



The Tree Shrinker

Volume XXXXII, No. 8

A MONTHLY BULLETIN

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August Potluck Picnic: August 16, 2014 @ 3:30 pm - sunset
Nelson-Trumm Residence – see below for location and directions

(No regular meeting in August)

Message from the President

As measured by the selling of ALL trees, pots and tools put up for auction at our EBBS Annual Auction last month, the event was a huge success! The smooth operation from registration, setup, active bidding, right down to the clean-up and being out of the building by 9:45pm is due to 25 members that carried out their job assignments so willingly and well. Bidders got some great buys. Our club made some great revenue from donated and consignment items. This President is proud to rub elbows with the members of our East Bay Bonsai Society!

On a further note, I am looking to see each and every one of you at the Summer Picnic on Saturday, August 16 beginning at 3:30 PM. Bring your significant other and assigned dish. Expect a social encounter!! The Nelson-Trumm hosts are delightful and share their home in the hills of Oakland as well as their exquisite bonsai collection. Remember that there will not be our regular meeting on the 2nd Wednesday of August!

Appreciatively,
Linda

August Potluck

August is the annual potluck picnic which will be held on Saturday, August 16, at the house of Janet and Rick Trumm starting at 3:30pm and will continue until sunset. The event is one of the club's social highlights of the year and should not be missed. Appetizers, socializing and garden viewing will start at 3:30 with dinner at 5:00. Janet and Rick have a large collection of spectacular bonsai which they are happy to show off. The chance to see and enjoy their bonsai is worthy of your visit alone. Best of all, the picnic is a chance for members to socialize on an informal basis.

The meal is potluck and food assignments are as follows:

Appetizer-Last name A-G
Entrée- Last name H-L
Side dish or salad- Last name M-R
Dessert-Last name S-Z

Be sure to bring serving utensils required for serving your contribution. The club will provide wine and soft drinks. The Oakland hills can occasionally be a bit cool and breezy so best dress in layers.



Directions are as follows: Take Highway 24 (from the north or east) or Highway 580 (from the south) to Highway 13, the Warren Freeway. Proceed to the Redwood Road exit and go east on Redwood Road toward the summit of the hill. Take a right on Skyline Blvd which is at the summit. Make a hard left onto Balmoral Drive and find #5749. The house will be on your left on a corner a short distance up the hill. If lost or you need other information, call 510-482-8428.

September Meeting

The September meeting will focus on how to prepare your trees for display at the big club show coming up in October. The meeting will feature short talks by EBBS members on specific aspects of tree preparation and display. Bob Gould will discuss how to make your tree look its best by last minute grooming

including the use of top dressing for the soil. Tom Colby will talk about why stands are needed to display your trees and will present some inexpensive options. Janice Dilbeck is in charge of the overall show layout and will provide insights of how the arrangement of the trees contributes to overall impact of the show. Lastly, Michael Hylton will discuss show logistics. It will be a full but informative evening.

Auction

The July auction was a great success. The final accounting is complete and it is clear that our treasury benefited from all the efforts of the many club members who helped to organize and stage the event, as well as those who bought and sold plants. Thanks are due to many people, but perhaps most specifically to Linda Soliven, our president, for coordinating the event. All her hard work resulted in a very smooth operation. Particularly noteworthy was her efforts to recruit new members to help with the auction. Linda has set the standard for how future auctions should be conducted.

The success of any auction rests squarely on the skill of the auctioneers. EBBS is fortunate to have John Nackley, Michael Hylton and Mike Pistello who were stellar auctioneers and who kept the action going at a fast pace. Mike deserves special comment because he was pressed into action at the last minute since Janet Nelson was unable to be an auctioneer due to an injury. Thanks to all three. They were real pros.

Thanks to the people who logged sales and to the cashiers. Both of these tasks require people who can function well during occasionally hectic times, a skill that not all us have.

