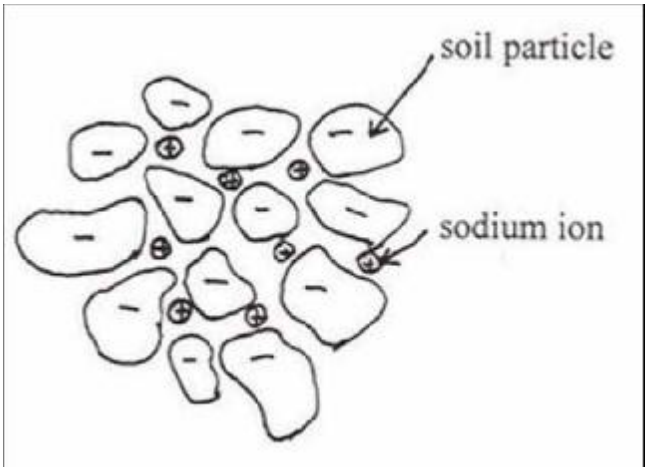
"Brown Leaf Tips" by Steven Hendricks

This article was taken from "BONSAI NEWS" A monthly publication of the Lake Charles Bonsai Society (July 2009). It was originally published in the Fort Worth Bonsai Society Newsletter, Jan 1994 pp4-6. Thanks to George Buehler of Louisville Bonsai club for printing this article in his newsletter.

George also printed a follow up article which has rebuttal of some points made in this article. I will post that article on our web-site. So read both articles/do your research before acting on this!

Did the leaves of your maples or azaleas burn around the edges this summer? A Japanese maple and Satsuki azalea of mine did burn and badly enough that I fear for their survival. I asked around and heard various theories as to why, but people seem fairly evenly divided between "moisture stress" and "salt build-up in the leaves". Since I can't do anything about the summer heat, I decided to do what I could for the salt buildup. At a recent workshop Warren Hill provided an in-depth look at this phenomenon and the most complete explanation I have ever heard. Warren stated that the leaf burn is a sign of sodium buildup in the soil and the leaves of our plants. It is caused by the retention of sodium by our soils which act like an ion exchange medium.

What is an ion exchange medium? Think of the water softener unit that many people install in their homes. It usually consists of a big tank that contains a granular material (medium) onto which some sort of chemical group is bonded. Generally this group is the sodium salt of sulfonic acid. The sodium is attached to this group only by a weak electrostatic attraction. The sulfonic acid group is negatively charged and the sodium ion is positively charged. When water containing hard water components such as calcium (+2 charge) and magnesium (+2 charge) pass through this material, the weakly charged sodium ions (+1 charge) are kicked off by the more highly charged elements. The hard water components are retained in the exchange medium and soft (read "sodium laden") water is released. This is the same kind of process that is happening in our soils.



Many of us use Turface, a baked clay product, in our bonsai potting soil mix. According to Warren, the clays in Turface are no more desirable in our potting mix than in the clay soils with which most of the Southwest is blessed. The clays in the Turface possess a net negative charge and act as an ion exchange medium, just like a water softener.

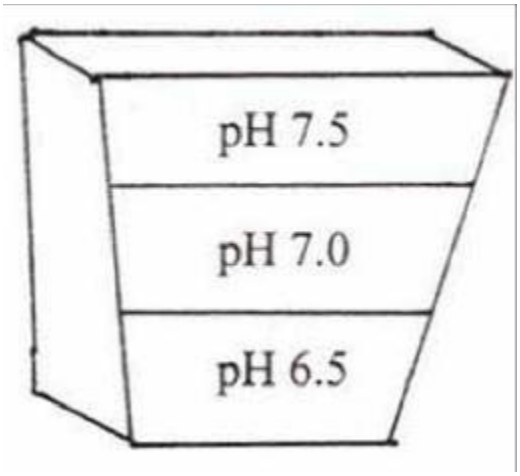
The positively charged ions (like sodium) in our tap water are attracted to and attach themselves to the clay particles and any other negatively charged soil constituents. They displace hydrogen ions that possess an even weaker charge. Because our water contains high levels of sodium, the soil quickly becomes saturated with retained sodium. As transpiration takes place, water, containing dissolved nutrients and sodium, is drawn up from the soil into the leaves. Since the leaf tips are the areas of greatest transpiration, the sodium concentrates preferentially in these areas. When the sodium concentration reaches too high a level, tissue damage occurs.

Though the leaves are the most visible manifestation, sodium buildup causes other problems in the soil. The sodium that binds to the clays and other negatively charged soil particles forms a sticky, gelatinous mass. This blocks the pores, impeding the circulation of air through the soil. As oxygen is depleted, undesirable fungi and anaerobic bacteria begin to grow and root rot sets in. This is what causes the peat moss in our azaleas to decompose so quickly to a black muck.

