

# THE BONSAI Wire

The Newsletter of The Greater New Orleans Bonsai Society

January 2022

## MEETINGS & Events

### Tuesday, January 11, 2022

#### **Intermediate Study Group 6:00pm-7:15pm**

Attendees for the study group are asked to bring in a tree in any stage of development. Randy will select several trees and lead the group in a design focused analysis and suggest next steps.

#### **Program: Silhouette Show 7:30pm**

The Silhouette Program is a study of branch ramification and evaluation of plans for further development of our deciduous bonsai. Bring in a deciduous tree for display and discussion. If you don't have a deciduous tree, you are welcome to bring in any tree. Advanced members will make suggestions to further refine your trees.

### Friday, February 11, 2022

#### **Program: Maples Lecture/Demo by Jennifer Price 7:00pm**

One of the new rising stars in bonsai, Jennifer Price discovered bonsai after retiring from the stage as a professional ballerina. For the last several years she has been involved in an intensive study program with Walter Pall from Germany and Jim Doyle from Pennsylvania. She has taught workshops and given demonstrations worldwide and last year was in Germany to be a part of Generation Bonsai and went on to represent America at an international bonsai convention in Shanghai, China.

### Saturday, February 12, 2022

#### **Program: Jennifer Price Bring Your Own Tree Workshop 9:00am**

Jennifer will conduct a Bring Your Own Tree workshop. Cost for the workshop is \$60. A sign up sheet will be available at the January Meeting. To get the full benefits of this workshop try to bring a tree that you have already worked on and wish to improve or a high quality raw tree.

### Tuesday, March 8, 2022

#### **Program: Bald Cypress Lecture/Demo by Randy Bennett 7:00pm**

Randy, as many of you know from his newsletter articles, is well versed in all aspects of bald cypress development, styling and care. This is your chance to have all your questions about this native species answered. If you have a bald cypress, bring it in for display and questions/advice.

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Meetings take place at the **Marine Corps League Hall, 2708 Delaware St., Kenner, LA**. For more information, articles and everything bonsai, check us out on our website at [www.gnobs.org](http://www.gnobs.org)

## Styling a Collected Bald Cypress

By Randy Bennett

In January 2021, I was collecting bald cypress for a grove planting when I noticed a small cypress that had been damaged a couple of years prior. What struck me was that the top had been broken out and a new leader had formed at a sharp angle to one side. It would make an excellent candidate for a flat top cypress bonsai. There were a few long shoots that I pruned back in the swamp, but that was all I had to do before collecting it.



The tree was styled during the Fall Show of the Louisiana Bonsai Society and raffled off at the close of the exhibit. This article explains the work that was done.

It was a natural candidate for designing a mature flat top. The only real problem was that the base of the tree was too small given the overall height. But as soon as I got the tree out of the mud, I knew what the solution was for the small base.

Mature bald cypress flat tops are unique in their branch structure. As the tree matures, most of the lower branches are sacrificed and all the energy is directed to developing the upper

canopy. Moreover, the trees are very tall and present a one-of-a-kind design style.

The photo below was taken along Interstate 55 between Ruidock and Ponchatoula Louisiana. It was the inspiration for the canopy design of the tree that was styled.

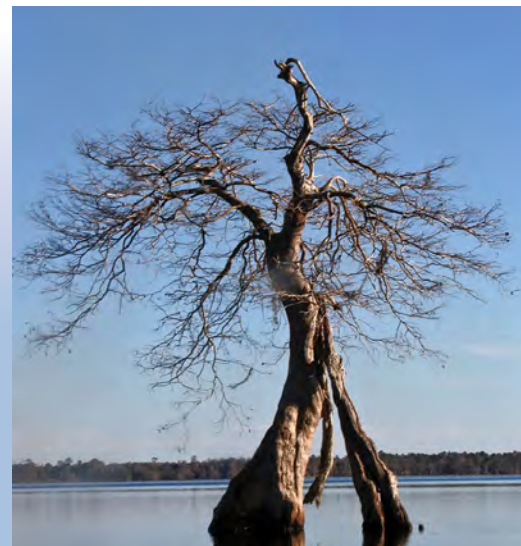
### *Graceful and Fluid Flat Top along I-55*

The photo below was the inspiration for the design of the base and provided the solution for the fact that the base was too small for a bonsai of this height. It clearly shows how massive the base of the tree used to be before it rotted away. In its current state, one can see all the way through the trunk to the other side – a variation of a hollow trunk design.

The solution, therefore, was to split the trunk of the collected tree at its base, driving a wedge up from the bottom of the tree, thus increasing the diameter of the base and giving the typical buttress appearance that is common to bald cypress. There would be no danger to the tree by using such a procedure. The vascular flow of food, water, and nutrients follows the grain of the bark. Since there will be no damage by cutting across the grain, the vascular tissue will remain entirely intact.

