

Tropical Bonsai

Why Tropical Bonsai?

I like bonsai trees - not just the horticultural and styling aspects but being able to display them regularly in my home. I try to have at least one bonsai tree in my dining/living room every day. In my opinion this is why one grows bonsai trees.



Figure 1: A display of tropical bonsai. Clockwise from top: *acacia galpinii*; *ficus natalensis*; *ficus burtt-davyi*; *ficus burtt-davyi*; *ficus burtt-davyi*

more than a short time. For more prolonged periods re-acclimating such bonsai trees is a rather protracted process involving a gradual lowering of surrounding temperature.

Many of my bonsai friends keep their trees in their gardens only to be enjoyed when one ventures outside. Although this is certainly a pleasure, their individual trees are not always fully appreciated unless they are part of an exhibition. Furthermore, venturing out is somewhat restrictive if you live in an area where the weather is not always sunny and winters mean freezing or below freezing temperatures. Such winter conditions inevitably mean that indigenous bonsai trees, which require a dormant period, must be protected in some fashion. In other words, they certainly are not left in their usual garden display areas and care must be taken if they are brought into a heated area for

Tropical bonsai trees are different in this respect. They must be brought indoors as outdoor temperatures fall. Although some tropical bonsai will survive near freezing temperatures for a very brief period of time (usually less than an hour), I generally like to bring my tropical bonsai indoors when the nightly temperatures fall regularly below 50 degrees F. In my greenhouse the temperature always remains above 50 degrees F. Bringing one of my tropical bonsai into the living/dining room (which is kept at a higher temperature) for a day or two presents no problems even in the middle of the winter. I, therefore, am able to enjoy my tropical bonsai indoors all year round. Also, I find that displaying individual bonsai trees in this manner gives me a chance to evaluate the present styling. Adjustments that need to be made become more apparent. Furthermore, I am also able to work on my tropical trees the year round.

Lastly, I am often told that growing tropical bonsai is not easy and keeping them alive over the winter is difficult. In fact, many good growers of indigenous bonsai that I know have told me that they are unable to grow any kind of indoor tropical bonsai. Let me address this. If you can grow indoor house plants you should with little effort be able to grow indoor tropical bonsai. It is not much more difficult. In the following sections I will try to describe as simply as possible the care and maintenance of some tropical bonsai trees.

Care and Maintenance of Tropical Bonsai Trees

Ficus Bonsai Trees

There are more than 800 varieties in the Ficus (or fig) family - most of which are classified as tropical or subtropical. Quite simply this means, for the most part, they prefer temperatures in the range from 60-90 degrees. For temperatures somewhat outside of this range they will survive but not indefinitely. In particular, the figs I grow as bonsai will not survive temperatures around freezing for more than an hour or so. Only when the temperatures remain above 50 degrees can they be placed in outdoor growing areas. The rest of the time they must be kept indoors - preferably in a sunny area away from drafts and direct contact with window panes. Most ficus bonsai when acclimated to the outdoors prefer areas of maximum sunshine. It is worthwhile to note that when moving ficus bonsai from indoors to outdoors they

should be gradually acclimated to the increase in sunlight to avoid burning or scorching of the leaves. Although this is not always a serious problem for ficus bonsai, since burned leaves can simply be removed and will be replaced by new foliage, it does stress the trees. Alternatively, when figs are brought inside, the reduction in the amount of sunlight quite often leads to a yellowing of some of the foliage and a partial leaf drop.

Most ficus bonsai require a well draining soil or potting mixture. Any good bonsai soil mixture will usually do but under no circumstances should they be potted in a commercial potting soil mixture. These mixtures are intended for potted house plants - not bonsai trees - and if the trees are over-watered, root rot will inevitably occur which if not treated immediately will lead to the demise of the tree.

