

Bonsai Notebook

www.austinbonsaisociety.com

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TEXAS EBONY **ebenopsis ebano** (*pithecellobium flexicaule* - old name)

This is not a true hardwood ebony. It ranges through the southern Rio Grande Valley to Corpus Christi. It's extremely drought-tolerant and, with mesquite and huisache, makes the canopy for the Valley. The leaves are dark green, the zigzag branches are spiny, and the birds use the dense foliage for nesting. The 1-2 inch long fronds have feathery leaves that fold and droop at night or on cloudy days. The trees are often multi-trunked and might look bushy until quite old or pruned. The blooms, May to October, are white and you can smell their sweetness fifty feet away. Bees are very attracted to them

The fruit ripens in the Fall and remains on the branches until after the flowering season the following year. It is a flattened, curved, hairy pod, 4 to 6 inches long, and about 1 inch wide. The wood is very heavy, hard, close-grained, dark red-brown tinged with purple, almost indestructible when used for fence posts, and valued for cabinet work. The tree is considered one of the most valuable species in the lower Rio Grande Valley. Texas Ebony can grow to 15 - 30 feet. The seeds are eaten by the Mexican people, and are boiled when green and roasted when ripe. The thick shells have been used as a coffee substitute.

The Texas Ebony can be considered an indoor bonsai material. It does well in full sun or partial shade. It is best treated as a tropical and potted during the summer. A severe drying out or repotting will cause the leaves to yellow and fall, but new growth should appear soon. The Ebony has fast and heavy root growth. For this reason it should be potted in a deeper than normal pot as the roots will push the tree out of the pot. In its natural state the Texas Ebony has a soft, rounded canopy style.

Calendar of Events

June 10, 7pm: Texas Ebony with Chuck Ware and Beginners Workshop

Hosts: Phina Chen and Noreen & Pete Quisenberry

June 16: Repotting Texas Ebony Members Only Workshop

July 7: Workshop with Owen Reich, LSBF Visiting Artist---sign up at meeting

July 8: L/D with Owen Reich, visiting artist

No members workshop in July and board meeting will be relocated



Terry Ward

(Photo by Joey McCoy)

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2015 LSBF Bonsai Educational Seminar October 9-10, 2015

Save the date! October 9 and 10, 2015 the Lone Star Bonsai Federation is hosting a special bonsai educational seminar at the Kingwood Community Center in Houston, Texas. Because there will not be a regular Bonsai Convention for 2015, the LSBF Board of Directors will be hosting a 1½ day mini-convention to continue our mission of bonsai education and advancement.

There will be two topics, bunjin and bonsai display, both are elusive and rarely discussed; both are about simplicity, but not easy to accomplish. The headliner will be a well known graduate of a long apprenticeship under a multiple Prime Minister award winning bonsai professional in Japan. Demos, lectures, workshops, display (and critique), auction, raffles and vendors!. All at a very reasonable price. More details to follow monthly.

For now, work on your best bunjin bonsai for exhibition at the seminar. This will be a judged show with LSBF Certificates Of Recognition awarded.



The rate of advertising in "Bonsai Notebook" is \$6.00 per month or \$35.00 per year, for two column inches minimum. Additional space must be purchased in increments of two column inches. Two column inches measure approximately 3 1/2 inches wide by 2 inches high. All ads must be camera ready and prepaid. Changes to ads must be received 30 days prior to the month of the desired insertions. Other newsletter content is due on the last day of the month, in order to be published in the next month's newsletter.

Lizzie Chen is the editor of "Bonsai Notebook". She may be contacted at lizziechen09@gmail.com

Austin Bonsai on the Internet

Online discussions
Picture and video sharing
Questions and answers
Upcoming events
NO SPAM

<http://groups.yahoo.com/group/austinbonsai/>
or
jvmccoy@sbcglobal.net.

2015 Kathy Shaner Seminar

October 23rd - 25th

Buda, TX

- * Seminar *
- * Home-cooked Dinner *
- * Bring-your-own-tree Workshop *

Registration available in July. To be notified when registration is open, email ckmurphy2000@gmail.com.

NEWS CORNER

The Texas State Bonsai Exhibit board is happy to announce the election of new board members. They are Quoc Hoang, May Lau, Simon Tse, Jonathan Woods, and Elaine White. All of these are members from Austin Bonsai Society. Quoc joined ABS a couple of years ago and brings enthusiasm and a willingness to help out where he can. Quoc works in the tech industry in Austin. May and Simon joined ABS the same year. Many of you may already know Simon as he is the webmaster for ABS, and TTSBE. His tech skills are so very welcome! May is a professional photographer who has been making the bonsai portraits on the website to show off the beautiful trees that TTSBE has in the collection already. She is also a really good bonsai artist with just a few years of learning. Her artist's eye is evident. Jonathan is the ABS president this year and is a hard working, organized person. His expertise is in real estate so he has been especially helpful in the conversations about the land in Mustang Ridge, its value, and how we might best use it. Of course, you know Elaine as she has been a board member before, and the owner of a bonsai nursery at one time. She has worked tirelessly on this project for 15 years. Welcome to all of you!

