



A Monthly Publication of the Lake Charles Bonsai Society

Volume XXXIV Number 1

January 2022

CALENDAR

🌲 **Wednesday, 5 January 2022 at 7:00 pm:** The Bonsai Society of Acadiana meets at ULL at the Ira Nelson Horticulture Classroom.

🌲 **The first meeting of LCBS for 2022 will be Tuesday, 18 January at 7pm at Alan Walker's bonsai studio at 916 Kirby Street, Lake Charles, LA 70601.**

🌲 **Also, 2022 dues are now being processed.**

🌲 **21-23 January 2022:** Mid-Winter Workshop Conference hosted by the Louisiana Bonsai Society at the Baton Rouge Garden Center, 7950 Independence Blvd. in Baton Rouge, LA. Featuring Brussel Martin, Dana Quattlebaum and Evan Perdue. Registration through Lowell Tilley at 225-241-2396 or lowelltilley@gmail.com. (See flyer on pages 8-9 for more details.)


🌲 **18-20 February 2022: Joy of Bonsai** hosted by Kawa Bonsai Society at Schley's Bonsai, 2745 Audubon Ave., DeLand FL. Featuring guest artist, Sean Smith. Multiple vendors. Registration and other information at <http://kawabonsai.com/joy-of-bonsai/>

🌲 **24-26 March 2022: SWLA Garden Conference & Expo at Burton Coliseum.**

🌲 **28 April-1 May 2022: The Lone Star Bonsai Federation's 2022 Bonsai Convention** will be hosted by the San Antonio Bonsai Society. Featured artists are Boon Manakitivipart, Roy Nagatoshi, and Jennifer Price. There will be 20 Workshops, Seminars & Demonstrations, Raffles, Auctions. Vendor registration opens November 6th. Venue and other details TBA.

🌲 **26-29 May 2022: ABS Learning Seminar, Rendezvous on the River: A National WORBAC ArtFest** at Whispering Woods Conference Center, 7300 Hacks Cross Road, Olive Branch, MS.38654. Featuring Zheng Zhi Lin, Fan Shun Li, Zhao Quing Quan, Mark Noelanders, Bjorn BJORholm, Kathy Shaner, Rodney Clemons, Suthin Sukosolvisit, Mauro Stemberger, Martin Schmalenberg, Michael Ryan Bell, John Powell, Byron Myrick and special guest artist, Robert Steven. Details at www.ABSBonsai.org/abs-learning-seminars or call Pauline Muth at ☎518-882-1039. *Register before 1 March 2022 to receive a free event Tshirt!

🌲 **13 October 2022 at 7:00 pm:** LCBS workshop with Pedro Morales in conjunction with LSBF Visiting Artist program.

 **October 2022: 9th World Bonsai Federation Convention** in Perth, Western Australia.
 Details at <http://wbffbonsai.com/nextcon.html>
 **For an excellent listing of known recurring bonsai events, please visit**
<http://www.magiminiland.org/Conventions.html>

LAKE CHARLES BONSAI SOCIETY

<http://LCBSBonsai.org>



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Lake Charles Bonsai Society

P.O. Box 1652

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Lake Charles Bonsai Society is a member of  **Bonsai Clubs International (BCI),**
 **Louisiana Alliance of Bonsai Societies (LABS),** and  **Lone Star Bonsai Federation (LSBF).**

JANUARY BONSAI TIPS

by Alan Walker

January's cooler weather means that your bonsai will more likely be subject to drying out due to wind and low humidity rather than temperature. A windy day with low relative humidity can evaporate just as much moisture from your bonsai as any hot summer day, so remember to check your bonsai's moisture daily. Do this even if it rained the day before.

You might consider starting some of your heavy pruning later this month. This would give the tree about a month prior to

repotting to start healing before the roots are disturbed, thus increasing its likelihood of survival. Keeping this delay in mind will help you to plan your potting schedule. Actually, this is a case where patience is prudent and the heavy pruning and repotting should probably be done in separate years except with young, vigorous material.