Potting small ficus trees in large pots will stimulate growth and lead to increased mass in both the trunk and the branch system. As figs grow in an apically dominant manner (they grow the most at the apex of the tree), if care is not taken to curb this growth by frequent pruning the resulting bonsai tree will be unbalanced and top heavy. A good and well balanced bonsai tree should have a nicely tapered trunk with the strongest and thickest primary branches nearest to the base of the tree. The taper in a fig tree's trunk is attained by continually letting the tree grow and then cutting it back. Furthermore, the same methods can be used to develop primary branches with a taper. The shape or silhouette of the tree is maintained in this way. One of the problems with growing figs in this manner is that they do not develop surface roots if the growing containers are deep. The roots of the fig tree, in this case, simply grow downward until the bottom of the container is reached. To develop good surface roots (or nebari) a shallow growing container should be used.

One of the most difficult aspects of the cultivation of bonsai trees is to learn how to water your trees. A good rule of thumb is the following: never try to control the amount of water your bonsai tree receives when you water but rather control the frequency of the watering. In other words, when you water your trees, water them well until the water runs out of the bottom of the container and then let them dry out before watering again. In mid-summer when the daily temperatures are the highest, with the bonsai soil mixture I use and sell, I water my trees once a day. In the spring and fall depending on the temperature, I water every second or third day gradually tapering off the watering to roughly once every 5-7 days in midwinter. One of the reasons for this is that these figs (*ficus natalensis*, *ficus burtt-davyi*

and *ficus sycomorus*) are indigenous to southern Africa. (Because of their leaf size, of the three, *ficus burtt-davyi* requires the least amount of water and *ficus sycomorus* the most.) In the regions where they are found, there are essentially two seasons - a summer season during which it rains and a dry or winter season where little or no rainfall occurs.

I prefer to water in the early morning. Should it rain, do not water. Some care must be taken. If the leaves on a fig begin to show signs of wilting, it should be watered immediately and the watering frequency should perhaps be altered, particularly if this is a persistent occurrence. Adjusting the frequency of watering is not an easy thing to master but it is extremely important as the demise of many bonsai trees can be directly attributed to over-watering. During the winter when figs are kept inside, a simple way to water is to fill the kitchen sink with water until it reaches almost to the top of the container in which the trees are kept. Let them soak until the surface soil is wet. Remove from the sink and drain until the water stops flowing, and return to their indoor growing area.

Centrally heated homes are usually quite dry. A humidity tray is great way to increase the humidity in the microclimate around your trees when they are indoors. Frequent misting of the foliage is very beneficial but should not replace watering of the roots.

As the bonsai potting mixture I use for my figs has roughly a 35% (by volume) organic content, I fertilize regularly. Any commercial plant fertilizer with the roughly the following ratio of the macro elements 3(N):2(P):3(K) with additional micro elements is more than sufficient for use during the spring and summer. I usually recommend fertilizing once every 7-10 days with one half the recommended dilution. In late summer and in the fall, use fertilizers with a much higher potassium(K) content. The higher proportion of potassium aids in wooding up new growth. Again half strength, but every 14 days is more than adequate. In the winter about once every 4-6 weeks with the high K fertilizer.

Microelements are of particular importance to the health and vitality of any bonsai tree. If necessary, supplemental applications should given particularly if the foliage of the fig loses its deep green luster.

Frequent fertilization leads to a build-up of soil acidity and therefore it is important that the trees be re-potted at least every 2 years. This should be done in the spring or early summer. Before re-potting, it is a good idea to let the potting mixture dry out for a few days. Removing the tree from its pot and gently tapping it on the table will result in most of the potting mixture

falling away from the roots. The rest can be removed with a chop stick. If a less porous soil mixture has been used, the old soil can be washed away with a hose. Figs generally develop a robust root system and at least 1/3 of the roots can be removed without causing harm to the tree. Always remove the larger non-surface roots rather than the thin fibrous feeder roots. When re-potting a bonsai tree, the new potting soil should be worked into the root system with a chop stick to eliminate large air pockets. If these fill with water, root rot may occur.