And sodium retention does not only affect maples and azaleas. Warren emphasized that it affects all of our plants, even though they may not show it as dramatically. I was happy to hear that should I successfully address the sodium problem, I should be able to keep my moss alive.

This knowledge also helped to explain other questions. Like many others, I have heard the adage that azaleas prefer deeper pots, yet I had never understood why. Azaleas are well known to have shallow roots. Warren conducted his own experiments to determine how depth of pot affects soil pH. He found that the deeper the soil, the lower, or more acidic, the pH.

Why? Because the soil saturates with sodium the same way an ion exchange column does, from the top down. As you water, the top layers of soil are the first to be exposed to the high levels of sodium. As the water percolates down through the soil, the sodium is adsorbed onto the clays and other negatively charged particles in the soil. The further down the water flows, the fewer sodium ions are left, so that by the time the water reaches the bottom third of the pot it has been filtered of most of its detrimental contaminants and is a neutral pH. This is the same principle of filtration that gives us pure well water and aquifers. If you plant an azalea or a maple in a deep pot, some of their roots will reach that healthier layer of soil. Plant them in a pot that is only one third as deep, and the roots never find an area of soil that has a pH and a sodium level to their liking. According to Warren, in Japan they regularly grow maples in pots no more than one inch in depth, yet they have no problems with leaf burning.



Where does sodium come from? It is ubiquitous in nature and generally present in the form of common salt or sodium chloride (NaCl). Municipal water supplies, however, contain unnaturally high levels due to the addition of sodium hydroxide (NaOH) by the water treatment facility. This is done to make the pH of the water alkaline in order to prevent our metal pipes from dissolving, something that happens quite rapidly if the water is acidic. Can you eliminate sodium from your tap water?

Sure, if you want to buy, install, and maintain water treatment equipment. You can install a water still that boils the water and recondenses it, or a reverse osmosis unit that uses a semipermeable membrane that will allow water across but excludes other dissolved particles. But all of this equipment is expensive, comes with regular maintenance requirements, and most people find them more trouble than they are worth. Other possibilities are collecting rainwater or buying distilled water in bottles. The first is unreliable in arid Texas summers [and tends to propagate mosquitoes in humid Louisiana], and the second is somewhat expensive. You can help alleviate the sodium problem to some extent by altering the pH of your tap water. Acidic water contains an abundance of hydrogen ions which, by their sheer numbers, will displace some of the sodium in the soil. Some of the more enthusiastic bonsaiists and commercial growers have set up systems whereby sulfuric acid is metered into the water while a pH meter continuously monitors the pH and adjusts the acid additions as needed. A simpler approach (as suggested by Vito Megna) for the hobbyist is to add a teaspoonful of white vinegar (acetic acid) to one gallon of water and use this to water your alkaline sensitive plants.

Warren stressed, however, that while lowering the pH of your water is helpful, it is not a complete solution to your sodium problem. The sodium must be fl ushed from the soil and prevented from reaccumulating. For this he suggests gypsum (calcium sulfate). Gypsum is a naturally occurring mineral that is sold by most garden centers for soil amendment. I bought a twenty pound bag at Home Depot for $3.49. When dissolved in water, the gypsum separates into calcium ions (Ca with a charge of +2) and sulfate ions (SO4 with a charge of -2). Since the calcium has more positive charges (+2) than sodium (+1), it will have a greater affi nity for the clay particles and displace the sodium ions allowing them to be washed out with the water. The sulfate ions will combine with water to form sulfuric acid, serving, thereby, to help acidify the water.

The gypsum can be mixed into the soil before potting or sprinkled on top of the soil for plants already potted. If your plants are severely sick, as mine are, Warren suggests placing the plant, pot and all, into a tub of water containing a handful of dissolved gypsum and allowing the water to rise through the pot to the top. Better yet, if the plant is root bound, to remove it from the pot and place the root ball in the tub to provide even better exposure to the dissolved gypsum.

While this is good for emergency treatment, Warren insisted that next spring each ailing tree should be bare rooted using a water spray and the soil replaced. For maples Warren uses a potting mix consisting of five parts crushed granite, two parts screened planters mix, and one part perlite. Planters mix is a product sold at most garden centers that contains a number of soil amending ingredients such as a humus and peat moss. The mix he uses in California also happens to include gypsum. If your local planters mix does not contain gypsum, then add some to your potting mix. Warren suggested that only by your own experimenting will you be able to tell the proper amount of gypsum to use, but a good place to start would be a handful per gallon of potting mix. George Gray says he mixes a teaspoonful into the potting soil of each plant he pots. Based on the healthy appearance of his maples, it appears to work for him.

