

# Bald Cypress as Bonsai (Part 1)

## (General Information About the Species)

By Randy Bennett

*The following is the first in a series of articles on bald cypress as bonsai.*



**Vaughn Banting's famous bald cypress bonsai**

What species of tree could be more iconic as subject matter for bonsai in the deep south than the bald cypress? We all appreciate their beauty and majesty. Whether you admire it as a mature specimen in a suburban neighborhood or while driving along I-10 through the swamp, the bald cypress is a beautiful and unique species.

### **Some Atypical Characteristics of Bald Cypress**

One of their unique characteristics is the upper canopy, which broadens and flattens out as they mature, often referred to as “flat-top” cypress.



Another unique feature of bald cypress is the fluted and buttressed base that they develop as they begin to mature. While this characteristic will develop in landscape specimens, it is much more pronounced in the swamp. The fluted and buttressed bases will begin to develop in trees when they are fairly young – about 10 years of age. The buttressing will increase with age and the degree of fluting multiply as well during the first 20 to 30 years of growth.



Bald cypress are best known for their characteristic “knees” that often develop in the landscape as well as the swamp.



But before we get into bald cypress as bonsai, I think it important to relate some general information and facts about this unique species. Bald cypress (*Taxodium distichum*) is a deciduous conifer native to the swampy areas of the southern United States. The trees grow straight and tall, reaching an average height of about 100 feet, though some may get as tall as 150 feet.

Although there are exceptions, which I will discuss later, it takes about 100 years for a bald cypress to mature and reach 100 feet or so in height. After about 200 years, it will have reached its maximum height and will have developed a fully mature flat-top shape with minimal branches underneath the canopy and a typical diameter of about three feet. Most of the lower branches will have been sacrificed in the swamp forest environment in favor of the flat-top canopy. That canopy acts like a giant solar-panel.

They live, on average, about 600 years, though few of those ancient giants exist today. There have been cypress discovered that were about 1,200 years old, but that is exceedingly rare. Those that do are much larger than what we typically see, such as the one pictured below. It is believed that the tree pictured below is actually two bald cypress that grew together. Or, perhaps it was a twin trunk cypress to begin with. Such trees were passed over by logging crews as defective since the trunk is not entirely straight. Bald cypress were heavily harvested in the south for lumber and few grand old specimens exist today. When trees are harvested for lumber, the stumps will sprout as long as the trees were less than 60 years old. After 60 years, they are loathe to begin again.





Only a handful of such specimens still exist.

Bald cypress are known for yielding lumber that does not rot. However, this is only true of mature trees. It takes many years for a tree to develop enough of the rosin to prevent the wood from rotting. But trees cut 200 years ago that sunk in rivers, swamps and lakes as they were being taken to mills are highly prized today – when they can be found. These “sinker cypress” show little to no rot after a hundred years of being submerged under water and lying in the mud.

The leaves (needles) of the bald cypress are small and frond-like, usually hanging down and measuring from three to six inches in length. They alternate along shoots and in bonsai culture, leaf length can be reduced to about an inch to an inch and a half when proper pinching techniques are applied.

The taxonomy of the *Taxodium* genus is highly debated. There is a similar cypress, called the pond or upland cypress. It is smaller and more prevalent in the southeastern part of the United States. It is classed as *Taxodium distichum* var. *imbricatum* and sometimes may be classified as *T. ascendens*. The pond cypress is virtually indistinguishable from the bald cypress until you look at the foliage. The leaves of the pond cypress are more thread-like in appearance. In Georgia and Florida particularly, you can find numerous areas where the bald and pond cypress have hybridized, yielding characteristics of both species. The other cypress that is closely related to the bald and pond cypress is the Montezuma or Mexican cypress (*Taxodium mucronatum*). It is native to the southwestern part of the United States, Mexico and Guatemala. It is even shorter when mature and has leaves that are much shorter as well. Its cones are larger and it rarely produces knees, even when growing in very wet environments.

