



The Bonsai News of Houston

MONTHLY NEWSLETTER OF THE
Houston Bonsai Society, Inc.

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February 2005

February Meeting

The next meeting of the Houston Bonsai Society (HBS) will be held Wednesday, February 2, at 7:30 p.m. at the Houston Garden Center in Hermann Park, which is located at 1500 Hermann Drive. Be sure to come early so you can visit with other members before the meeting begins.

Open Workshop. The program is an open workshop. The emphasis should be on repotting.

Guy Guidry Series. Many of you will remember Guy Guidry from his work at the Lone Star Bonsai Federation convention last spring. Based on favorable responses to his teaching there, HBS has arranged for Guy to visit Houston four times over the next twelve months. His first visit will be this spring. The schedule for his first visit will include a 1/2 day workshop on developing taper in bald cypress, another 1/2 day workshop that is the opening workshop in a black pine series, and a full day open workshop. You will be able to participate in part or all of the weekend. Sign-up for the first weekend or for the full series will be available at the February meeting. If you have questions please call Pete.

—Pete

Saturday Study Group, February 19

Our study group will meet Saturday, February 19, at 9 a.m. at Bayland Center in Bayland Park, 6400 Bissonnet (Bissonnet at Hillcroft--south of I-59 and east of Fondren). Everyone is welcome--beginners and seasoned veterans alike. We all have a good time. --Anthony, Buddy

Membership Fees Are Due March 23

Your 2004 membership has expired. Renew now to be sure you do not miss a single newsletter or any information about up-coming events. The deadline for renewal is 5:00 p.m., Wednesday, March 23. Dues must be in our hands by then. An individual membership is \$25.00; a family membership, \$30.00. A membership form appears at the end of this newsletter.

New Co-Chair for Study Group

Thanks to Anthony who has volunteered to take over duties as co-chairman of our Saturday study group. Thanks also to Donald who has served in this capacity for the past two years.

Kathy Shaner in the Fall

For those of you who regularly attend Kathy Shaner's seminars in Austin every spring, this year she will be in Austin in the fall instead. The probable dates are October 7, 8, and 9. Details are still being arranged.

Bonsai Care

by John Miller

John Miller, who writes a monthly column for the Bonsai Society of Dallas and the Fort Worth Bonsai Society, has agreed to share his column with us. We need to make adjustments for our warmer, damper climate, with its early springs, long summers, late falls and erratic winters.

Have you been enjoying the landscape this month. There is much styling info to learn if you look at the landscape while driving around. With all the leaves gone, you can see the branch structure, what pleases you and what is not so good. Notice the different ramifications for the various species of trees. Also it is just plain beautiful (if you ignore the trash on the ground). It's not all gray. There are many shades of gray involved. Some trunks are black. The exfoliating bark on the sycamores leave the limbs stark white, looking like bleached bones hanging in the forest. And the twigs have various hues, willows are red or golden, ash has a greenish hue. The evergreens give splashes of green and the possum hawk decorates the landscape with its red berries. A great time of the year.

February is the start of the active cycle for bonsai, first the repotting when new growth is first evident, then the refinement process starts as soon as the green comes, all the while tending to the tasks of watering, feeding, and watching for insects.

Con't next page.

Spring is a long drawn out affair and each species has its own timetable in dealing with it. To be really successful in bonsai, then, you must know what each species you have will need and how it responds to YOUR OWN backyard climate. If you have kept your trees from freezing they will want to start growing much earlier than those kept outside all winter. Typically, in my collection which stays outside, the elms will be first, foliage showing about the end of February or the first of March depending on the winter, along with the earliest maples. Then later in March, the rest of the maples and most of the others. The deciduous oaks will come out around April 1. Out here in the country, I am 2 or 3 weeks later than I was in town, 30 miles away. The timetable has to be your own set by watching the trees themselves. All bonsai functions should be done when your tree tells you that the timing is right.

