



Sustainable Pruning Practices

John Eisenhower, Integrity Tree Service

A common rite of passage for new doctors is to take The Hippocratic Oath before beginning their careers in medicine. The Hippocratic Oath asks physicians to swear to uphold specific ethical standards including commitments to treat their patients to the best of their ability and to protect them from harm.

Practitioners of tree care today need a similar commitment to high standards of practice, especially for pruning. As poor quality tree care continues to be pushed on unsuspecting tree owners around the world, arborists need to declare their commitment to education and sustainable pruning practices that protect and preserve our trees.

Sustainable Pruning Practices

Environmental sustainability is the quality of not being harmful to the environment or depleting natural resources, and thereby supporting long-term ecological balance. Sustainable pruning practices apply methods that do not harm trees but improve their health and longevity and do so with the least impact on resources.

In short, the goal of tree care providers should be to prune trees in such a way that they achieve their pruning objectives with minimal cost to the trees, to tree owners and to the environment. There are some simple first steps in achieving this goal.

Consider Native Trees First

If sustainable pruning takes into consideration a tree's natural growth habit and its unique environmental and cultural requirements, it stands to reason that native plants will be easier to maintain than non-natives. Introduced species have brought great diversity and delight to our communities as more adaptable trees are discovered and developed around the world. But they come with a cost, usually increased maintenance demands.

Native trees are better adapted to local temperatures, rainfall, insects, diseases as well as soil texture, structure, nutrient content and soil pH. Non-native trees generally have lower vitality and need more soil amendments, fertilizer and insect and disease treatments. The bottom line is that non-native trees require more resources to maintain – more work, more time, and more expense.



Don't Fight Genetics

Good pruning is both an art and a science. It combines artistic expression and research-based data to make proper pruning decisions. The results are safe, healthy and beautiful trees. But you say I'm not an artist! And I'm not a scientist! Can I still get good results from my pruning?

Yes you can! A design precept states that *form follows function*. In simple terms this means that the way something looks results from the way something works. If we understand the function of a thing, we can better understand its form. Beautiful plants in nature have a shape or form that compliments their natural growth habit and their proper function in the ecosystem. This principle applies to pruning trees. When we make proper pruning cuts based on our understanding of how trees work in their native setting, the results are sound branch architecture and very attractive trees...naturally! When we get the science right, the art tends to take care of itself.

A good example of *form following function* is the branch structure of the velvet mesquite tree. *Prosopis velutina* has a weeping growth habit with lateral branches that grow horizontally from low on the main stem. They grow outward, then down to the ground. Sometimes they grow along the ground, then upward again toward available sunlight. These low branches act like props. They support subsequent layers of higher branches, each nesting on top of the one below. The result is a compact mushroom-shaped crown that deflects the wind safely up and over the tree during monsoon storms.

Getting the science right is to leave as many low branches on the tree as possible. This compliments the tree's natural function and creates a strong, safe and more beautiful form.

Unfortunately, many mesquites are over-pruned by removing large lower limbs. This fights against their natural growth habit. It's no surprise the trees are like beach umbrellas and have trouble staying upright in high winds. Wind gets up under the elevated crown and causes branch and entire tree failure. It is a losing battle. And genes always win. Working *with* genes and not against them is another critical step in sustainable pruning.

Request Pruning to Industry Standards

When people ask for help pruning their trees, many aren't sure what to ask for. They know their trees need attention. They just don't know how to describe what they need.

Tree service advertisements only add to the confusion. They use tree pruning terms such as tree trimming, cutting, topping, shearing, hedging, sculpting, rounding, wind-sailing, lacing and the list goes on. Each one describes a pruning operation but none explains precisely what will be done. Tree owners are left scratching their heads. Worse, they are often disappointed with the results.



To help clear up the confusion, the American National Standards Institute (ANSI) developed the ANSI A300 pruning standard. The A300, based on best management practices for tree health and safety, was created to help arborists write better pruning specifications. One of the primary benefits of writing clear specifications are that tree owners can know more precisely what will be done to their trees.

The A300 recommends that proposals clearly state:

Pruning objectives: Such as structural improvement, size reduction, building clearance, etc.

Pruning types to be used: Such as crown cleaning, thinning, raising, reducing and restoring

Minimum and maximum branch diameters for pruning cuts: ½ inch, 2 inch, 6 inch, etc.

Maximum % of foliage to be removed: 5%, 10%, 25%, etc.

Tree pruning specifications are to an arborist what a set of blueprints is to a building contractor. They define the pruning outcomes that are planned and how they will be achieved. They tell what *will* and *will not* be done. They put the contractor, the tree owner and the crew all on the same page. Good tree pruning specifications clarify expectations and create a win-win for everyone.

If non-specific language is used in a tree maintenance contract, Caveat Emptor! Buyer beware! Without clearly written specifications, there is no way to be sure the contractor will avoid pruning methods such as topping and lion's tailing that can harm your trees, sometimes without remedy. Both of these unacceptable pruning practices deplete energy reserves and increase tree stress and the likelihood of insect, disease and other secondary problems.

When contracting for pruning services, request that the tree care provider define terms and establish clear objectives. They should also describe specific pruning types or systems they will employ to achieve the objectives. Last, they should provide minimum and maximum branch diameters and % of foliage to remove. If they have difficulty describing what they plan to do, they may not have the level of skill or experience to provide proper tree care. To avoid a disappointing result and possible loss of tree value, consider only selecting a company that provides clear specifications based on the ANSI A300 standards for tree care.

Summary

In summary:

- ✓ Whenever possible select and maintain native trees.
- ✓ Learn about your trees and prune them to complement their natural growth habit.
- ✓ Follow the ANSI Pruning Standards and best management practices.

If you do these things, you'll be well on your way to developing a sustainable tree management plan.