### *Mature Hollow-Trunk Bald Cypress*

But before that work could begin, several steps were taken. The first was to



prune away branches and shoots that were not needed in the design. That meant removing all the shoots on the lower part of the trunk. Only three branches were kept beneath the upper canopy. These were wired and left long for the time being to increase their thickness. After another year's growth, they will need to be cut short and begin developing secondary and tertiary branching. In addition, the remaining fall foliage was removed.

The second step was to prune and wire the branches that would make up the canopy. Once all the branches were wired and shaped, a brass bristled brush was used to remove all the flakey bark from the trunk to ensure that there were no twists in the vascular structure. A very straight grain would be necessary to make sure that the trunk split evenly.



### *Wiring is almost complete*

At this point, the tree was taken from the nursery pot it had been potted up in and the soil removed. An examination of the roots was needed to make sure that a minimal amount of root damage would occur where the trunk needed to be split. Moreover, it was critical that there would be sufficient roots on both sides of the split to ensure the health of both sides after the trunk was split into two halves.

One of the unknowns was how far the trunk would split when the wedge was driven in from the base. The tree would be ruined if the split were allowed to go too far. A point on the trunk was chosen as the maximum amount of splitting that would be allowed. To prevent the trunk from splitting beyond that point, a piece of rubber innertube was wrapped around that point and several wires wrapped tightly around the rubber. The rubber would protect the trunk from damage from the wire and the wire would prevent over-splitting.



*Examining the roots to ensure even distribution around the trunk. Note the rubber wrap and wires that will prevent the trunk from splitting too far.*

The examination of the roots revealed that the roots were very healthy, and the pot had become rootbound in a single growing season. The examination also showed the beginnings of root flaring beneath a few roots that were higher up on the trunk. These upper roots will be removed later and will make the final design even better than was planned.

In addition, there were no roots that would be damaged from the split. So, after getting another set of hands to hold the trunk firmly,

a 'multi-tool' with a wood-cutting blade was used to begin cutting into the trunk to force the split along a specific line. The cut was made as deep into the trunk as the blade would go from the bottom and up the trunk about eight inches.



*Multi-Tool with a wood-cutting blade that was used to cut the trunk*



Cypress cont. from pg 3

When the tree was collected, the tap root was cut through and the base of the tree cut flat before potting up in the nursery container. This helped to ensure that a flat surface was available to begin driving in the wedge.

Once the cut was completed, a wooden wedge was hammered into the cut from the bottom of the tree upward. The tree split perfectly. The trunk was examined several times as the wedge was driven home to make sure the process was going as planned. The final position of the wedge increased the diameter of the base from three inches to almost six inches!



*The above photo shows the wooden wedge as it was carefully driven into the trunk, splitting it into two sections.*

Fortunately, the trunk only split a little higher than the cut that was made and the rubber tourniquet was not needed. However, it is always better to be on the safe side when performing an operation of this type, whether it is on a trunk or on a branch.

Because this procedure was carried out in November, before any threat of freezing in the deep South, a few more steps were taken to ensure the trees health and well-being through next spring. A bead of wood glue was run along the edges of the split trunk to seal the cambium tissue. Normally, I do not use glue to seal wounds, but the extremely thin line of tissue that needed protecting called for something simple to apply. Next, the entire split was packed with wet sphagnum moss. This will keep the wood from drying out during the next few months. Once the tree leafs out and begins actively growing, the moss can be removed with tweezers, being careful not to disturb the roots. The tree will also need to be protected from any freezing temperatures this winter and kept out of the wind. These extra steps will only serve to provide extra layers of protection until the tree has recovered and is once again actively growing.

The tree was then repotted into a larger nursery pot, giving the roots additional room to grow in the spring.

## An Introduction to Bonsai Soils

By Harry Harrington  
[www.bonsai4me.com](http://www.bonsai4me.com)



One of the most widely debated subjects for most bonsai enthusiasts is soil composition. Ready-mixed soils can be bought from bonsai nurseries and garden centres but these tend to be relatively expensive and dubious quality. Faced with repotting more than 3 or 4 trees in the spring, most enthusiasts learn to mix their own soils. There are a large number of soil ingredients that can be used when mixing your own soil or “substrate”; different mixes are used by different enthusiasts with varying degrees of success.

For the beginner, choosing which soil mix to use can be a daunting task. This article is written as an introduction to Bonsai soils, it does not discuss every soil ingredient or mix that is available or feasible, nor does it tell which soil mix is the ‘best’. The individual enthusiast can only answer that question after experimenting over time with their own trees and care routines.