Since potting season in southwest Louisiana starts next month, this is a good time to be sure that you have your potting materials ready. Study your trees and make

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your choices for containers. Order the pots right away to make sure you have the right pot at the right time. Get your rooting stimulant and any time-release fertilizers you might want to use in your soil mix. Prepare your potting soil making sure to screen out the fine particles to avoid soil compaction which can cause poor drainage and root rot later in the year. Get your soil components such as hadite, coarse sand (eg. #2 blasting sand), Turface, small pea gravel, aquarium gravel, clay garden soil, humus or leaf mold, and sieved pine bark or redwood bark. See the article on **Rudiments of Repotting** by Jean Smith in the January 2018 issue of **BONSAI NEWS** for more on this topic or the article on **Bonsai Potting Mixes or the Real Dirt** by Don Waitkus, also in the January 2018 issue or contact your editor for a copy.

As I mentioned last month, you should remove the majority of the flower buds on your azaleas as they develop, keeping only two or three per branch. You will not be able to do this in a single session, because the buds don't emerge at the same time. Grasp the bud firmly at the base with your fingers or tweezers and give a quick twist to the side.

Don't pull them off, because you may lose more than you bargained for. Also, remove spent blooms immediately after they fade, so that your azalea doesn't sacrifice the vitality it needs for development. Keep your azalea healthy and robust, feed it well into the fall with a high phosphorus fertilizer, and give it lots of sun. Your azalea will reward you with spectacular blooms if you do.

As in any month, check your wired trees for signs of scarring. Wire scars look very unnatural and are difficult to hide satisfactorily.

Check the arrangement of your trees and compensate for the lower angle of the winter sun. What used to be the hottest and brightest part of your yard may now be shaded part of the day. Look over your deciduous trees and turn weak sides toward the south or southeast, so that the dormant buds in these areas will be the first to break dormancy and grow in the spring.

Plan a field trip to collect bonsai material. Perhaps you will find a good spot to lead other club members. Let us know if you have access to an area where a small group of club members could collect.

Bonsai Society of Acadiana

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BSA Notes

by Boyd Snellgrove, MD

Hope everyone enjoyed their holidays!!

Bonsai Society of Acadiana will kick off 2022 with its monthly meeting

on Wednesday, January 5th at 7pm at the Ira Nelson Horticulture Classroom. It looks like there will be several great learning opportunities available to us

for the first few months of the year. Baton Rouge will be hosting their Mid-Winter Workshop and Randy Bennet's Bald Cypress Class in January. Underhill Bonsai will be hosting an

event in March. More details will be sent as they are available.

We will be starting to collect 2022 dues. \$30/person for the year, or \$50/couple.

Bonsai Resolutions for the New Year

1. I will remove wire BEFORE the tree grows into it.
2. I will fertilize my bonsai correctly and on time.
3. I will repot all the bonsai that need it.
4. I will critically look at my bonsai and restyle those that need it.
5. I will remove bonsai from my collection that I do not like and cannot see a way to restyle into something I like.

6. I will work on my bonsai more often, and I will trim on time.
 7. I will not grow more bonsai than I can properly care for.
 8. I will bring my bonsai to club meetings to show it off or to get advice when needed. I will photograph my bonsai in all stages.
- Courtesy of Mohawk Hudson Bonsai Society, *THE TWIG* newsletter

Growth Media Compaction: Your Repotting Technique and How It May Affect Your Bonsai's Health

by R. (Bill) Cody

A combination of events piqued my interest in this subject. First, I have often wondered about our bonsai repotting technique during which it is suggested that we remove only one-third^{1, 2} to two-thirds³ of the growth media present at the time of repotting. Second, David DeGroot announced a shift to an all mineral growth medium at the Pacific Rim Bonsai Collection.⁴ Third, I remembered pictures in various bonsai journal showing Japanese repotting efforts which appeared to be more radical in growth media removal than recommended above.^{5, 6} And fourth, I was staring at a mound of growth media resulting from a bit of horticultural neglect of my own.

