

The Art of Bonsai

By Eugene Howell

We all want to have healthy bonsai that look as good as they possibly can. To get to this point with a tree there are some things that need to be done annually and others that should be done only every few years. Whether it is an annual job or one of the not-so-frequent ones, there are times that are better than others in which to do the work.

We have all heard that the best time to do major branch pruning and root work on deciduous trees is when they are dormant. This raises the question of “what is dormancy in a tree?”

If you go to a horticulture dictionary you will learn that dormancy in a plant is “a resting phase; a state of temporary cessation of growth and slowing down of other activities in whole plants”. In this phase transpiration almost stops, production of food stops, and leaves turn color and eventually drop (in deciduous trees). The only part of the tree that stays fairly active is the root system. During this period the roots take the opportunity to continue some development.

Interestingly, the only way to research dormancy in plants (When do they go dormant?; When do they come out of dormancy?; What causes dormancy in a particular species of plant?) is by observation of the particular species as it does these things. Each species of plants has its own unique combination of environmental conditions that cause dormancy. To complicate the matter, within a species each plant will have a slightly different set of conditions that cause its dormancy. So what you may wind up with is two bonsai of the same species, one of which goes dormant as much as two or three weeks earlier than the other one and comes out of dormancy with a similar separation in time. I happen to have two Bald Cypress' that do this. When I wrote this article last year we were within 4 days of Christmas and one of them had been fully dormant for at least three weeks. The second one, on the other hand, was still covered with bright green growth, some of which was not more than a month old. These two plants sit side by side so they get identical light and temperatures, yet every year this happens. The one that goes dormant first is also the last one to come out of dormancy in the Spring.

The subject of dormancy in plants is one that has been of keen interest to researchers since before the beginning of the 1900's. There is an annual International Symposium on Plant Dormancy that takes place so researchers from around the world can exchange findings on the subject. The reason dormancy is of such great interest to scientists is that if various food crops can have their dormancy characteristics changed by even small amounts, the ability to feed the world's masses is greatly increased. An excellent book on the subject is Plant Dormancy: Physiology, Biochemistry, and Molecular Biology; the only problem is that even as a used book, it typically sells for around \$148.

So what causes dormancy and when can it typically be expected to occur? With this teasing question we will continue the discussion next month.