### The Basic Requirements Of Bonsai Soils

A bonsai is confined to a relatively small quantity of soil throughout the year on which its very existence depends. Through the soil in the pot, the tree must be able to obtain water, nutrients and gases in order to grow. For this reason, a bonsai must be planted in a good quality bonsai soil, the quality of the soil used directly affects the health and vigour of the tree. In my experience, unhealthy trees that lack vigour have often been planted in a poor (often organic) bonsai soil.

There are a number of qualities that are required in a good soil mix:

**Good water-retention.** The soil needs to be able to hold and retain sufficient quantities of water to supply moisture to the bonsai between each watering.

**Good drainage.** Excess water must be able to drain immediately from the pot. Soils lacking good drainage are too water retentive, lack aeration and are susceptible to a build up of salts.

**Good aeration.** The particles used in a bonsai mix should be of sufficient size to allow tiny gaps or air pockets between each particle. It is important to the health of the roots that they have access to oxygen. A particle-based, well-structured inorganic soil allows fast drainage of water and allows fresh air to continually enter the soil. A compacted organic soil that lacks any structure will also lack aeration and drainage, this leads to unhealthy roots and trees.



*Pumice is a very useful soil component that can be mixed with other soil components such as bark, akadama or lapillo and will create a very vigorous root system.*

### Varying Soil Mixtures To Suit Different Tree Species

Although all Bonsai require free-draining, water-retentive soils, different species vary in their requirements for water and nutrients, this should be reflected in their soil composition. Pines and Junipers for instance require less water than most other species; this in turn means that they require a less water retentive soil mix. Alternatively, flowering and fruiting species have increased water requirements and tend to be planted in soil mixes with relatively high water retaining capacities. When mixing your own soil, the ratio of waterretaining material to drainage materials is varied according to the tree that it is intended for. Very often the particle size of the soil granules is increased to provide additional drainage to a bonsai soil.

Alternatively, by increasing the amount of water-retentive material and its particle size, the greater its waterholding capacity becomes.



*Lapillo or lava, and pumice are an extraordinarily useful soil mix for Junipers and Pines, particularly if a little akadama is added.*

### Organic or Inorganic Soils

Soil mixes are described as being either organic or inorganic. Dead plant matter such as peat or leaf-litter or bark are described as being organic soil components. Inorganic soil mixes contain little to no organic matter; instead, they are made up of specially-formulated soils such as volcanic lava, calcined (baked) or fired clays. These materials can be more difficult to locate than organic materials, but have become readily available online.



*Chopped bark can be added to a soil mix to increase water retention which can be very useful, particularly for deciduous species.*

### Organic Soil Mixes and Components

In past decades, Western bonsai enthusiasts tended to use organic soil mixes, a large proportion of peat, bark and leaf-litter mixed with grit to aid with drainage.

But as time has passed, our knowledge and understanding of bonsai in the West increased, it is now acknowledged by most enthusiasts that organic soil components such as peat are not conducive to the good health and vigour of a tree. Peat and other organic soil components have many disadvantages; they can be too water retentive, leading to the soil being continually



sodden, particularly during periods of rain in autumn, winter and spring.

Conversely, during periods of high temperatures, dry peat can be difficult to thoroughly water, leaving dry spots inside the rootball of the bonsai. Possibly the most serious problem with organic soils is that although they may consist of appropriate sized particles when the bonsai is first planted, they continue to break down in the bonsai pot and become compacted. As the soil compacts it becomes airless and drains poorly.

Such waterlogged and airless soils soon suffocate the roots and can lead to rotting roots and ill-health in a bonsai. The only organic component that I would still recommend using as part of a bonsai soil mix is composted bark, sifted to remove any particles less than 2mm. While bark will break down slowly, it still holds its structure for a long time and until then, will not impede the air circulation or the drainage of a bonsai soil.

### Inorganic Soil Mixes and Components

The advantage of inorganic materials is that they hold their open structure for a long time without breaking down into mush. Inorganic materials retain a certain quantity of water and any excess is immediately flushed through the bottom of the pot; it is difficult to 'overwater' a bonsai planted in a good inorganic bonsai soil mix.

Akadama is Japanese baked clay, specifically produced for bonsai and imported into the West; it is normally only available from bonsai nurseries and therefore difficult to locate. There are a number of grades of Akadama available including 'Double Redline' that is more costly but is of premium quality and less likely to break down. Akadama is the soil of choice for many Japanese bonsai Masters and enthusiasts.

This is partially due to its relatively low price in Japan where it is also easily obtainable. However, while Akadama might be considered a good quality soil component, it can break down into a solid mush within 1 or 2 years if used without volcanic soil components such as pumice or lava to keep the soil structure open. Because soils made using just akadama breakdown so badly, they must therefore be washed out of the roots every two to three years.

