Developing New Apices on Stump-Collected Bald Cypress

By Randy Bennett

Whether you trudge into the swamp to collect a medium to large cypress stump, purchase one at the Annual GNOBS Auction, or dig one up out of someone's yard (Who does that?!!!), you will typically have a cut like the one pictured below, where the top of the collected tree was removed with a saw.

When cypress stumps are collected during the winter, they rarely have any shoots on the trunk base, particularly if they were collected from the swamp. However, when spring comes, the stump will bud profusely. These buds will elongate into shoots that may grow from a few inches to a couple of feet in length. And there will always be shoots that sprout at or near the top-cut.

The bald cypress used as an example in this article was one that came out of Dawn Koetting's yard. And no, I didn't go on a midnight bonsai collecting trip! Dawn dug it up and put it in last year's auction. I won the bidding and the photo below shoWs the tree the day after the auction. The brown foliage is a result of windburn acquired on the trip from Dawn's house to the auction. However, the tree suffered no serious ill-effects.

The tree was beginning to develop flutes and I thought it might be a good candidate for a flat-top style bonsai. I kept the tree in full sun and kept it thoroughly watered. On February 10th, 2019, the buds began to pop.

Normally, you would allow a collected tree to recover for a couple of years after removing it from the ground. But I am very familiar with bald cypress and was certain it could take another repotting, particularly since I had no intention of cutting any roots and was going to put it back into the same soil. I simply wanted to get it into a training pot, so I could properly determine the front of the tree and begin the process of developing knees.

The photo below shows the tree after carefully removing it from the nursery pot. I made sure that the course potting mix was very wet. This helped to insure that the soil would not simply fall away from the roots. I was delighted to find that the flare of the buttress increased as the upper level of soil was brushed away and the picture shows the side selected to be the front of the tree. The yellow line shows the original line of soil.

The orange line in the photo below shows where the new soil line will be when the tree is planted in the training pot. The red arrow shows where the rootage on the left-hand side of the tree was cut. Although unclear in the picture, new roots had sprouted from the cut.

The tree was repotted into a mica pot. To secure the tree into the new container and ensure that it would not move, once repotting was completed, three pieces of 17 gauge galvanized steel wire were fed through multiple points in the bottom of the mica pot. A mound of the current soil was placed in the bottom of the container and the root mass was pressed on top to help insure a lack of air pockets.

Once the tree was in place and the newly selected front properly positioned, three wood screws were partially screwed into the base of the tree below the future soil line with a cordless drill. The location of the screws was determined by selecting woody material under the surface roots that corresponded with the steel wire that had been inserted. Two ends of the same piece of steel wire were then twisted together on top of one screw. The same procedure was performed with the other pieces of wire and screws.

Once all three wires were snugly in place, they were tightened once again with pliers. The screws were then snugged up against the base of the tree with the drill. This ensured that the tree would not move once repotting was complete. Making sure that a newly potted tree cannot move is a critical step for good root growth. If a tree wobbles in a pot, wind, animals or simply moving the pot to a new location can break and damage newly forming roots. This can cause a tree to go into shock or even kill the tree.

Steel wire was used because aluminum wire stretches and can easily break when tightening. Although not to the same degree, the same holds true for copper. The screws will not harm the tree.

Once I was certain that the tree would not move in the pot, it was time to select a new apical shoot and properly carve the top-cut to ensure proper healing and taper. The diameter of the top-cut was two inches. Scar tissue and thick, heavy callouses are not attractive on a bonsai. They must be kept as inconspicuous as possible. So how do you do that with such a large cut?

To keep the round shape of the trunk and enable callous tissue to form smoothly and quickly, rather than make a straight, slanting cut, a **slanting convex** or rounded cut is required. Looking at the front of the tree, a shoot in the center, near the top was selected to become the new apex. The yellow arrow in the photo above shows the shoot that will become the new apex and develop a continuing line of taper in the trunk line.

The first step was to remove the bulk of unwanted woody tissue in back of the future apex and trunk line. To do this, a root cutter was used, always being mindful to not prune into the convex shape that was being developed. Once all the material was removed that could comfortably be cut away with the root cutter, a Dremel tool with a sanding drum attached was used to create a smooth surface and finish creating the slanting convex surface that was

needed. And for those of you who have been told that I must own stock in Dremel, it is not true (although I wish I did)!

Once a clean, smooth surface was created, cut paste was applied to seal the wound

After sealing the wound, the next task was to carefully wire the new apex upward, in line with the trunk. Next, any point on the trunk that had two shoots emanating from the same point, one was removed, including the one at the base of the new apical shoot. If these double-shoots were located near the top-cut, the weaker shoot was kept. On double-shoots at the lowest locations, the stronger of the two was kept. Finally, all of the shoots on the trunk were reduced in length, with the higher shoots cut shorter than the lower shoots. This was done to help equalize the strength of these shoots.

All of the current shoot-tips contain auxins; growth hormones that the tree deposited there in the fall. By reducing their concentration, you force back-budding and, more importantly, the accelerated growth of those shoots whose tips you did not prune – namely, the new apical shoot.

Most will be removed next winter, but all will be kept for now to help the tree regain strength. It must seem contradictory to severely cut back shoots while saying that you want the tree to regain its vigor. But you must remember that, although you want the tree to regain strength, you do not want the lower branches to become excessively large. You are trying to force as much energy and growth as possible into developing the new apex and develop the taper in that shoot. So the bulk of new growth must be forced into that region.

The above photo shows the tree with this winters' work complete. The buttressed base at the soil line is 9 ½ inches in diameter. The height of the tree at the top-cut is 30 inches. The finished height of the tree is anticipated to be about 46 to 48 inches.

NEXT STEPS

The tree was placed in a plastic mortar tub. The tub was then willed with water. The height of mica pot and soil is slightly above the rim of the mortar tub. That way the mortar tub can be kept full of water without inundating the soil surface. This is the method I use for growing cypress knees. But that is a topic all unto itself. I will provide a follow-up article on growing cypress knees.

I will begin a fertilizer regimen in March, after new growth has hardened off. The apex shoot will be allowed to grown unchecked for at least two years. By that time, it will be past the roofline of the house. Cypress will typically grow 2-3 feet a year! During that time, I will keep the lower growth pruned short to force as much growth into the apical shoot as possible.

It will take about two years for the newly created convex top-cut to completely callous over and heal. Larger diameter top-cuts will naturally take longer. In two to three years, I will cut back the apex shoot and begin development of the flat-top structure.

Below is a photo of another cypress where the convex stump-cut method was used on the back side of the tree. The slanted, convex cut was over 3 inches across and 5 ½ inches vertically. It took 3 years to completely seal the wound. You can see the small ridge in the center where the two edges of callous tissue eventually met. Hopefully, you can see how smoothly the callous tissue formed using this technique as opposed to the thick roll of tissue typically formed when using a straight or concave cut.

Below is the same tree from the front. This photo was taken in January of 2019. You may also see a few of the knees that were developed. This tree was clearly not grown in the flat-top style, typical of bald cypress. I grew this tree to illustrate a traditional formal upright bonsai style. Like Chinese elm, Japanese maple, trident maple and so many other species, bald cypress are as easily adaptable to traditional bonsai styles as they are the natural forms in which they grow.

Below is a better shot of the knees that developed. This photo was taken in the spring of 2017.

It is my intention to follow up with future photos and information as I develop my flat-top bald cypress. I hope this information proves helpful.