We have a long way to go, but things are looking good for TTSBE and the possibilities for an exhibit here. Keep your fingers crossed, and if you have skills that might be helpful, please talk with one of the board members. In addition to the new members, Joey McCoy, Alisan Clark, Nan Jenkins, (all ABS) Donna Dobberfeld, and Ryan Odegaard (SABS) are also on the board.

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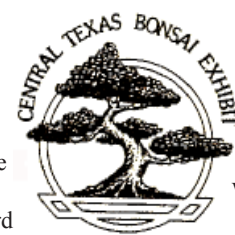
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WELCOME NEW MEMBERS

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**Linda Chalker-Scott, Ph.D., Extension Horticulturist and Associate Professor,
Puyallup Research and Extension Center, Washington State University
The Myth of Foliar Feeding**

“Fertilizers sprayed on the leaves of trees and shrubs are more effective than soil applications”

Recently, I received an email from a professional colleague whose clients often ask about foliar feeding as a method of fertilizing plants. As he says, “All the water soluble fertilizer companies advertise the practice all the time.” What, he wondered, was my opinion of the practice? Foliar feeding involves spraying the foliage of target plants with water-based fertilizers. The logic for the practice is based on scientific research from the 1950’s, which demonstrated that leaves can take up minerals through their stomata, and in some cases through their cuticles. This research is consistently cited in the argument that foliar feeding is 8, 10, or even 20 times more effective than traditional soil application. In assessing the advertised claims for foliar feeding of shrubs and trees, I had particular questions that are answered in bulleted lists below (all bullets are directly from marketing media):

(1) What are the advantages of foliar feeding over soil application?

- Immediate results
- Prolong bloom
- Increase crop yields
- Increase storage life of food crops
- Boost growth during dry spells
- Increase cold and heat tolerance
- Increase pest and disease resistance
- Maximize plant health and quality
- Help the internal circulation of the plant

(2) When should one use foliar nutrients sprays?

- When the soil is too cold for conversion of nutrient elements into usable forms
- When it is at least 72°F
- Any time except when it is too hot or too cold
- Transplant time
- Bloom time
- When a quick growth response is desired
- After fruit set
- Every 2-3 weeks
- Any time of stress
- As long as the plant has leaves that aren’t dormant
- When the soil is deficient in nutrients

(3) What time of the day, and in what quantity, should you apply foliar fertilizers?

- Early morning
- Until it drips from the leaves
- There is no improper way

(4) How long will material last on the leaves

- 24 hours
- 1-2 days
- Four weeks

(5) What nutrients are critical components of foliar feed fertilizers?

- Nitrogen
- Phosphorus
- Micronutrients

(6) Apart from commercial formulas, what should homemade mixtures contain?

- Seaweed
- Compost tea
- Natural apple cider vinegar
- Blackstrap molasses
- Fish emulsion

The Reality

If these laundry lists look more like a multiple choice test rather than solid information, it's not surprising. Foliar feeding is yet another agricultural practice best suited to intensive crop production under specific soil limitations rather than as a landscape management tool. Thus, advertisers take great liberties with the facts, often resulting in contradictory messages (note especially the recommended temperature conditions!). Rather than individually refute the numerous errors in the claims, I'll explain when foliar feeding might actually be beneficial.

