



Bonsai in America

Written & Published by Dave Bogan

February 2014 Volume 3, Issue 2



Funeral for a Friend

By Andrew Smith

I went to a most unusual funeral recently, the funeral of my dear friend, the forest.

Actually, it was more of a wake than a funeral, and it wasn't for the whole forest, just for the millions and millions of pine trees that have been killed in recent years by the mountain pine beetle.

I went to a most unusual funeral recently, the funeral of my dear friend, the forest. I was hoping they'd have a pine tree in a pine box for viewing, but instead they had poetry readings and an interpretation of the life cycle of the forest by a local ballet troupe. Loggers, hunters, hikers, climbers, innkeepers and tourist shop operators were all in solemn attendance.

After the wake a torch-bearing mob marched to a nearby field where a giant effigy of a pine beetle had been constructed and laid atop a pyre of dried wood and old Christmas trees. The whole thing was torched while the crowd cheered and fireworks exploded in the cold night sky.

All of this was put on by the town arts council as a way of helping local people acknowledge and cope with the loss of such a large part of the Black Hills National Forest to an insect that's smaller than a grain of rice.



The forest is changed! Gone! Ruined! Nearly a half-million acres are affected in the Black Hills alone. Whole mountain slopes of once vividly green pines now stand brown and broken and dead. The breeze

that once made them sing now breaks their brittle tops and they fall to the ground slowly, in pieces. Stands of ancient pines that have graced rocky ridge tops for many centuries now crumble in rank decay.

And the fires are still to come. Once all this dead forest is lying dried and on the ground it will become a huge stockpile of highly flammable fuel just waiting for a summer lightning strike to set it off.

Unlike Dutch elm disease, chestnut blight, gypsy moths or the emerald ash borer, the mountain pine beetle is a completely native pest. I've seen pictures of chestnut trees taken in the 1800's

and some of them were as big as redwoods. It was the most massive, majestic tree of the Eastern U.S., and now it's completely gone. It was a tragic loss to our landscape when it was destroyed by an **imported disease**, but today no one is alive who even saw a giant chestnut tree.

That's why import and quarantine laws for plants are important and are something we should all support. I would not want to think I unknowingly helped destroy another one of Nature's treasures just to make things a little more convenient for myself.

But the mountain pine beetle, *dendroctonus ponderosae*, did not arrive on a ship or a plane. It probably arrived with the pine forest itself, as the glaciers and then the spruce forest, retreated northward and the climate warmed up. The beetle is always here and usually does little harm, or is even beneficial to the environment by creating small openings in the forest canopy that increase habitat for a variety of small animals.

But for unknown reasons the beetle population occasionally swells to massive levels and then this tiny insect shows its demonic side, often destroying hundreds of thousands of acres of forest before the population, just as mysteriously, drops to normal levels again. Although the current outbreak seems unprecedented in size, records show a large beetle infestation in the 1970s and an even larger one in the 1800s. In fact, the town of Deadwood got its name from all the standing dead trees that were in the area when settlers first arrived.

The forest will survive this beetle. As old trees fall, new ones spring up. New meadows and habitats will be created. As the pine forest is opened up and fragmented other tree and shrub species will get their time in the sun. And the cycle will go on.

But for now, it's devastating. So much is gone that was green only a few years ago; so many big old trees that will take many human lifetimes to replace. And so many potential bonsai trees too.

Mountain pine beetles don't usually attack bonsai-size trees, although there are other pests that do. But the most effective way to control the beetle is to thin the forest through logging. Beetle epidemics thrive in overly dense forests. Once the forest is open again the beetle population will drop.

So the Forest Service has been logging and thinning as much of the remaining forest as they can to bring the infestation to a halt. Although it works, the beetle is currently far ahead and there



Continued By Andrew Smith



is an enormous amount left to do.

In the last couple years I've watched as one after another of my favorite bonsai collecting areas have been logged and then thinned. Rock outcroppings where I have spent many happy years collecting trees for bonsai, and had hoped to spend many more, have now had nearly all the twisted, stunted, little trees removed.

This is a normal part of forest management and I won't complain about it. I have marked the trees on some of these timber sales myself. And the fact that stunted trees are typically removed to allow more healthy trees to grow is what makes collecting those stunted trees allowable in the first place. But I can't keep ahead of the crews and their big skidders who are trying to get ahead of a tiny, tiny beetle. I can only watch as

countless potential bonsai trees get turned to sawdust and pine slash.

