The Art of Bonsai

By Eugene Howell

This is the second part of an article on leaf reduction. In Part-One we learned that if a plant loses all its leaves during the growing season, it will replace them with new ones, but these will be smaller than the original set. This will occur on a plant whether it is deciduous or evergreen. Thus we have one bonsai technique for reducing leaf size; complete defoliation of the tree. When the leaves are removed the plant maintains life by using its stored food, so completely defoliating a tree too frequently is not recommended unless one happens to live in a subtropical area (Florida). In temperate parts of the country it is recommended that defoliation be done only once each year because the plant must be given enough time (with leaves) to store enough food to get it through the winter. In Florida our evergreen trees do not go completely dormant and deciduous trees are dormant for only a few weeks, at most. So a large store of food is not necessary. Thus, here in Florida defoliation can be done in late Spring, and again in late Summer.

Although some bonsai hobbyists defoliate by plucking the leaves from the plant (by far the fastest way to do it), if you want the most number of leaves to grow back, you should use bonsai scissors and cut each petiole (my least cherished bonsai task). When the leaves are plucked, many of the buds at the bases of the petioles are damaged and do not develop into a new leaf. When the petioles are cut with scissors, few, if any, of the dormant buds are damaged and a maximum number of leaves are replaced by new, smaller ones.

The next method of leaf reduction is a good bit less labor intensive than the one just described. In this second method we once again take advantage of our knowledge of botany.

From the discussion in the first part of this article (from last month) you know that the meristem cells at the tip of a small branch are dominant. As previously discussed, when the tip is removed the dormant buds will come out of dormancy. A second thing that will happen is that the leaves left on the branch after the tip is removed will be frozen at the size they are when the tip is removed. This means that you can freeze the size of the leaves on each branch at just about any size you wish. The trick is to examine the tree often enough that you can catch all the leaves before they grow too large (and this is tough to do). This requires almost daily observation in quite a bit of detail.

However, there is a fly in the ointment. We have frozen the size of the leaves on the branch by removing the tip, but when the tip is removed the dormant buds come out of dormancy and some begin to develop into new branches. As the new branches grow, any leaves further down the old branch will have a tendency to grow in size as the new branch grows (thus erasing the miniaturization effort). So what do we do about this little twist? You must do the same thing (tip removal) to the new branches before the leaves on the older branches get too large. You can see why I say that close observation of the plant on a daily basis is needed.

The third method of leaf reduction is the easiest of all. First you pinch the tip of each branch and then simply cut off the largest leaves (keep the smaller ones). As new leaves grow, continue doing the same thing. This cycle never ends, but after a few weeks, and a cycle or two, the tree will be covered with smaller leaves and any that get too large will be readily apparent. To make this technique successful you obviously must be observant and look at the tree each day. What you don't want to do is ignore the tree after having developed smaller leaves. If you do, then when you finally get around to inspecting it you will find that once again it will be covered with large leaves.

We see that there are three good methods of accomplishing leaf reduction. One is labor intensive but does not require constant vigilance, one requires much less labor, but does require daily inspection, and the final one requires only moderate labor and attention. One of these should fit your personality, so don't be one of those who must think up excuses for why the leaves on their tree are too large.