The seed cones of the bald cypress are green and globular in shape, averaging about an inch and a half in diameter. Each cone can hold anywhere from 2 to 32 seeds, but they typically average about 16 seeds per cone.



## **Pests and Diseases of Bald Cypress**

### **Galls**

One thing people often do is to confuse seed cones with galls. The photo above shows the globular-shaped seed cones and the photo below depicts galls.



Seed cones form at the end of branches while galls form on leaves and are much smaller. Galls on your cypress are nothing to worry about. They are caused by an insect called the cypress gall midge. The female midge fly will lay her eggs at the tip of a shoot before it opens. Then, as the leaf opens and elongates, the leaf cells encapsulate the eggs, forming the gall. The galls are usually small, about the size of a dime or nickel. Once the eggs hatch inside the gall, the larvae feed on the gall tissue. The larvae pupate into new cypress midge flies, which hatch from the galls in November when the galls turn brown and fall from the tree.



The best way to deal with this problem on your bonsai is to simply remove the gall by pinching it off of the leaf and throwing it away.

### **Cypress Beetles**

The cypress beetle is a very small insect whose body is covered with dark markings and has a yellow head. They are about the size of a small ant. They will usually attack trees near the apex, feeding on new leaves. More often than not, they do minimal damage to a tree. However, if you encounter them on your bonsai, treat with an insecticide labeled to be effective on cypress beetles.

### **Mites**



There are two different types of mites that feed on bald cypress. The spider mite and the rust mite. Both have very sharp mouth parts. They will use these to pierce the leaves and drain them of fluids. As the fluids are consumed, the leaves become pale and turn yellow.

If you have yellowing foliage, you can determine whether or not mites are the cause by taking a sheet of white paper, holding it under the yellow foliage, then tapping the foliage with your hand. Mites are barely visible with the naked eye and rust mites are so small that you will need a 10X magnifying glass to see them.

If you determine that you have mites, avoid using an oil spray and opt for a miticide such as dicofol or kelthane. Bald cypress are sensitive to dormant oil sprays and summer oil applications. Do not use oil sprays on bald cypress. You can also use any of the insecticidal soaps available.

### **Chlorosis and Not Enough Water**

Other causes for yellowing leaves may be chlorosis or insufficient watering. Some people growing bald cypress as bonsai forget where they are most happy – in the swamp. We think because we are growing them as bonsai that they need to be in your typical bonsai soil. While they can certainly thrive in such a soil, we forget how quickly bonsai soil dries out and insufficient watering can cause the tree to go into stress with the result being the yellowing of foliage. Make sure that the soil in which your bald cypress bonsai is growing stays wet, or at least damp. Do not let the soil dry out.

Chlorosis is caused by an iron deficiency. And guess what the main cause of that happens to be – poor soil that lacks proper nutrients. A secondary cause can be the trees' inability to absorb the nutrients it needs. Chlorosis on bald cypress occurs on new foliage rather than foliage that already exists. As the new growth emerges, it is distinctly yellowed and is usually stunted in growth. The simplest solution is to add coffee grounds or peat moss to your bonsai soil. Both will increase acidity (which bald cypress love). And remember, you will not create a problem by adding either of these ingredients to your existing soil since bald cypress thrive in very wet



conditions. Another option, though with only short-term results is to treat the soil with a soil acidifier or chelated iron.

### **Blight**

Bald cypress can be affected by several forms of needle or leaf blight. All forms of “blight” are fungal problems. You can recognize it by brown to black spots on the foliage and even on young branch shoots. Twig blight is typically caused by a lack of water. Are you seeing a pattern here? Twig blight can be made worse by exposure to direct sunlight or low temperatures. If you are experiencing twig blight, move your cypress to a shady location and give it plenty of water. You should prune away any branches that are infected. Make sure that the infected branches are disposed of, then place your pruning tool in a solution of 1 part bleach and nine parts water for about a minute. You can also use Lysol spray for disinfecting your tools. For leaf fungus, use any of the fungicides recommended for use on bald cypress.