EBBS owes a debt of gratitude to those members who furnished items for sale at the auction, and specially to those who donated items to the auction which meant the entire proceeds of the sale went to the club. Particular thanks go to the Drowleys who donated a large collection of bonsai to the auction. Your generosity will be repaid by the club being able to fund outstanding speakers in the future.

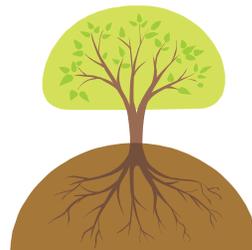
The auction had a minimum price of ten dollars on any item or group of items. This was instituted in the auction last year and resulted in the elimination of small cuttings etc. which slowed the pace of the auction. This year the auction was complete a little after 9:00 pm. The higher overall quality of the auction items over past years was reflected in the fact that all items in the auction were sold with the single exception of a pot lifter which was a bit of a mystery item which no one seemed to know quite how it worked.

If you missed out on selling your plants at the auction or if you have items worth less than ten dollars, take heart. EBBS has a sales table at our show in October and all plants, especially inexpensive plants, are welcome with the usual twenty percent of the selling price going to the club.

The overall view of many club members was that the auction this year was the best organized, and to the club and the sellers, the most profitable event yet. Again, many thanks are due to all who participated.

It is all fertilizer

The most basic requirements for growing bonsai are water, sunshine, a quick draining soil and fertilizer. But why do we need to fertilize our trees? After all, in northern California redwood trees happily grow to be more than 300 feet high and they have not received a drop of Miracle Grow or any other fertilizer for that matter. Or have they? It turns out that they have received the nutrients that they need from decomposing leaf litter under the trees.



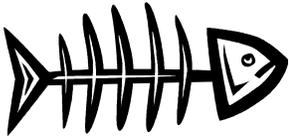
There is a rough rule of thumb used by the forestry crowd that the roots of a tree extend from the trunk about as far as the tree is high. There are several reasons for the wide spread. The most obvious one is that the tree needs a broad root base for mechanical support. Other reasons are that there is not a lot of water always available, and the amount of nutrients from leaf litter and occasional bird poop is small, so the tree needs to really stretch out for supplies. So what changes to create a need for fertilizer when we grow redwoods, or any other tree for that matter, as a bonsai?

We fertilize our bonsai for several reasons. Although we usually don't think of it in these terms, we are impatient and want to see our tree evolve into a fine bonsai in our life time, or maybe even in less time, so we push the growth of the tree with fertilizer. Second, we grow bonsai in small pots with very limited space and, in order to maintain healthy roots, we periodically prune the roots. The tree must have sufficient energy to quickly grow new roots to prevent a serious setback when the roots are pruned. When we style our tree, the pruning and wiring are both stressful, so the tree must be growing vigorously before either can be performed without disastrous effects on the health of the tree. Lastly, properly used fertilizer can encourage heavier bloom if the tree is a flowering tree, or better fall color of the leaves if appropriate to the tree.

Choice of the best fertilizer to use is a good news and bad news situation. The good news is that our trees are appreciative for the extra nutrients in whatever form we supply them and respond with enthusiastic growth. The bad news is that we really don't know a lot about what happens to the fertilizer once we apply it to our trees, and this leads to strongly held opinions bordering on near religious zeal and which are not usually backed with data. There are four basic forms that fertilizer can take. Each of these forms has both advantages and disadvantages and their own set of idiosyncratic speculations.

The first form is inorganic solids which are dissolved in water. The most prominent example is Miracle Grow which is readily available and inexpensive. The most striking disadvantage of Miracle Grow is psychological, not horticultural. We often fall into the trap of thinking that if a little is good, a bit more must be even better. Solutions of this form of fertilizer that are too strong can

burn the roots of our tree which does more harm than good. The directions about proper dilution which appear on the box are more than mere suggestions and should be observed carefully. The fertilizer is flushed out of the soil in subsequent watering although we don't know how fast this occurs. It is speculated that water from the fertilizer solution can evaporate in the soil leaving locally a thin film of high concentrations of salt solution which can burn the roots. If this is true, flushing with water between fertilizing your tree is important. Although we don't know the exact dynamics of fertilizer loss from the soil, it is clear that this style of fertilizer must be applied at regular intervals which add to the maintenance chores for your plant.