The object of my concern was the growth media remaining after potting up satsuki azaleas. These azaleas were either cuttings or airlayers in 1990/91 and were

potted into 3-gal. RootMaker® containers in early 1993. They were potted into a coarse one to one (by volume) pine bark-expanded shale growth medium whose drainable pore space has consistently been 40+% over the years. Since the health of these azaleas seemed to be quite good each year and their trunks were fattening in a satisfactory fashion, I really forgot about them until this spring (2001) when I looked at a 'history' tag and discovered that they had been in the same container for eight years. A frenzy of potting up followed. One azalea expert recommends that only one-third of the root ball be removed from the bottom and no more than one inch all around the root ball.⁷ In this instance, radical pruning of the root system included the removal of all growth medium (it was the consistence of mud under the root ball) and the entire mat of fine fibrous roots

down to the major roots from beneath the trunk outwards. Finally, the grow medium was washed from the now flat root system. Incidentally, all of these azaleas were repotted into considerably smaller containers and have flourished. Since the central portion of bonsai root balls is most often undisturbed during repotting, I decided that the eight-year old growth media recovered from these containers warranted scrutiny.

The clumps of roots, stems, leaves and other debris of the repotting process were removed from the mix. Then the 26.4

liters of available growth medium was sieved. The results are presented in the table Figure 1. In sieving growth media, the total volume of the different sized particles is always greater than the original volume as it is here, because particles of unequal size fit together more closely than particles of equal size. In the 3/32 inch column, that total volume, based on my observation, was arbitrarily divided into 50% mineral and 50% organic and added to the respective percentage totals in the bottom row.

Compacted Growth Medium Sieved

Total Volume	26.4 Liters									Totals
Screen Size In Inches	1/4	3/16	5/32	1/8	3/32	1/16	1/32	1/64	< 1/64	
Volume In Liters	0.4	0.9	11.1	2.0	1.9 1.9	3.7	3.0	3.1	2.5	30.5*
Volume As %	1.5	3.4	42.0	7.6	7.4 7.4	14.0	11.4	11.7	9.5	115.9*
Total %	54.5% + 7.4% = 61.9 % mineral				46.6% + 7.4% = 54.0 % organic					115.9*

Figure 1. All particle volumes refer to those particles retained on top of each respective screen. At the 3/32-inch size particle level, the characteristics of the growth medium changed abruptly from predominately mineral to half organic and half mineral; then to predominately organic at all the smaller sizes. The less than 1/64 inch size is essentially dust. Since I could not see any particles that resembled expanded shale, I designated it to be organic. Since all of the original 50% pine bark was retained on a 1/8 inch screen, I believe that the 54.0 % organic material now **less** than 1/8 inch indicates significant degradation of the original pine bark.

*In sieving growth media, the volume of the different sized particles is always greater than the original volume as it is here, because particles of unequal size fit together more closely than particles of equal size.

The drainable pore space was determined using a method devised by Dr. Carl E. Whitcomb⁸ and described in this journal.⁹ Here are the definitions and calculations used:

Total Pore Space (TPS) is that space that lies between and around all of the solid particles within the growth medium. It is equal to

the volume of water added to the growth medium in any given container.

Drainable Pore Space (DPS) is that space within the growth medium containing gases after all of the water drainable by the effects of gravity has been recovered. It is presented as a percentage of the total pore space: Drainage volume (DPS) ÷ TPS x 100.

The volume and shape of the container is of no importance so far as the depth of the perched water table is concerned for a given growth medium—it is the depth of the container that is all important. Black plastic commercial one-gallon containers were modified to represent the most commonly used bonsai containers from five inches to one inch in depth. Once the results

were in, I wondered why these azaleas seemed to be doing so well in such poorly aerated soil. Since the azaleas were planted in containers nine inches deep, a nine-inch deep container was pressed into service in an attempt to determine the answer. The results are presented in the accompanying graph (Fig. 2).