The original 1950's research came from Michigan State University and was particularly useful in understanding how nutrients move within plant tissues. As explained by Dr. Tukey in his testimony to the Joint Committee on Atomic Energy, use of radiolabelled nutrients allowed his team to discover "...that a leaf is a very efficient organ of absorption. The amounts may at first seem relatively small, but to offset this handicap, the efficiency is high." From this advertisers claim that foliar feeding is 8, 10 or 20 times more effective than soil application. This is not accurate for several reasons. Obviously, materials applied directly to a leaf are more likely to enter the leaf in large quantity than the same materials applied to the soil. Leaching, chemical reactions, microbial activity, etc. can decrease what actually reaches the roots and is taken up into the plant. But materials applied to the leaf do not necessarily travel throughout the entire plant as effectively as they do through root uptake. They often remain in the same or adjoining tissues but travel no further. This is especially true of those elements recognized as "immobile" within plant tissues (apart from root uptake and xylem transport). Research over many decades has explored the mineral uptake and transport of many species of fruit trees, conifers including pine and spruce species, and some hardwoods of ornamental or commercial value. Results have been mixed in many cases, with some species responding well to treatment and others remaining unaffected. Generally, the results suggest that foliar application of particular nutrients can be useful in crop production situations where soil conditions limit nutrient availability. For instance, alkaline soils do not readily release many metallic nutrients, especially iron and manganese. Zinc, copper, magnesium, molybdenum, boron, and calcium are other micronutrients required in small quantities that have been applied to foliage in an effort to relieve deficiencies and combat fruit disorders. Fruit, as adjacent tissue, can benefit from foliar spray. But this is a localized application that does not affect the trunk or roots – and therefore is not a solution to soil imbalances. In fact, researchers consistently state that foliar treatments are a specialized, temporary solution to leaf and fruit deficiencies in tree fruit production but will not solve larger soil management issues. On the other hand, macronutrients, such as nitrogen, phosphorus and potassium, are needed in larger quantities. While many of these are mobile in the plant, it is pointless to apply them to foliage as leaves cannot take up enough material to supply the entire plant's demands. Furthermore, foliar application of high concentrations of such nutrients often results in leaf burn as water evaporates and the fertilizer salts remain behind. Substituting numerous, lower concentration applications would not be cost effective. Species differ widely in their ability to take up nutrients through their leaves. Differences in cuticle thickness, stomatal resistance, and other genetic factors will influence uptake, as will environmental conditions. Plants in a protected situation (like a greenhouse) have thinner and more porous cuticles than plants in the field and take up foliar sprays much more readily. Likewise, plants adapted to arid environments naturally have thicker, less penetrable cuticles than those from more moderate locations. A better management solution to the problem of nutrient availability is to choose plants that can adapt to the existing soil conditions. If you have alkaline or calcareous soils, for heaven's sake don't install acid loving plants! Poor plant selection in terms of mineral nutrition will be a management problem for the lifetime of the plant – which may be pretty short. Choose cultivars of species that are more resistant to alkaline soils – they are able to acidify the root environment so that micronutrients are remobilized from the soil and available for uptake. The existing research does not justify foliar fertilization of landscape plants as a general method of mineral nutrition. It can be useful for diagnosing deficiencies; for instance, spraying leaves with iron chelate can help determine if interveinal chlorosis is from iron deficiency. It would obviously have benefit for those landowners with landscape fruit trees that perpetually have flower or fruit disorders associated with micronutrient deficiencies. Applying fertilizers to leaves (or the soil) without regard to actual mineral needs wastes time and money, can injure plant roots and soil organisms, and contributes to the increasing problem of environmental pollution.

The Bottom Line

- Tree and shrub species differ dramatically in their ability to absorb foliar fertilizers.
- Proper plant selection relative to soil type is crucial to appropriate mineral nutrition.
- Foliar spraying is best accomplished on overcast, cool days to reduce leaf burn.
- In landscape plants, foliar spraying can test for nutrient deficiencies, but not solve them.
- Micronutrients are the only minerals that are effectively applied through foliar application.
- Foliar application will not alleviate mineral deficiencies in roots or subsequent crown growth.
- Foliar spraying is only a temporary solution to the larger problem of soil nutrient availability.
- Minerals (especially micronutrients) applied in amounts that exceed a plant's needs can injure or kill the plant and contribute to environmental pollution.
- Any benefit from foliar spraying of landscape trees and shrubs is minor considering the cost and labor required.

For more information, please visit Dr. Chalker-Scott's web page at <http://www.theinformedgardener.com>

PHOTO GALLERY



June Bonsai **by John Miller**

Hopefully with all this rain this year you have checked your bonsai to be sure they drain properly. Very few plants will take any length of time in a pot full of water.

Even so you must get your trees prepared to take on the Texas summer.. Remember that the biggest stress on potted plants comes from the soil being heated, especially by the late afternoon sun slanting in under the shade cloth and foliage. The low humidity in the afternoon does little to stop the heat. You need to provide good shade on the west side. Two waterings are sometimes needed--one about 2pm to cool the soil and provide for evaporative cooling and another later about sundown to get the soil temp back down and to allow the plant to be able to rest at night.

Leaf pruning should not be considered a yearly task. It usually should be done only as needed and only on very healthy trees. Broadleaf evergreens would not get it. I usually consider Memorial Day as the end of leaf pruning.