A second kind of fertilizer is solutions of organic material such as fish emulsion. Application of organic products to our trees has a very California touchy feely appeal to some growers, but bear in mind that trees are not picky eaters. They take their nutrients wherever they can get them. An advantage of fish emulsion is that it does not burn the roots if you are a bit heavy handed when you prepare the fertilizer. Smelling the soils after applying fish emulsion indicates that at least some remains in the soil for several days, so it is not quickly flushed out with subsequent watering. Speculation about fish emulsion is that it contains traces of chemicals beyond basic nitrogen that are beneficial to the trees. By the way, if you choose fish emulsion as your fertilizer of choice, the neighborhood cats will love you.

A third kind of fertilizer is solid organic products applied to the top of the soil. These include rapeseed cakes and mixtures of organic solids such as bone meal and cottonseed meal enclosed in tea bags. The thought here is that every time you water, nutrients are leached out of the solids into the soil so your plants are fed with each watering. The problem is that we don't know how much is leached and when the cake is exhausted, so we have no real control of our fertilizer. It is also not clear how many of these cakes are required for best results. Further, we assume that nutrients are leached out at a constant rate. It is more reasonable to assume that a lot of nutrients are leached out at first and the amount then dwindles over time. Speculation is that the tree has a stomach for nutrients that is only so big so if we supply more than the tree can consume the excess is simply washed out with the water. In spite of the uncertainties, this style of fertilizer is popular because it needs to be applied only occasionally. Further, in the fall when we wish to discontinue fertilization, we can simply remove the cakes and fertilization stops.

The last kind of fertilizer is inorganic salts enclosed in pellets of porous plastic. Osmocote and Apex are examples. These products are applied either to the surface of the soil or are incorporated into the soil itself. The nutrients are slowly leached out of the fertilizer pellets by water over a period of several weeks or

months. The rate at which these fertilizers release their nutrients can depend on the temperature as well as the amount of water flowing over them. A disadvantage is that there is no clear indication of when the pellets have become exhausted of their nutrients. Further, it is assumed that the rate of fertilizer release is constant and this is probably not the case. Discontinuing fertilization with these products sometimes relies on our thinking that by the time fall comes, the products have lost most if not all of their nutrients, which may or may not have happened, and in fact may have happened long before fall.

How in the world can the newcomer to bonsai make his way through this maze with all of the choices, each of which bears multiple question marks? The take away message is that in spite of the questions raised, all of these products work very well and there is no best choice. A great place to start is with Miracle Grow, but be sure to read and use the directions on the box when you make your fertilizer solution. Feeding your trees every two weeks in the active growing season should have your trees responding with vigorous growth. The most important thing of all is that it is not what you fertilize with, but rather that you regularly use something. Your trees will love you for it.

Bonsai Potting Soils

Don Meeker has written a series of three articles on bonsai potting soils for the *Tree Shrinker*. In this issue, Part 1 provides a brief introduction and excerpts from some of the bonsai literature to give some history on the subject. In future issues, Part 2 will review the major components now widely used for bonsai potting soil, and Part 3 will review some of the science, physics, chemistry and biology involved in potting soil composition and the culture of living trees in pots.

Part 1 - Introduction and Background

Potting soil mixes for bonsai is an evolving topic and there are many considerations. We all know about soil, right? Ever since we were little kids and played in it and got in trouble if we tracked it in the house or had too much on our clothes or our bodies. So what's the big deal? Plants grow in the stuff, so put some in a pot and plant your tree in it, it will grow. Trouble is folks, it ain't that simple. To gain a little understanding of what it is all about, I've searched the literature (more like a little term paper and not a doctoral dissertation).