DPS & WHC of Compacted Growth Media

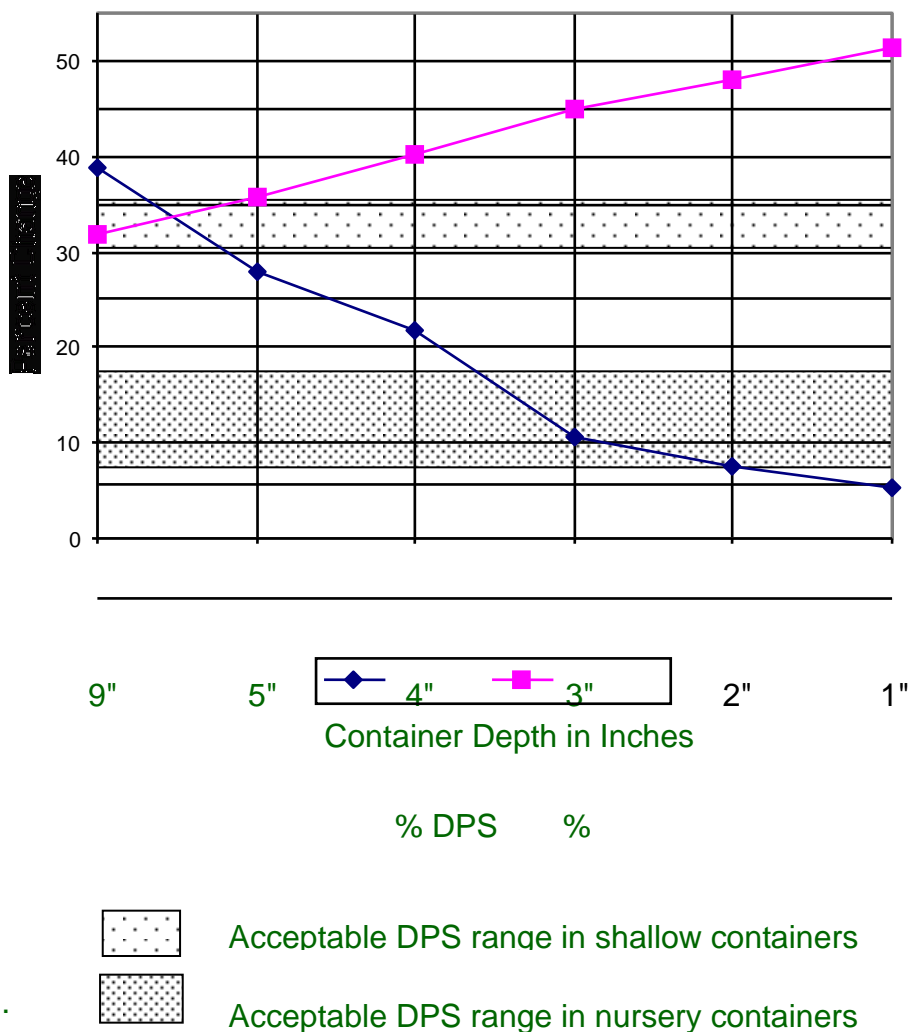


Figure 2. Dr. Whitcomb refers to propagating containers and flats as shallow containers, the depths of which more nearly conform to that of bonsai containers.

Even in this improperly timed study, the DPS in most commonly used bonsai containers would be dangerously low for healthy roots systems.

Discussion

“...more plants in containers are killed by excess water and poor drainage than any other single factor.”⁸ Excess water, accompanied by poor drainage, restricts the diffusion of oxygen into the spaces around the roots and root

suffocation and death follows. Carbon dioxide is the by-product of root respiration as well as the activity of fungi and bacteria in the growth medium. The accumulation of this gas alone can be toxic to the roots of plants in containers. If the particles of a growth medium fit tightly together,

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the spaces (pores) between the particles will be small and the growth medium will retain large quantities of water, reducing the diffusion of gases in the medium. If the growth medium is composed of large particles, the spaces between these particles will be large and less water will be retained and now drying of roots becomes a problem. As water is pulled by the forces of gravity from the growth medium, a certain level is reached within the container at which the forces of capillarity, adhesion and cohesion completely confound the force of gravity and no more water can be drained from the container. This volume of water remaining at the bottom of the container is referred to as the "perched water table." The shallower the container the greater the percentage of the container's volume and root system is included in this layer of excessive water.

