



The Most Livable
City in America

Harmful Pruning Practices

Pruning is permanent and once done cannot be undone. Pruning impacts a tree for its entire life. There are many reasons a tree may need to be pruned but all pruning should be evaluated with the health and safety of the tree in mind. Improper pruning will weaken a tree, can shorten its life, and reduce its aesthetic value. Proper pruning reduces the hazard a tree may present while improper pruning can actually increase a tree's potential to become hazardous.

Over the years many commonly accepted pruning practices have been determined to be detrimental to tree health.

Pruning to Raise the Canopy

Canopy / Crown raising

Foliage and branches grow where they can acquire sunlight to support tree growth and development. Raising the crown or canopy of a tree only serves to reduce photosynthesis and weaken the development of taper (trunk) growth in response to wind stress. Done correctly, appropriate canopy adjustments are justified to provide clearance for obstacles and safety.



Lions tailing

The worst form of canopy raising occurs when all limbs are removed except the few remaining at the top of the tree. The remaining limbs and foliage are referred to as a "lion's tail". This process reduces photosynthesis, creates significant wounding and disrupts the tree's ability to move with the wind and build taper to support the remaining foliage. This practice is extremely damaging to a tree and should always be avoided.

Pruning to Reduce the Height of the Canopy

Trees should never be reduced to a size that is not typical for its species, variety or cultivar characteristics. If a tree is too big for its location, we recommend removal and replacement with a species that matches the needs of the site and the homeowner.

Topping

Topping refers to the indeterminate removal of branches and limbs to reduce the height of a tree. Often referred to as a "tree haircut" this practice leaves large wounds that allow decay to spread rapidly through the tree and creates a profusion of epicormic branches that have little structural integrity.



Crown Reduction

Crown reduction pruning makes cuts at branch junctions. However the branch collar is violated and decay can spread easily into the wounded tissues. Branch sprouting can occur at the pruning cuts resulting in the same weakened structural syndrome as topping.

Plant Maintenance

Crown reductions can be made using subordination pruning, where branch tips are removed back to the crotch to bring the canopy into a more compact profile.

Pruning to Thin the Canopy

Thinning

Thinning is often used under the rationale that it increases light penetration and air movement through the canopy of the tree. Actually engineering research on tree dynamics in wind have illustrated that thinning a trees' canopy reduces the cantilever effect of the tree and makes for an increased risk of branch failure in normal winds.

Thinning also reduces net photosynthesis which can stress remaining limbs and living tissues for a significant period of time. By reducing interior branches, the process of thinning also reduces the structural support for the remaining foliage. Rather than reducing weight load on the entire limb, it shifts the load to the end of the remaining branch.

Removing internal deadwood and crossing branches, that are common in some species, such as ash, is not thinning.



Shaping the Canopy

Pollarding



Pollarding is an ancient horticultural pruning technique that essentially tops trees and then annually prunes off the sprouts that are created. After many years of cutting back the sprouts the stems become roughly callused over. Like topping these cuts create wounds that have a difficult time healing, but the continual removal of the sprouts prevent the development of hazardous limbs. Internal decay is a serious problem with pollarded trees.

Topiary

Topiary is the horticultural practice of pruning and forcing woody plants, including trees, into "artistic" shapes. This level of severe pruning requires continual maintenance to maintain the shape, structure and support of the impacted trees. It is a practice that can severely reduce the structural integrity and health of trees.



An integrated approach

When caring for urban trees it is important to make a complete evaluation of all environmental conditions to accurately diagnose all stress factors and prescribe care based on specific circumstances. This prescriptive care will help your tree meet its full potential.



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