Three areas to consider:

1. The physics - the structure of the soil mix and its capability and capacity to let water and air move through the mix. The roots of most plants don't take in water. They take in 'water vapor', a mix of water and air. Both are needed in the soil. As water is pulled through the soil by gravity, it pulls air down into the soil cavities which mixes with the residual moisture to create the needed water vapor.

The second physical function of the soil is to provide a stable base or foundation to support the plant and protect the roots.

2. The chemistry - the chemical makeup of the soil and its capability and capacity of providing the nutrients the plant needs to support and maintain vigorous, healthy life. Soils vary in their makeup to be more or less acidic, alkaline or neutral. A broad mix of elements and compounds are required nutrition for the plants. This is much more complex than the nitrogen, phosphorous, potassium (N-P-K) that we usually see, perhaps with a little iron added. Those elements must be in a form usable and available to the trees.
3. The biology. Soils, in general, are composed of mineral and organic components in varying proportions. Clay soils are composed of fine mineral particles, often with some fine organic residue mixed in. Sand is composed of larger mineral particles, while loam has a larger portion of organic particles and a smaller portion of minerals, either fine (clay) or sand. In addition, varying largely by area, the soils also contain very large amounts of other life forms, bacteria, fungi, yeasts, as well as insects, their eggs and larvae.

Clay soils are very valuable for gardening or farming but become problematic in containers. Some forms, such as akadama or kanuma work very well in pots. Most garden clay soils don't work well in containers for woody plants. They are too dense to serve well as bonsai soil.

A sub-topic of the soil biology is the newly evolving science of the soil 'microbiome'. There is an enormous community of living microbes living in the soil and the plants that serve valuable and needed support functions for our trees. This adds to the complexity of the issues involved in the culture and care of bonsai trees. One of those microbiomes most of us are familiar with is a family of fungi known collectively (commercially if not scientifically) as mycorrhizae.



A few extracts from the Bonsai literature provide some context for the reader and help build a sense of the changing ideas about what is best for bonsai potting soil. Note that historically the Japanese used garden soil, particularly sub-soils (to avoid the insects that often live in the topsoil).

Also note that they grew trees in garden soils for several hundred years before the advent and general availability of specialty soils like akadama, lava rock, pumice and perlite. Another forty or fifty years of experience will allow the development of a more scientific basis for best managing bonsai soils. There are a number of corollary issues besides root development, moisture retention and basic nutrients to

be studied and given consideration in the development and care of our trees.

Tatsuo Ishimoto, *The Art of Growing Miniature Trees, Plants and Landscapes*, 1956

"Your soil mix should match as closely as possible the original soil provided to your plant by nature."

Lynn Perry, *Bonsai: Trees and Shrubs*, A Guide to the Methods of Kyuzo Murata, 1964

Ms Perry writes a great deal about the soils used in Japan and their history. She also discusses pH levels. Her general formulas are various proportions of sharp coarse sand, and subsoil and/or topsoil. Noting "In cases where the individual prefers to incorporate black soil into the potting mixture, it is recommended that a greater portion of subsoil than topsoil be used." She notes that at one time in the Tokyo region only sand was used as a potting soil. This necessitated a greatly enhanced regimen of watering and fertilization.

John Naka – copyrights 1973-1996, Vol 1. pp 90-95 Six pages of various formulations for trees of different species, ages and sizes. He shows only 3 ingredients, soil, mulch and sand in 3 different sizes: large between 1/8" and 1/4" screens, medium between 1/16" and 1/8" screens and small between 1/40" and 1/16" screens, with dust to be discarded.

Vol II p. 56 In the description of the potting of a Coastal Redwood –

"Soil mixture was 1 part soil, 2 parts mulch (peat or other organic material and 2 parts sand."

The Japanese Art of Miniature Trees and Landscapes, Yuji Yoshimura, 1957.