Repotting 'can' be done at any time during the dormancy but new roots are susceptible to freezing so you have to have some place to protect them after repotting. The best time to repot the deciduous temperate zone trees is when the buds are just beginning to swell but before green is showing. Generally this will be before the last of the freezing weather. Trees that leaf out early, maples and elms, can withstand a few degrees of frost but if repotted you should protect the newly growing roots. Sometimes this just means setting them on the ground. Some species such as the oaks and willows are naturally programmed to wait much later so that there is very little chance to get nipped.

The newer wisdom on azaleas is that you also repot them at this time. The roots will be reestablished by blooming time. This is much easier on the tree than waiting until after bloom when the temperature will be hot. Before blooming starts you will be removing a lot of excess buds anyway which will reduce the stress on the tree at that time. Remove enough buds to allow the remaining flowers to have room to fully open. This should be done in late February or early March on the early blooming species (Karume) but may go later in March for the Satsuki types.

Refinement is the process that makes a well styled tree look great, developing fine ramification and obtaining smaller leaves. Part of the refinement starts as soon as new growth appears. Keep it pinched so you keep the internodes short and develop a compact set of twigs with small leaves on the branches. On alternate leaved species (e.g., elms) pinch when the shoot gets 4 or 5 leaves. Fingernails or shears can be used. If the twig gets too long, it will be tough and you have to use shears. On opposite leaved trees (e.g., maples) pinch the central shoot as soon as it can be distinguished from the two leaves. To do this really right you need to use tweezers with a dull point.

Spring flowering plants will have their buds set on last years growth so pruning them will remove some flowers. Those that bloom later in the year will generally bloom on this year's growth. Pruning them will reduce the amount of flowers. In some cases such as crape myrtle, tip pruning of the branch will result in no flowers at all. In these cases you

must decide which is most important, ramification or flowers. A compromise would be to prune the branch shorter than you normally would and then let it bloom on new growth which will at the proper length, at least for the first flowering of the season.

When the growth starts, the tree will need fertilizer. However, use one that has a small amount of nitrogen (the first number). The tree is naturally programmed to grow rapidly at this time so you don't need to encourage it further. Feed lightly to maintain a healthy green foliage. Ideally use an organic fertilizer which provides nutrients more slowly when the weather is cool. Trace minerals should be added to help with both the foliage color and the color of blooms.

If you have not used an horticultural oil, the time is fast running out. The oil would be used to kill scale and overwintering mites and other boogers. When new growth starts, oil might damage the tender foliage. When new growth starts, the problems to look for are the above mentioned mites but especially aphids and mealy bugs. These can be controlled as well as giving the plants the required fertilizer by using an organic spray. (1 tablespoon each of liquid kelp, liquid fish emulsion, apple cider vinegar (5%), and molasses in one gallon of water. Or use a commercial mix like Garrett Juice. All these are available in any organic nursery.) If leaf spot, mildew or any other fungal problems appear, use a baking soda spray or a commercial fungicide.

An important job which many neglect, saying they are not going to show any trees, is to (using an apt automobile term) detail their trees. This makes them look their best and that helps give you incentive to follow other good practices. Start by checking the branches. Prune any out-of-place or too long twigs. Remove any unnecessary wire, that is, wire on limbs that have set in place. Treat any jin and shari that needs it. Then move down to the pot. Be sure it is clean and all lime deposits are removed. Steel wool works great to clean pots. A coating with a very light wax polish such as leaf shine will make the pot look good and help keep the mineral deposits from forming. Then check the soil. It should cover the outer roots. The surface of the soil must be clean of any fallen leaves or other debris. Now it looks so good, you might as well take it to a show!

Composted Pine Bark

By Paul Weisharr

The attached is an email from Paul Weishaar of the Indianapolis Bonsai Club. You will remember that The Bonsai News of Houston reprinted a lengthy and thorough article on soil and soil amendments in May- August of 2003. This email is reprinted with permission of the author and the recipient.

I received your email asking about "composted" pine bark. You observed the bags of pine bark you have are not noted as "composted." Without documentation
Con't next page.



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By appointment.

You do not know if the pine bark was bagged the same day as it was created or had a chance to lie around for a while and begin the decomposing process. After you have sifted to obtain the smaller particles, I would recommend leaving the bark sit in an open container (the more exposure to the air the better) for a minimum of 30 days. Microbial activity becomes significant at about 45 to 50 degrees and increases as the temperature rises.