In summary, there are various theories as to why our maples burn so badly around here. Since there is very little I can do about the heat and moisture stress, I am giving gypsum a try. I have given my ailing trees a gypsum bath. I may also try Vito's vinegar water as well. It's too late in the season to expect a visible difference in my plants this year, but if they were not too badly damaged to make it through the winter, I hope to see a notable difference next year.

Wiring, Shaping and Refining Trees

The regular meeting this month was going to focus on styling coniferous trees. I will focus on Pines as we will be dealing with them at the April 17th workshop. Here are a few tips on this topic I gleaned from Dr. Folse's talk on the subject last year and from some book/internet research. References are cited at the end of this article.

Late summer is a good time to style pines as it prevents excessive sap loss[2]. According to Harry Harrington wiring pines in summer is not desirable as thickening branches in fall can cause wire damage. Wiring in late fall or winter allows you to leave the wires on through next summer which should be sufficient time to set the branch[2]. There are different schools of thought on this topic – I'm sure these points will be addressed by Andy and local experts during August 17th workshop.

Just as an aside – I have always wondered what the difference is between white pine and black pine. The Hawley article[1] describes this quite well. Pines with two or three needles per fascicle are typically known as Black pines or hard pines. Whereas pines with five needles per fascicle are known as white pines or soft pines or just five needle pines. There are hundreds of species of pines that fit these basic categories but some take to bonsai culture better than others.

Japanese Black Pines – *Pinus thunbergii* are known to be very vigorous growers among pines. These trees have rough bark that makes them good for bonsai. They back bud well, so you can de-bud in spring and fall. Also shortening needles of new growth and old growth in fall can help back budding.

Ponderosa pines also fall under the black pine category as they have two needles per fascicle. However, they are some of the slowest growers among pines. However, some collected Ponderosas are quite old and have some nice trunk development – so you don't have to wait 100 years to style them!

At the Shohin convention in St. Louis I bought a book on "Ponderosa Pines as Bonsai" by Larry Jackel[3]. Larry talks about modifying the spring and fall Black Pine techniques for Ponderosa

Pines. The spring technique of reducing / thinning candle growth is not usually practiced on collected Ponderosas as the candles are quite small. Ponderosas do not take to "de-candling" very well. You can cut off needles in spring and get some ramification. The modified Fall technique involves reducing needles from top and bottom of the branches and removing the terminal bud on that branch. Larry notes that this technique works best only the first time its carried out! Maybe all the buds that could develop get used or maybe the tree needs time to recover and set new buds on old wood. We don't really know!

There is a lot more to this topic than I can cover. I hope this piques your interest enough so you can do some research on your own.

[1]**Pine Bonsai in the Midwest USA** by Douglas K. Hawley http://mababonsai.org/pages/hawley_pine1.html
[2]**Pruning Pines** by Harry Harrington http://www.bonsai4me.com/AdvTech/ATPine%20Pruning.html
[3]**Ponderosa Pines as Bonsai** by Larry Jackel http://www.absbonsai.org/books/booklist.html

A Ponderosa Pine bonsai example from Andy Smith's web site – http://www.golderarrowbonsai.com

One of my Ponderosas –
this one is from Andy's workshop at MABA 2008

August 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!

- Avoid heavy pruning later in month as it may create new growth that may not harden off before winter. Continue jin and shari work.
- Continue pinching junipers, but deciduous trimming less necessary. Don't leaf prune. Clean last year's needles from pine shoots.
- Wire conifers, especially junipers.
- Attentive watering necessary. Be sure to soak dry compacted soil.
- Reduce nitrogen feeding this month.

Springfield Bonsai Society

Expiration Notice:

If you are not a 2009 SBS member, please contact one of the club officers to continue getting the printed copy of our newsletter. You can also choose to receive just the electronic copy.

SPRINGFIELD BONSAI SOCIETY

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Upcoming Events

Cancelled – August 10, Monday 7 pm SBS Meeting – Wiring, Shaping and Refining Trees.

August 14, 15 and 16. Midwest Bonsai Society – Fall Show, Chicago Botanic Garden

August 17th 5:30 pm Guest Artist workshop with Andy Smith – Washington Park Botanical Garden.

September 5, 6, 7 St. Louis Japanese Festival - Lindsey Shiba Guest Bonsai Artist. Missouri Botanical Garden.

September 14, Monday 7 pm SBS Meeting – Photographing Bonsai. Dick Adorjan and Dick Hendee. Bring a tree and your digital camera to learn about taking good bonsai pictures.

October 24 – Fall Show (10 am to 4 pm) and Bonsai Auction (1 pm)
Its not too late to style a tropical / conifer tree for display at our annual show or for the year end auction.

Administrivia

Your 2009 Officers are:
President – Gary Trammell 217-741-4849 (M)
Vice President – Scott Day 217-585-8473 (R)
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/