Yoshimura devotes a couple of pages to soils and gives mix formulations for 1 - different size pots (smaller for small pots and larger for large pots). And 2 - for different types of trees in different stages of development (in training, mature or training completed). He lists as ingredients for the several formulations sand or fine gravel, black loam sieved, black loam powdered, clay or reddish loam (35-50% clay), light clay with sand (*Kanuma*), peat, Leaf mould or humus and sphagnum moss.

Yoshimura also recommends spreading out the soil in the sun for drying for about a week. Also, all soils should be sieved and separated as to texture/size. Powders or dust should be discarded unless specifically called for as they tend to clog the roots and contribute to root rot, a major cause of the loss of potted trees. They may be suitable for bamboo (a grass), and willows (water loving) and some herbaceous accent plants, grasses and herbs. He also calls for some powdered black loam with broad leaf evergreens and deciduous, and specifically maples and zelkovas.

The Masters' Book of Bonsai, Compiled by the Directors of The Japan Bonsai Association. First U.S. printing 1983

“Soil: The consistency, quality and care of soil for bonsai determines the health, vitality, and appearance of your dwarf trees. Ideally, soil for bonsai should be lumpy, should drain easily, and should usually be free of manure or artificial fertilizer.

Red loam: Brownish-red soil with hard, solid lumps; free of manure. Used as the basic soil for bonsai. Screened into three grades: large, medium, and small lumps.

(Note: This appears to be a general description of a soil that we know as ‘Akadama’, and is the first reference I know of to this type of soil rather than just garden soil or sub-soil)

Sand-and-clay mixture (Kiryu-tsuchi): Resembles red loam, but grayish in color and sandy in texture with hard lumps. Usually mixed with red loam to produce soil for evergreen bonsai. Screened into three grades: large, medium, and small lumps.

Black loam: Dark brown soil with hard, solid lumps; some manure content. Mixed with red loam to produce soil for various types of bonsai and, when finer lumps are used, for decoration soil. Screened into three grades: large, medium, and small lumps.

Sandy light clay (Kanuma-tsuchi): Yellowish-white soil – turning yellowish-brown when damp – capable of retaining large amounts of moisture. When screened and mixed with 30% sphagnum or “mountain” moss, it is used for planting azaleas, and when mixed with red loam for cultivating cuttings.”

(Note: Satsuki azalea bonsai master Suisho Nakayama in his talk and demonstration at the BABA Exhibit Saturday (3-9-2014) evening mentioned that his azaleas were planted in Kanuma.)

Screening: Prior to screening, all the soil types described above should be dried. This is usually done by spreading the soil on straw mats and exposing it to the sun and wind for about ten days. After screening, lumps that are very large or very fine should be discarded, leaving only the three grades of large, medium and small. For large grade, a mesh of 1/2” should be used; for medium grade, 3/8”; and for small grade, 1/4”

“It is always best to use soil of the same type found in the natural environment in which a particular species grows. Since it is often impossible to create such soil artificially, however, red loam is usually used as a substitute in bonsai cultivation. Red loam can be used either as it is or with a mixture of pumice, small pebbles or river sand to improve its drainage capacity, or of sphagnum moss to improve moisture retention.”

Marin Bonsai Club Auction

The Marin Bonsai Club invites you to our annual club auction on Tuesday August 19. Location is the Marin Art and Garden Center in Ross, but we will be in a new building on the campus, the Marin Society of Artists space. It's on the right when you come in the main entrance, and there is parking in front. There will be bonsai, of course, and pre-bonsai material as well as pots, stands and tools. We also have a sales area for purchasing items outright. We hope you will join us for

bargains and good fun. Preview starts at 7:00 and auction at 7:30 after a short club meeting. Cash and checks only. Hope to see you there.

Bonsai Instruction at Merritt College

Regular bonsai workshops will resume this August. These workshops are available to all EBBS members and are an opportunity to work on your own trees under the guidance of fine teachers. They are also the place to get specific answers to the care and maintenance of your trees. Clearly they are the best deal in town for increasing your knowledge of the fine art of bonsai. Leading the workshops are two distinguished artists who are also members of EBBS, Bill Castellon and Randall Lee.