The vital air spaces within the growth medium are adversely affected by the normal settling of the medium, the decomposition of organic materials (in this instance, pine bark) and the growth of new fibrous roots into the spaces between the growth medium particles. All of these phenomena cause the growth media texture to become finer over a period of time and the water saturated zone at the bottom of the container rises, effectively reducing the percentage of growth media and root zone that is properly aerated, i.e., the drainable pore space diminishes.

In this instance the pine bark decomposition has severely reduced the drainable pore space over the eight years since these azaleas were potted up into the nine-inch deep, three-gallon containers to 'fatten' their trunks. The only reason that the azaleas remained healthy under these conditions is that they were planted into a relatively deep container--not many bonsai have homes in nine-inch deep containers--with a reasonable drainable pore space. The water holding capacity is elevated—no wonder the surface looked wet all the time! A typical example of my "looking but not seeing" as the significance of the wet look just did not register.

In Figure 2 the drainable pore space is dangerously low within the range of all the typical bonsai pot depths tested. If the suggestions that a portion of the bonsai's root system with its old growth medium be left intact is followed,^{1,2,3} even repotting a bonsai into a shallow container with a

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growth medium with a suggested 35-40% DPS would leave potentially unhealthy conditions within the undisturbed portion of the root zone.

Therein lies the thrust of this study: Since water within a growth medium can and does move horizontally from areas of large pores into areas of smaller pores, water from the new "good" growth medium would move laterally into the undisturbed, compacted, root-filled growth medium directly beneath the trunk. This phenomenon of water moving horizontally from large pore-spaces to smaller pore-spaces in this manner is called "lateral perching."

Dr. Whitcomb's recommendation for drainage time in the usual growth medium test is for 10 minutes.⁸ This growth medium sample produced slow but steady drainage for almost thirty minutes and significant dripping continued for another thirty minutes at which time the test was terminated. This phenomenon is just not seen in the testing of the usual "normal" growth medium. Unfortunately, I was so fascinated at the time by this state of affairs that by the time—almost a year later-- I realized my timing error in performing the test, the growth medium had been discarded. I think that it is obvious that the results presented here would have been more ominous indeed had the test been terminated at the ten-minute limit, while the active drainage of water was still 20 minutes from cessation.

When a bonsai dies, it is a time of great frustration and sadness. Not infrequently, bonsai die from horticultural practices that are not immediately lethal but are sources of repeated insults to the health of the bonsai until the defense mechanisms of the tree are overwhelmed. I would suggest that there are few bonsai enthusiasts worldwide who send their deceased trees to a plant pathologist who may be able to determine the cause of death. This is a possible source of information that could prevent the death of other specimens under your care—it's called "learning from your mistakes."

Once upon a time the renowned azalea bonsai expert, the late Khan Komai, visited the Austin Bonsai Society and I journeyed from Houston to participate in his workshops and lecture. He said that when an azalea arrived into his studio from an outside source, as soon as it was feasible, he removed all of the 'foreign' (my word) growth medium and repotted it into his own mixture. Otherwise, he said, "The azalea will die."

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I contend that over a period of time any once perfect growth medium residing in the repeatedly undisturbed portion of a bonsai root ball literally becomes 'foreign' to the bonsai's original environment.

Decomposition of organic material, settling of the growth medium and continued replication of fibrous roots in the area reduce the drainable pore space and increase the water holding capacity of this central portion of the root ball to dangerous levels far from the medium's original values. I further contend that this foreign environment, producing low oxygen and high carbon dioxide levels, can eventually be detrimental to the overall health of the bonsai involved as well as providing a haven for root-rot pathogens. And as so often happens in bonsai culture, the decline of your bonsai may be so slow as to be unnoticed until irreversible harm occurs.