### **Fall Webworms**



Fall webworms are caterpillars that hide in the bark, you will know they are present when you see a web over the bark and/or foliage. The adult form is a moth that is white in color. She lays hundreds of eggs on the underside of cypress leaves. Once the eggs hatch, the worms can do a lot of damage in a short amount of time, so when you see evidence of them, you will need to treat infected areas with an insecticide for caterpillars. However, before you treat, you will need to remove the webs. The webs repel water and so, if not removed, the insecticide may simply run off of the infected area without harming the caterpillars.

### **Bagworms**





We have all seen bagworms. A bagworm is a female caterpillar that lives in a bag that it builds out of plant debris. She lays her eggs in the bag and they hatch in the spring. As the larvae leave the bag in spring, they form their own bags, slowly moving about the cypress feeding on the foliage. Because they are so clearly visible, the best way to deal with them on your bonsai is simply to remove them by hand and drop them in a bucket of soapy water.

### **Scale**



Bald cypress can also be susceptible to scale. The small, brown, dome-shaped scales will form on twigs and young branches in the spring. They will sometimes form on leaves as well. Most treatments recommend using an oil spray to kill them. However, since cypress are not tolerant of oil sprays, the best method is to simply remove them with your fingernail. If you check your trees daily, you can eliminate them before it becomes an all-out infestation.

### **Soil Requirements**

Bald cypress require a soil that is acidic and at the very least, neutral. They will not survive in an alkaline soil. They will adapt to soils with a wide range of components, but are happiest in soils with a great deal of organic matter. You can find bald cypress growing in many parts of

the country and in a wide range of soils. They do not require wet soils to grow. They can grow in heavy, clay or mucky soils. But they will also grow in compacted, garden-like loamy soils and even drier, sandy soils. This speaks well of their adaptability. But.... look where they grow in nature. And where do we find the most healthy, long-lived specimens? The soil and environment of the swamp.

The “soil” in the swamp is composed of thousands of years of decayed leaf matter and trees that have died and rotted. Their roots are under water most, if not all, of the year. They thrive in these conditions.

In bonsai culture, they adapt easily to a 50/50 mix of organic and aggregate material, as long as they receive adequate water. I grow my cypress in Miracle-Grow Potting Mix, with no aggregate. I feel it is vital that the roots stay wet. I also will set smaller bald cypress bonsai in trays or tubs of water during the hottest months, with the rim of the pot slightly above the level of water. When cypress are not getting enough water, you will see browning of the foliage, indicating that the tree is under stress.

It is not my intent to criticize the soil mix used by anyone growing bald cypress bonsai. I am only relating what I do and why. Can they grow and be happy in bonsai soil mixes? Certainly!... as long as they get enough water. However, I don't want to put my cypress under unnecessary stress in the heat of summer and I am interested in growing cypress knees and keeping them in scale with the tree.



I'm not talking about bending small roots in half, wiring them together and extending them above the soil surface to simulate a knee. (This actually occurs naturally among certain species and is called a "looping root".) I'm talking about actually growing cypress knees. I do not know if anyone else has successfully grown cypress knees in bonsai culture. I would assume there are others who have done so. I have simply never seen anyone write about it. I will elaborate on the method I use to grow knees in Part 5 of this series.

## **Light Requirements**

Bald cypress like exposure to full sun. However, keep this in mind; more shallow pots means that the soil heats up and ceramic containers can become hot to the touch in full sun. Both of these factors can cause roots to become hot as well. This can affect their function and can inhibit the transport of moisture and nutrients. The result is that the entire tree becomes stressed and visibly manifests itself in the browning of the foliage.

If your cypress shows signs of stress, you have several options: move it into the shade, cover the soil surface with wet, long-fiber sphagnum moss, increase misting, increase the amount of water it receives, or all of the above. Remember, you cannot overwater a bald cypress!