Figure 2: A small Natal fig bonsai tree. Note the small leaves which are the result of years of leaf pruning.

prematurely become leaves, hence the leaf reduction. With a healthy fig the largest leaves can be removed every week or two during the growing season. Removing in this way no more than 30-40% of the foliage, is less stressful in my opinion than a complete defoliation once a year. In order to maintain the shape of *ficus* bonsai trees, it is usually necessary and recommended to remove the growing tips at the ends of the branches. This will also force back-budding on the branches and ultimately lead to better overall ramification. Complete defoliation of areas of enhanced growth is a simple method to slow down the growth in these areas.

Figs, particularly *ficus burtt-davyi*, are susceptible to infestations of armored scale. These tiny black scales are easily removed by hand. The infected trees should be isolated and immediately treated with Bayer Advanced Tree and Shrub Protect and Feed Concentrate or something similar.

One interesting thing to note is that these varieties of figs will let you know if they are not happy with their growing conditions. They will self defoliate and almost overnight you will find that there is virtually no foliage left on the tree. The most common cause is prolonged over watering although the

The periodic removal of leaves from a bonsai tree (leaf pruning) is used to reduce the size of the foliage and to control growth. It should not be undertaken on trees which are not in the best of health. Note that of the three aforementioned fig varieties, *ficus burtt-davyi* has the smallest leaves while *ficus sycomorus* has by far the largest. Removing the largest leaves from a healthy fig bonsai results in the production of new leaves which are smaller in size. Buds which were meant for the next growing cycle

tree should be checked thoroughly for any type of infestation. If there is no apparent infestation and the potting mixture appears to be wet, let the tree dry out before watering again. Adjust the watering frequency accordingly and do not fertilize until new growth begins to appear.

Acacia Bonsai Trees

My acacia bonsai trees remind me of southern Africa. Both *acacia galpinii* (monkey thorn) and *acacia burkei* (black monkey thorn) are indigenous to this area of Africa and are some of the most common trees found there. *Acacia burkei* have individual leaves which are round while *acacia galpinii* are more elliptical. In spite of their generally poor surface rootage (nebari), both develop mature flaky bark quickly. Care must be taken when re-potting to keep as much of this bark intact as possible. The absence of good nebari is due to the fact that they develop a strong tap root which must be systematically eliminated when grown as bonsai. Initially they must be grown in deeper pots to accommodate the tap root. Removing a portion of the tap root and re-potting in a shallower pot will ultimately result in an acacia bonsai acclimated to a bonsai pot whose depth is in proportion to the size of the trunk. Roots must, however, first develop underground. Raising the tree in the container when re-potting exposes potential surface roots.



Figure 3: An *acacia galpinii* group planting which can be enjoyed year round.

Acacias are tropical bonsai and as such will not survive temperatures around freezing for more than an hour or so. Hardier than figs, they still must be kept indoors until the daily temperatures remain above 50 degrees. Unlike figs they lose most of their foliage in the winter.

Acacias, as figs, prefer a well draining porous potting mixture. I use the same potting mixture for both figs and acacia bonsai and re-pot every 2-3 years. Again as in the case of figs, they should be watered well once a day during the growing season. In the late fall and winter the watering should be tapered off to once every 5-7 days. Acacia trees in nature do not require much water in the dry dormant season and care should be taken

not to over water them when they are brought inside for the winter. They should be fertilized in same manner as figs but no fertilizer should be given in the dormant winter months.

In the spring after the first buds appear, acacia trees grow profusely, often developing large shoots in a relatively short period of time. Care should be taken to prune back unwanted growth. When pruning, never prune back to the stem of the leaves but rather leave a small stub which can be removed after the new growth appears. The new buds are usually located at the base of the leaf stems and care should be taken not injure them. Multiple leaves occur on each leaf stem and these can be reduced by regular leaf pruning.

My acacias do not seem to be particularly prone to any type of infestation. In the fall, when I have brought my trees into the greenhouse, I generally drench everything with Bayer Advanced Tree and Shrub Protect and Feed Concentrate.