I believe that the results of this study (despite being flawed) on bonsai growth media left long undisturbed serves to bolster John Naka's earlier recommendation for the removal of old soil and roots beneath the trunk "...by gouging out into a hollow space."¹⁰ and the more recent repotting advice offered by Nick Lenz,¹¹ David Rowe¹² and by Miyao and others¹³ in a recent transplanting symposium.

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Louisiana Bonsai Society

Mid-Winter Workshop Conference

Featuring Brussel Martin, Dana Quattlebaum, and Evan Perdue

Baton Rouge Garden Center

7950 Independence Blvd. Baton Rouge, LA

Bonsai Display

Participants are welcome to bring a limited number of bonsai to display just for fun.

Bonsai Critique

To improve further development/refinement, members may bring 1-2 bonsai trees from your collection for suggestions by a professional bonsai artist at no charge.

Four Super Vendors

Little River Bonsai Nursery, <https://www.facebook.com/danabonsai>, Dana Quattlebaum will conduct a workshop, more details to follow.

Underhill Bonsai Nursery, <https://underhillbonsai.com/>, Evan Perdue will conduct a workshop, more details to follow.

Bayou Bonsai Concepts, <http://www.billsbayou.com/>, makers of fine bonsai soil products and bonsai planting stones for grower in Southeast Louisiana.

Myrick Bonsai Pottery, <https://www.myrickbonsaipottery.com/>, handcrafted pottery made by Bryon Myrick with a lifetime of experience making pottery.

Friday January 21, 2022

Bonsai Workshop by Dana Quattlebaum 12:00 p.m. to 4:00 p.m.

Fee set and plants provided by Dana,

Supper social to follow \$15

Demonstration by Mr. Brussel Martine 5:00

\$10 (LBS members free).

Saturday, January 22, 2022

Bonsai "BOT" Workshop by Brussel Martin 9:00 p.m. to 1:00 p.m.

Workshop \$45 (LBS members \$35). Limited to 8 participants.

Lunch \$15

Bonsai Workshop by Evan Perdue 1:00 p.m. to 5:00 p.m.

Fee set and plants provided by Evan

Bonsai "BOT" Workshop by Brussel Martin 1:00 p.m. to 5:00 p.m.

Workshop \$45 (LBS members \$35). Limited to 8 participants

Supper social \$15

Demonstration by Mr. Brussel Martin 5:00

\$10 (LBS members free).

Sunday January 23, 2022

Bonsai "BOT" Workshop by Brussel Martin 9:00 p.m. to 12:00

Workshop \$45 (LBS members \$35). Limited to 8 participants

Raffle of Demonstration Trees 12:00

Raffle tickets are \$5 per ticket or \$20 for 5 tickets. Need not be present to win.

Pre-bonsai available: Workshops are bring-your-own-tree, or a limited supply of pre-bonsai is available for the workshop. Reserve your tree by calling Lowell Tilley at (225) 241-2396. The club also has some very good bonsai pots for sell.

Registration: To register, please call Lowell Tilley at (225) 241-2396, or email lowelltilley@gmail.com. To reserve a place in a workshop, send a check payable to LBS to Lowell Tilley, 520 Laurie Lynn, Baton Rouge, LA 70819.

Join Louisiana Bonsai Society

Join today and receive member discounts on workshops. \$20—individual. \$25—family.



Lake Charles Bonsai Society

2022 MEMBERSHIP/RENEWAL APPLICATION

NAME: _____
(if couple, please list both names)

MAILING ADDRESS: _____

City/State/ZIP: _____

PHONE: (Home) _____ (Work:) _____

E-mail address/URL: _____

Enclosed are my 2022 membership dues for (select category (1/2 price after 30 June):
Individual Membership @ \$25 **Family Membership @ \$30**
cash or check # _____ DATE: _____

Bring to meeting or SEND TO: *If you have any questions, please visit:*

LAKE CHARLES BONSAI SOCIETY
P.O. Box 1652
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<http://LCBSBonsai.org>
or call:
Alan Walker at 337-8402

LCBS meets next on **Tuesday, 18 January at 7pm!**

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