From one perspective, if the loggers are able to get there first and thin out the timber, then what remains is protected for the future from the beetles that would likely kill all of it. And that's good. But from my perspective, it's also sad. Either way, so much is lost.

Of course, there are other places to collect trees, and there are other species and techniques to try. Everything changes and we have to change too, like it or not. And new twisted pine trees will someday grow on those same rocks and perhaps be enjoyed and collected by someone else. I hope so. And the cycle will go on.



For now, all we can do is burn a beetle effigy and recognize that we are always in the middle of a changing environment.

Andy



The Next Step—

Advanced Tips & Techniques

By Bjorn Bjorholm

Japanese Maple —Winter Refinement —

As we all know, Acer palmatum is a staple species for bonsai. The appeal of course is that Japanese Maples can be enjoyed year round, no matter the season. The fluorescent green or red buds usher in spring, the full canopy provides a visual sense of relief from the heat in summer, the vibrant reds and yellows of the foliage signal autumn, and (if cared for properly) the delicate bare branches of winter make the effort of creating Acer palmatum bonsai entirely worth the time spent. In my opinion, Japanese Maples serve almost as a barometer for judging one's experience in bonsai. Bonsai involves a level of foresight and patience not prevalent in our other usual daily activities. Thinking 2, 3, 5, 10 years down the road is a necessity in bonsai art, and this is especially true in the training of Japanese Maples.



In future articles, I will discuss the necessary spring and summer maintenance techniques for Acer palmatum bonsai. But in this issue, let's take a look at the winter silhouette refinement process for the species. Japanese Maples have what's known as a bifurcating branch structure, also called an opposite leaf phyllotaxy, meaning that a set of leaves appears opposite (split) each other on a single stem. In April each year, we remove the center bud back to the first pair of leaves on the entire tree. This halts the growth for that year, prolonging the developmental process, but

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year-after-year, we begin to see the results of our efforts in the winter, when our Japanese Maples are leafless. The issue is that, in addition to bud pinching in spring, we must also be consistent in our refinement of the silhouette of our maples in winter. The most

As this technique is performed consistently,



ment.

Our intention in performing this technique is to create a delicate, ramified, somewhat horizontally oriented branching pattern. The delicate pattern is aesthetically pleasing, but there's a more important point to applying this technique to our Japanese Maples. We are focusing here on sustainability, the long-term as I mentioned at the beginning of this article. By being diligent in our application of heavy branch removal each year, we will be able to maintain the relative size of our Japanese Maple bonsai over an extended period of time, while at the same time developing a soft, pleasing, fully ramified branch structure.



I understand that a vast majority of bonsai exhibitions in the US are held during the growing season each year, when Japanese Maples and other deciduous trees are in full leaf, and I think this has been a major contributing factor in keeping bonsai practitioners from focusing on creating more refined branch structures and eliminating flaws in our deciduous trees. In Japan, and many other countries, however, major bonsai exhibitions are held in the winter months, mainly to showcase the efforts of enthusiasts in the creation of deciduous bonsai. In my opinion, it would be great to see a shift in US exhibitions, with more of a focus on winter display. Time, effort, consistency, and foresight are all necessary with developing great Japanese Maple bonsai, so let's shift our focus to the long-term and in the meantime begin developing an outlet to showcase our efforts in the winter months.

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Compromising while Styling a Tree

A lot of times while wiring out and styling a tree, we run out of branches. There is one area that you can or must compromise for a better style—the back. Trees are viewed primarily from the front and then from the sides as we walk up on them. In some cases especially with pines or junipers, we will have an area not having a branch where we need one or in some cases, we have a branch but its not full enough. In order to make the tree look great, it is acceptable to bring a rear branch around for use as a filler even though it may leave a gap in the back—thus we compromise the back area.. Additionally, again in the case of many junipers or pines, we may need to bring a branch down from the top areas to fill in a lower area. This is also acceptable but always try to hide the branch as it comes down with smaller branches.