Why is "composted" bark important? If you were to mix fresh pine bark in with non-organic materials, e.g., Turface, Haydite, etc., the pine bark would be so diluted that it would take a very long time to begin composting. If you leave it sit in an undiluted form it will begin composting much sooner. The reason for composting is to produce beneficial soil additives. Pine bark is great for producing nitrogen, among other nutrients. The nutrients are present in a form that cannot be used by plants except as it is made available by various microorganisms. The beneficial microorganisms decompose the organic matter which in turn liberates the nutrients for the plant.

If you are in a situation where you must use uncomposted pine bark and do not have the option to begin the composting process, I would recommend purchasing a product called "Micro Plus," which is packaged by Hollow Creek Farms and is available through Hollow Creek Farms

or Stone Lantern Publishing (*Bonsai Today*). This is basically composted very fine pine bark with a super high concentration of beneficial microorganisms. Two or three tablespoons of this product per tree will begin the decomposing process of the organic components.

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By appointment, please

Calendar of Events

Feb. 2	Monthly meeting of HBS, 7:30. Hermann Park
Feb. 19	Study Group, Bayland Park
Mar. 19	Study Group, Cabrera Farm Nursery
Apr. 2-3	Spring Bonsai Show
Apr. 16	Study Group, Bayland Park
May 21	Study Group, Bayland Park
June 18	Study Group, Cabrera Farm Nursery
July 16	Study Group, Bayland Park
Aug. 20	Study Group, Bayland Park
Sept. 17	Study Group, Bayland Park
Oct. 8-9	Fall Bonsai Show
Oct. 15	Study Group, Bayland Park
Nov. 19	Study Group, Cabrera Farm Nursery
Dec. 17	Study Group, Bayland Park
May 13-15	State Convention, Fort Worth Walter Pall (Germany); Mary Madison (Florida)
2008	Bonsai Clubs International convention, San Antonio

Mycorrhiza

Ron Smith arranged for Corey Newsome of *Plant Health Care* to speak about mycorrhiza¹ to the HBS at its meeting last June. His comments were directed primarily at landscape plants, but have application for growing bonsai. Unfortunately, I did not transcribe my notes right away, so I could no longer figure out what they meant. The following is a combination of my notes from that meeting supplemented with a little outside reading. —ed.

In an urban environment, many trees are in constant stress because their soil has no natural mycorrhizal fungi or beneficial bacteria, these having been destroyed by pollutants, fumigation, construction work, and other land management practices.

Normally, a tree allocates about 70% of its carbon to the top and 30% to its roots. If the top of a tree is stressed, however, perhaps because of improper pruning or an infestation of pests, the tree will allocate more carbon to the top, and the roots will suffer.

If the roots are stressed, perhaps by drought, the tree will allocate more carbon to the roots, and the top will

¹ From “mycor,” meaning “fungus,” and “rhiza,” meaning “root.” The singular is “mycorrhiza”; the plural can be “mycorrhizae” or “mycorrhizas.”

suffer. Similarly, when a tree is transplanted, it may lose leaves to try to balance the carbon allocation.

Roots have a zone of absorption, the area from which they draw nutrients. Roots follow the path of least resistance and absorb what comes into their path. The roots draw nothing from the space between the feeder roots. Water and nutrition in those spaces are lost to the plant without mycorrhizae. Mycorrhizal fungi, however, create a web of tiny filaments which attach to and extend the “reach” of the individual roots. Mycorrhizae mine the soil for water and nutrients and deliver them to the plant. For most plants, mycorrhizae constitute “cheap labor.”

What’s in it for the mycorrhizae? Mycorrhizae need carbon to exist. They cannot produce it themselves and so they get carbon from the plant’s roots; in they it move water and nutrients to the roots, thereby extending the roots’ zone of absorption. The relationship is truly symbiotic.

Mycorrhizae also release chemicals into the soil that dissolve hard to capture nutrients such as phosphorous, iron and other “tightly bound” soil nutrients. Thus, plants with a healthy mycorrhizal system usually need less fertilizer.