For this reason it is strongly not recommended to be used on its own for species that will not tolerate regular bare-rooting (Pines for instance). Akadama should be mixed with volcanic or clay granules such as pumice that will ensure the soil stays open for a good length of time. Fired clays are also stronger than Akadama and thus will not break down over time. As with Akadama, fired or volcanic clays can be used on their own, mixed with grit for faster draining soil or mixed with 10%-20% bark if an organic component is required for greater water retention, while still retaining good drainage properties. A wide number of fired clays are available; I would recommend

contacting other enthusiasts in your country and investigating online as to the best soil components and pre-mixed soils available to you.



*A bonsai planted in Akadama. The new Akadama around the edges of the image is still holding its structure, however the remainder has turned into a muddy, airless mess.*

### Sifting out 'Fines'

Large amounts of dust that remain in the soil mixture can clog the open structure of the soil and disrupts the drainage of excess water. For a good soil structure that drains well, where necessary, soils are sifted to remove dust and very small particles.

### Switching From Organic To Inorganic Soils

Almost all deciduous varieties will tolerate the transition from organic to inorganic soils immediately; coniferous species, in particular Pines and Junipers, require the retention of some of their old soil which will contain the mycorrhizae fungi necessary for their survival.

### The Best Soil Mix for Bonsai

There is no single soil mix that is best for cultivating bonsai; variables such as local climate and rainfall, personal watering regimes and individual tree species all contribute to variations in enthusiasts' soil mixes.

*My personal favourite soil mixes at the time of writing (November 2021) are from Ibuki in Poland and are a mixture of akadama and volcanic inorganics such as pumice and lava rock. The pumice and lava provide excellent structure ensuring aeration and drainage while the softer akadama particles are excellent for the fine roots within the rootball to root into. Chopped bark can be added to 'fill out' the soil for better water retention in deciduous trees and additional lava rock can be added for a drier mix suitable for coniferous species. I use medium-sized particles 4-5mm in size for most trees, with a soil surface of smaller (2-3mm) more water retentive particles. For coniferous species such as pines I will add larger 6-7mm particles for more drainage.*

Ultimately, experience of using different soil types and ingredients will shape your own particular preferences. It is recommended that, in the first instance you find out the soil-mix that local enthusiasts are using and take it from there. I would however always recommend that an inorganic soil be used to improve the health and ease of cultivation of your bonsai.

### 'Bonsai Soils' bought from Nurseries and Garden Centres

Though it saddens me to say this, the vast majority of products packaged and sold as 'bonsai soils' at plant nurseries, garden centres and even some bonsai nurseries are next to useless for bonsai. Often these are simply peat/ compost based soils mixed with some sand or grit and (as described previously) have a soil structure that is too water retentive, airless and generally bad for the health of your bonsai.

There are of course knowledgeable outlets selling good quality soil products. However, just because you bought some ready-mixed bonsai soil from a nursery does not necessarily make it suitable for the health of your bonsai. Similarly, if you have bought a bonsai from anywhere other than a well-respected specialist bonsai nursery that will care about the quality of the trees it is selling, do not assume that the tree is planted in a good soil.

### Feeding Trees Growing In Inorganic Soils

If there is one thing that seems to worry enthusiasts about switching to an inorganic soil is the lack of 'proper' organic and a 'lack of nutrients'. Firstly, I and many (most) experienced enthusiasts have switched to largely inorganic soils (such as lava, pumice, Akadama etc) and have been using these products for many years. The reason for switching to inorganics is purely for the increased health, vigour and strength that it provides a bonsai (or any plant for that matter). Be confident that switching to inorganic soils is widely considered 'best practice'.

Bonsai grown in an inorganic soil do not need any special fertilising regime or special ingredients to keep them healthy. There are of course some differences between compost-based organic mixes and inorganic mixes. Inorganic soils contain little or no nutrients, however, compost/ peat based organic soils just as equally only provide very limited nutrients to a bonsai and these are quickly depleted within a bonsai pot.

Organics are able to retain more nutrients better than inorganic's, after feeding, but this is not necessarily a good thing. Trees growing in inorganic soil need more fertiliser than those growing in an organic soil. Many enthusiasts see this as being advantageous though as it allows the enthusiast to feed their bonsai heavily to encourage better growth, health and faster development. That an organic bonsai soil can hold nutrients for a little longer than an inorganic bonsai soil is hardly advantageous, as bonsai growing in organic soils still need to be fed regularly!



### Embracing the Art and Science of Bonsai

We are back to normal days and hours  
**Wed to Sat 10 – 6. Our online store is always open**  
and both Evan and Doug are available for local pick-up  
and appointments!

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