The meetings are held every fourth Monday (except when the college is not in session) and start at 7:00 pm at the Landscape Horticulture Building. The college is located off Redwood Road in the Oakland hills. Questions about the workshops may be addressed to either Bill at 510-569-8003 or Randall at 510-864-0841.

Bonsai Calendar

- Watering – Water regularly.
- Fertilizing – Continue regular feeding, except for decandled pines.
- Repotting – Not recommended at this time except for tropical and semi-tropical trees.
- Styling/Pruning – Avoid drastic pruning. Wire uprising branches on quince, ume, oaks, etc. Prune excessive growth on trees.
- Insect and disease control – Maintain defensive treatments for fungus. Watch for and treat insect infestations.

Refer to the EBBS Bonsai Calendar for more details on seasonal care.

Events by Others

GSBF's Bonsai and Suiseki Garden: open Wed., Thurs., Fri. 11:00 a.m.–3:00 p.m., Sat. 10:00 a.m.–4:00 p.m., Sun. 12:00 noon–4:00 p.m. Enter at gate across from Boat House.

August 2 – 3, 201, San Francisco, San Francisco Suiseki Kai: 33rd Annual Suiseki Exhibit at the Union Bank Community Room, Japan Center, 1675 Post Street. 10 AM – 5 PM both days. Our show coincides with the 41st annual Nihonmachi Street Fair, so come early and enjoy your day in San Francisco's historic Japan Town! Suiseki and stone sales. For more information, contact sfsuisekikai@gmail.com or visit <http://sfsuisekikai.wordpress.com>.

August 19, Ross, Marin Bonsai Club: Annual Auction at the Marin Society of Artists building (at Marin Art and Garden Center. Preview at 7 PM. Auction begins

promptly at 7:30 PM. More information at marinbonsai.org

August 23 – 24, Santa Rosa, Redwood Empire Bonsai Society (REBS): 31th Annual show at the Santa Rosa Veterans building, 1351 Maple Ave. 10 AM – 5 PM Saturday and 10 AM – 4 PM Sunday with demonstrations both days at 1 PM by club sensei Kathy Shaner. Large exhibit of members' trees, vendors' sales room, members' sales room, raffle and silent auction. Free admission, parking and treats. Contact Bob Shimon @ 707-884-4126 or shimon@mcn.org

Articles or Services for Sale (or give-away)

Wanted to Buy (or for free)

Each membership household, free of charge, may place a five-line ad related to bonsai in four newsletters each year. Send a copy of ads to your editor by the fourth Monday of the month to appear in the next publication. To place an add call (925) 458-3845.

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| East Bay Bonsai Society—Schedule for 2014 |
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Regular Meetings: Second Wednesday, every month (except August and October) @ 7:30 p.m.

Place: Lakeside Garden Center, 666 Bellevue Avenue, Oakland.

Visitors welcome—for more information: call: (925) 431-0452

Website for Bonsai Garden Lake Merritt: <http://www.gsbf-bonsai.org/lake-merritt/NewHome.html>

Meeting Program

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| Aug | No regular club meeting, picnic on the 16th |
| Aug 24 | BGLM Introduction to Bonsai – Bob Gould |
| Sept 10 | Show Prep |
| Sept 28 | BGLM Introduction to Bonsai – Don Meeker & Linda Soliven |
| Oct | No club meeting due to proximity to show |
| Oct 26 | BGLM Introduction to Bonsai – J D Lin |
| Nov 12 | Juniper Jubilee – Mike Pistello |
| Nov 23 | BGLM Introduction to Bonsai – John Nackley |
| Dec 10 | Holiday Dinner |

Special Event

| | |
|------------------|-----------------------------|
| Aug 16 | Picnic |
| Oct 11-12 | Fall Show – Matt Reel |
| Nov 15 | Wiring Workshop – John Doig |