Mycorrhizal fungi also attack pathogens or disease organisms entering the root zone. For example, mycorrhizae excrete specific antibiotics which immobilize and kill disease organisms. Some mycorrhizal fungi protect pine trees from phytophthora, fusarium and rhizoctonia diseases. In addition mycorrhizae form a barrier that inhibits the invasion of root diseases.

Mycorrhizal fungi improve soil structure. By producing humic compounds and organic “glues” that bind soils into aggregates and improves soil porosity, thus promoting better aeration, water movement, and root growth. In sandy or compacted soils the ability of mycorrhizal fungi to promote soil structure may be more important than the seeking out of nutrients.

An estimated 80 to 95 percent of all plants—including trees, flowers, vines, shrubs, vegetables, fruits trees—form mycorrhizal relationships. One notable exception for bonsai enthusiasts is the azalea.

There are two general classes of mycorrhizae.

Ectomycorrhizae (EM) live entirely outside the roots (“ecto” come from the root meaning “outside”).

EM produce brown “puff balls” on top of the ground. You may have encountered them in the woods. If you kick or step on them, you see a puff of “dust.” The “dust” is a cloud of spores. The spore are airborne and therefore easily transmitted.

EM include over 4,000 species of fungi. Most woody trees and shrubs have EM (as opposed to AM, discussed below), including most trees in the families Pinaceae (pine, fir, spruce, cypress, etc.), Fagaceae (oak, beech, etc.), and Betulaceae (birch, alder, hornbeam, etc.).

Endomycorrhizae (also called, “vesicular-arbuscular mycorrhizae” or “VAM” or “AM”) live inside the root cell

and produce spores in the ground. Most grasses, vegetables, flowers have AM. In fact, far more plants have AM systems than EM systems.

AMs start life outside the cell much like the EM fungi do, but the plant's cell wall grows around and envelops the AM. AM spores are NOT air borne and therefore must be gotten down into the soil. Most species of AM fungi are short-lived, some about 15 days.

In answer to a question, Corey noted that fungicides do indeed weaken a mycorrhizal system. When, however, a mycorrhizal population is established, the plants are not as subject to infestation from harmful fungi.

In answer to another question, Corey said that, in the symbiotic relationship, the plant stays in control. The plant has the ability to "shut off" mycorrhizae, unlike the situation with harmful fungi.

So, you want to experiment with mycorrhiza. Where to you get it? If you attended Corey's lecture, he had samples available. To inoculate your bonsai, follow the directions on the package (3 to 6 oz. of product per gallon of soil, depending upon the product you have). You also got a packet of mycorrhizae in your goodie bucket at the convention last May. Ron Smith probably has some as may Phillip Drilling. There are also many sources on line.

Of course, most of our members and most of the teachers who have visited us always, when repotting a bonsai, throw a handful of old potting soil into the new mix to inoculate it (always assuming the old soil has mycorrhizae and beneficial bacteria—and I would not do it with a sick plant, especially one with root problems!).

How often do you need to inoculate your soil? Speaking of the landscape setting, Corey said that often the soil needs to be inoculated only once, but in an urban setting with extremely barren soil, more frequent inoculations may be necessary. Some people inoculate every year, some every two or three years.

Because we change the soil every time we repot a bonsai, we need to inoculate each time. I suppose, however, if you bought commercial mycorrhizae once, inoculated all your trees and they all stayed healthy, you would only have to buy mycorrhizae once (or at least once in a while), if you used existing soil to inoculate new mixes.

There are numerous web sites with information on mycorrhizae, including Plant Health Care's site, <http://www.planthealthcare.com/>.

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For special requests or questions related to *The Bonsai News of Houston*, contact the Editor or the **Houston Bonsai Society, Inc., P. O. Box 540727, Houston, Texas 77254-0727**, www.HoustonBonsai.com.

The deadline for submission of articles is 8:00 p.m. the Wednesday 2 weeks before the monthly meeting. *The Bonsai News of Houston* is available by e-mail. To receive a copy by e-mail instead of regular mail, contact the editor at address above.

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