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Bud Nipping

It is spring time, and consequently a great time to pay attention to controlling all that vigorous plant growth. It is also a good time to refresh our minds about what we are attempting to achieve with our miniature trees. I am going to “borrow” some explanations from what I believe to be one of the finest books on bonsai, *Understanding Bonsai* by Pieter Loubser (ISBN 0-908387-65-2).

To increase the impression of age we try and make the trunks of our trees thicker in proportion to the height, and we also try and reduce the size of the leaves. The side branches are thick close to the trunk but rapidly become narrower with secondary and tertiary branches that support the leaf clouds. The process of thickening the branches and shortening the internodes (the spaces between the nodes or shoots) is called “compression”. Compression is that magic quality that makes a viewer say “Wow!”.

Almost everything we do with our trees is intended to increase compression, but one of the most efficient in this respect is nipping the buds. The process is quite simple. The new shoots are simply squeezed off between thumb and forefinger. Timing the operation is a bit more tricky, and is best explained by studying what actually happens when one nips the buds.

The secret lies in the auxins. Remember auxins? I wrote about them about a year or so ago. Auxins are growth hormones that are produced by the very tip of a shoot called the terminal bud. They are responsible for making plants grow in length. When the buds are systematically nipped off, the auxin factory is removed. The absence of auxins allows other growth hormones called Cytokinins to make the plant grow in width. New shoots should be left to grow until they have fully developed their first set of new leaves and the second set has nearly developed. The first set of leaves is always smaller than the second set. The bud is then nipped off, leaving just the first set of smaller leaves. Soon new shoots will develop from the two remaining leaf nodes. They should also be nipped in the same way.

Because the tree now has many more leaves, it produces smaller leaves to reduce water loss, and to keep the total leaf surface area constant. There are two things to be aware of. Sunlight eradicates auxins. The more sunlight a tree receives, the fewer the auxins, resulting in better compression. Make sure your plants receive as much sunlight as possible at all times (without getting sun-burnt off course).

Secondly, remember that whatever the plant does above the soil, is mirrored by the roots below the soil. As one nips the buds to create good compression and ramification (the fine network of leaves and twigs that form the leaf pads), the same needs to happen with the roots. If your soil is coarse enough and drains well, this should happen automatically. As the fine root hairs encounter stones they butt up and branch out creating their own ramification, but this root growth needs to be controlled by yearly trimming when repotting.

Lastly, nipping the buds forces a tree to use its reserves to combat your “damage”. Bud nipping on trees which are not healthy is not advisable. Also bud nipping must be done on newly formed shoots, and therefore should only be done in spring to give the tree time to recover before winter.