Guy wires

Guy wires are a very useful tool to hold a branch for long periods of time. Since they are left on for long periods, you should always use a little precaution. Remember, at the point the wire attaches to the branch, there may be a lot of force and you must protect this area. If it's a smaller branch, you can use a piece of rubber or thin tubing. If it's a larger branch and has a lot of force, try using wire as a anchor point on the branch that is being pulled. Use heavy gauge wire and run three or so wraps around the branch in the area the guy wire will be attached just as if you were wiring the branch. Now at the mid point, attach your guy wire to the bottom side of the center wrap. This will spread the force over the wire wraps and not place the force just on the one point of the branch. In some cases, screws or small eye bolts can be used at the bottom or lower anchoring point and will do only do minor damage while in use but, will heal once removed.

Bark removal

After removing the majority of bark from a branch, there is always some in the branch crotches or a thin layer of underlying tissue left behind. I sometimes use steel wool to remove this. Especially on older dry wood. It works as well as sand paper and leaves a soft smooth finish..

Exposed root over rock

When creating a exposed root over rock, as usual, wrap and lay the roots on the rocks in a way that will look good. Next, depending on the amount of "good" roots I will either apply a thin layer of wet sphagnum on top of the roots which will help encourage additional roots or I don't use any sphagnum, placing the roots directly on the rock and then wrap the areas with shrink wrap pulled tight. Of course, you need to insure the roots extend below the wrap and into the soil. Keep watered thoroughly. The wrap will hold the roots firmly to the rock and promote warmth, humidity and great root growth.

If your trees don't have long enough roots or if you want to create an exposed root style, I have developed a means of doing so. I start with 2" PVC pipe or a piece of vinyl gutter down spout approximately 12" long. I place the tube(s) in a nursery container with a couple of inches of soil. Now, I pot small trees into these tubes using a good coarse and open soil mix. Prior to inserting the trees, if I see one major or a strong root, I will eliminate it and attempt to make the roots equal in size and strength. Typically with generous fertilizing and allowing the tree to simply grow, with in one season I will have long roots. The downspout will allow you to use slightly larger material. When creating exposed root styles, after removing the trees and cleaning the roots, I will select the desired long roots. Wire them into a unique shape and then pot the tree with the long roots exposed. This allows you to develop some nice exposed root styles.

Pruning Techniques and Thoughts with Deciduous Species

It will soon be time that many of us will be pruning our trees prior to and after spring growth. Initial or heavy pruning is always a drastic and stressful time for our trees so we should approach it with full knowledge of the specific species, what we are doing and why we are doing it and then always plan a rest period after this work is done. The why is usually clear. When a tree is first styled, we should always have a plan for its future appearance and growth. The initial pruning should include removing if possible, everything that will hinder the future design of the tree. In many cases, we must remove a lot of growth based on its location or more importantly its size in relation to the rest of the tree. I don't want to go into the actual design criteria but I will say the single most important area to look at is taper. Taper is not only important for the trunk, it is also very important when reviewing branches, their size, location and again the taper of each branch. Taper starts at the root base and continues up the trunk, through the entire tree out to the smallest branch on the tree.

Prior to any work, we must know the traits and growth patterns of every tree prior to removing the first branch. Determine if it is actually a tree or a shrub. Trees have strong apex areas and shrubs typically do not. Next, determine how it grows and very importantly how they bud back. For example, a lot of pines will rarely bud back and will never bud back if the foliage on a given branch is totally removed. Most deciduous will bud back to different degrees with some easier than others. On most deciduous, you can remove a branch and it will bud back at the base of the removed branch (if a stub is left) or in the collar area where the branch meets the trunk. This base and collar area contains a multitude of dormant buds in many species. This can all be used to our advantage. If I want bud back at the base, I generally leave a stub approximately twice the length of its thickness. This will allow you to have choices as the new buds emerge. Sometimes a bud on the old branch stub will look better or have a better location than one that emerges directly from the trunk in the branch collar area.

Of course the use of a stub will depend on its location and size. I will mention, when attempting to main-



tain a stub for future budding, I will apply a thin coating of wound sealer to help prevent this stub from dying back to quickly before new buds have a chance to form. Always remember though to go back later and reduce the stub and insure the sealer is removed once it starts to heal. This is especially true if the old branch was growing upward. A new branch on this stub can be used to change the direction towards the area we need and over time, will have more taper. So, when you do remove a branch, consider: 1. leaving a stub for future buds / growth or jin. 2. Leave the collar area for potential budding or 3. Remove the entire area, collar and all and then very slightly create concave area for future healing over of the entire wound. In many cases I prefer to leave a short stub, allow it to die back and then slightly carve it. Part of the overall look of a bonsai is to hide or at minimum, make our work look more natural. Lets face it, most wounds from branch removal will not heal properly or look natural for many years. I prefer a slight carved stub to a unhealed wound even on some deciduous.