If you think you need to leaf prune, you probably can still do it but need to be careful, it could turn hot in a hurry. The tree needs time to replace the energy used to grow new foliage. I have done it on Shumard oaks successfully. Again never leaf prune the atropurpeum varieties of Japanese maples, they dont rebud very well.

When night temperatures stay above 60 degrees you can think about repotting some of the tropicals. I would wait another month tho for the buttonwood.

However, some tropicals can be leaf pruned all summer. The Ficus nerifolia especially benefits by leaf pruning and can be done more than once each summer. That will develop the heavy twiginess you see in the Ficus bonsai from the Far East.

As the summer progresses the growth of the deciduous trees will sometimes slow also. But you still need to keep an eye out for errant shoots. Keeping a clipper with you when watering would let you take care of most of them. Just like in the spring a shoot too long will thicken the twig too much. The major pruning chore is now transferred to the tropicals.

Tip pinching on some flowering species like the crape myrtle will result in fewer flowers but if you let it go they get out of shape. I prefer to try to balance the flower/design question by pinching early. This provides more growing tips to divide the energy and the resulting flower is shorter.

It is less showy but more in scale.

Also If you have fruiting bonsai, you should reduce the number of fruit on the tree. The number one goal of the tree is to provide seeds for reproduction and it will starve itself in order to do so. Again, most fruit are too large to look good on a bonsai.

Some days may be relatively cool to you but the sun can still make the pot pretty hot. Not only does this dry out the soil very fast but the tree roots do not like a hot soil. A temperature I have heard given is that 120 degrees will kill roots on most plants. I cannot give you a precise to-do list since your backyard is different from mine but you should be sure that the sun does not hit the pots directly. Notice especially where the hot afternoon sun, from 2pm to sundown, hits your bonsai area. If you use a cover of any kind be sure that the side of the pot is protected also. A loose weave cover is preferable to solid paper or foil. Chopped sphagnum moss spread on the soil surface will reduce evaporation and help keep the soil cooler.

Get to know your trees like your children. Which ones use more water and which ones stay moist between waterings. If some are difficult to keep happy you can try moving those to a cooler location (but be sure they get their sunlight). Another trick is to group these together so that you can hit them with a shot of water twice a day and not have to spent the time going thru all your trees.

The extended cool and damp weather is good for fungal diseases like black leaf spot. Hot and damp bring other fungals like mildew. Treat with potassium bicarbonate or sodium bicarbonate (baking soda). After the foliage is hardened a bit you can treat with a 1% hydrogen peroxide (1 part 3% peroxide to 2 parts water) weekly

Also watch for signs of insect problems. The spider mite will always be near. Others to look for are scale of various forms, aphids, and mealy bugs. For scale you may need to go to a systemic insecticide. I use the organic foliar feed (1 Tablespoon each fish emulsion, liquid kelp, molasses and cider vinegar per gallon water) to control all these. You can use some of the other organic controls or a chemical according to label directions. Always read the label directions carefully and never apply oil based chemicals to buttonwoods. You should do controls on a regular basis. Also remember that most insecticides kill the insect but do not remove the evidence (the scale shells, webs, etc)

If ants, or any other creature, are building nests in the soil, the tunnels and cavities will prevent proper watering and result in a loss of roots. After you get rid of the ants be sure to grab your chopsticks and work the soil down and eliminate any holes. You will probably need to add a little more soil on top.

The best way to fertilize bonsai is by using fertilizer cakes. The cakes provide a slow constant feeding each time you water. Cakes made with a cottonseed base will provide as acid ph when they break down which we need in any city water system I know of. Making your own is easy and much cheaper than buying them. I use chemical fertilizers such as Miracid or Peters a couple of times a month also. My main problem with chemicals is not knowing how many bad salts they have that may accumulate in the soil and also I know that each time I water I am washing the chemical fertilizers out on the ground.



Bonsai Notebook

Austin Bonsai Society
P.O. Box 340474
Austin, Texas 78734



The Austin Bonsai Society is a nonprofit organization which exists to help in providing guidance and education for individuals in their desire to learn and expand their knowledge and skill in the arts of bonsai.

The Society holds regular meetings, twelve months a year, on the second Wednesday of each month. Our social period begins at 7:00 PM, followed by our program at 7:30 PM. Normally, unless announced otherwise, these meetings are held in the Zilker Garden Center building, located on Barton Springs Road in Zilker Park, Austin, Texas. We offer a monthly program of interest to the general membership.

The cost of membership is presently only \$30.00 for an individual and \$35.00 for a family membership.

For additional information, please contact the Austin Bonsai Society at P.O. Box 340474, Austin, Texas 78734



Spotlight of the Month
(Photo by Joey McCoy)