In many cases, when I have grown a deciduous tree in the ground for several years, most of the branches are either way too thick or in the wrong locations. In these cases and depending on the species, upon removal from the ground, I totally remove all the branches. Species such as Trident maple or elms will allow this and bud back profusely all over the trunk and at old branch locations. Now, let me back up slightly. When I grow trees in the ground, I do prune them every year but this is done more for basic shape and the elimination of trunk swelling from multiple branches in one location. I also, 3 years prior to removal, "ground" layer all my deciduous trees below ground to totally remove all large old roots and create a totally new fine root system. So, upon final removal from the ground, I typically have a very healthy tree with a very nice fine flat root system that will tolerate this drastic work. The trees are potted in shallow pots, all branches removed and then allowed to grow untouched for the most part all year. The only other thing I watch, is how all the new branches are emerging. Typically most branches will emerge and grow upward with an undesirable angle at the trunk. It is very important at this very early stage when they are very pliable that I gently pull them down with guy wires so the angle they emerge at is at least horizontal.

One of the biggest issues concerning pruning is unfortunately, most do it incorrectly or maybe I should say not enough. The main objective from the very first cut is to build branches and ramification. We must prune back typically farther than we think we should. Here again, think taper. Taper in all branches as they grow outward from the trunk. In order to achieve this we must cut back and build branches from their beginning at the trunk. In a perfect world, a branch should divide and gain taper every inch or so as it grows out. Of course, this will depend on the size tree and size branch but I think you get the idea. In order to obtain this, we must continually prune back removing the larger section of a branch and allowing a smaller side branch to take its place. This is an area where we can see the results of good growth. Trees should be kept healthy but not overly fertilized. Too much nutrient causes fast long growth that we don't need. This is where internode length plays a big role. Long internodes (distance between leaves) does not allow for good taper or ramification. I have seen this on a lot on trees that early on were pushed for fast growth which ultimately have long sections of branches without side growth and no taper. Here is a case where we must prune back even farther to remove these long sections. Take your time building your trees and do not be tempted to push fast growth. In the end, you will be glad you didn't. It may take a couple years longer to build your tree but it will have a better chance of being a excellent tree verses a ok tree. Remember, Bonsai is a journey not an overnight creation, Additional attention needs to take place throughout the year as you trim for shape. Always trim back a little further in than the general outline or silhouette of the canopy allowing for new growth. If you don't, it will add to your work load of continually trimming or the tree will continually gain size and before you know it, it will be larger than planned and at this point, you will need to prune even more.

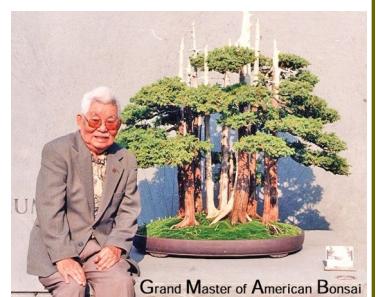
An area of extreme attention will always be the apex area in trees. This is of course the strongest growing area of the tree. This area will continually thicken or lengthen and will require occasionally hard pruning to remove the thick over sized branches. In this area, it is very important to continually prune and in many cases, prune hard every year depending on the species. In some cases, the apex area will become so thick with smaller branches that even the smaller branches will need thinned out. As always, Bonsai is an ongoing practice and a tree is never finished.

Celebrate the spirit of The Honorable John Naka

This coming August 17th marks what would have been John's 100th Birthday. To honor the special occasion, the ABS is producing a one of a kind special **Commemorative edition of our Journal Magazine**. The issue will contain never before seen or heard stories and pictures of John's life in Bonsai.

In addition to this special issue, the ABS will be holding a very special one of a kind auction of one of a kind never before seen **John Naka memorabilia**.

To obtain the issue and be eligible for the memorabilia, make sure you join or renew your membership. Much of this will be for **members only**.



Grand Master of American Bonsai