

TREE TOPPING

And Why You Shouldn't Do It

A BAD PRACTICE

The most harmful of all tree pruning practices is topping, also called “heading,” “tipping,” “lopping,” or “dehorning.” Unfortunately, topping is very common, even though extensive amounts of literature have been written on the subject and why it should not be done. This bulletin explains what it is, along with better alternatives.

TOPPING: WHAT IS IT?

As defined in the *Harpers Ferry Tree Conservation and Beautification Ordinance*, topping is “the cutting of tree branches to stubs or lateral branches that are not large enough to assume the terminal role.” Okay, so we have the legal definition, but what does that mean? In a nutshell, topping is the practice of indiscriminately removing large branches or trunks from the top of a tree’s canopy. Topping can be very harmful. The picture below shows a tree that has been topped. Notice how ugly the resulting tree is. The damage does not stop there, as explained in the next section.

There is a technique similar to topping called *pollarding*, but the two practices are not the same. Pollarding requires frequent, consistent pruning and only works on certain kinds of trees. Pollarding consists of cutting back branches to a certain point at a fixed height, but continuing to do so every year or two to create a compact canopy.



Topping not only exposes a tree to potential damage, it is also unattractive.
(Photo by Larry Costello, University of California.)

HOW DOES TOPPING DAMAGE MY TREE?

Topping causes many problems. The lack of leaves means the tree cannot produce the nutrients it needs to feed itself. Open wounds can become entry points for many pests and diseases that otherwise may not affect the healthy tree. These wounds also often fail to heal properly. Once the tree begins to rebound from the initial pruning damage, survival mechanism kicks in. Latent buds are activated, and a congregation of small, weak, superficially-attached branches called *watersprouts* grow below each cut. The tree needs to put out a new crop of leaves as quickly as possible. If the tree does not have enough stored energy reserves to do so, it will be seriously weakened and may die. Another problem caused by topping is sunburn, since the trunk is no longer protected from the sun’s heat and light by the leaf canopy.



Watersprouts resulting from topping make the tree thicker, but also weaker, than before. (Photo by Edward F. Gilman, Professor, Environmental Horticulture Department, IFAS, University of Florida.)

WHAT OTHER DAMAGE IS CAUSED?

Topping can also cause problems not experienced by the tree itself. A parking lot, street, or city park with topped trees will be hotter than before, due to lack of shade, resulting in the “heat island effect.” Less leaves also means less CO₂ exchange, contributing to global warming. Other damage caused by topping includes less wildlife habitat, more volitization of gasoline in gas tanks, and quicker breaking-down of asphalt due to heat exposure. On a much more personal level, it can be expensive: once the numerous watersprouts take over, pruning will be required again within a few years.



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IF IT'S SO BAD, WHY IS IT STILL DONE?

Topping is still done for many reasons, although none of them are sound and solid. The most common reason given, especially in areas with high winds, is to reduce storm damage caused by wind drag on leaves. This is a very misguided notion. Once the tree begins to regrow, there will be more leaves clustered in one area than there were before. Because the watersprouts that form are only attached to the outermost layers of a trunk's bark, this dense cluster of leaves will be more likely to cause these new, weak limbs to break off the tree. Damage caused by branch failure of a topped tree may lead to a finding of negligence in a court of law, since topping is considered an unacceptable pruning practice.

ARE THERE ALTERNATIVES TO TOPPING?

Well, of course there are! The following alternatives should be considered instead of topping the tree.

For reducing the overall size of a tree, rejuvenating growth, or reducing wind resistance, *crown thinning* is a much better option. Thinning removes unwanted branches by cutting them back to laterals that are large enough to assume the terminal role. This pruning method emphasizes the tree's natural form and results in a more open tree, allowing more light penetration and air circulation. Thinning also strengthens the tree by forcing diameter growth of the remaining branches.

If the tree is too tall, *crown reduction* may be necessary. Branches are cut back to laterals that are at least one-third the diameter of the stem that is to be removed. If it is necessary to remove more than half the foliage from the branch, remove the entire limb.

SHOULD I HIRE AN ARBORIST?

Previously topped trees can be corrected by a trained arborist using several methods, including cabling and ongoing inspection. The arborist may recommend other possible solutions as well.

Pruning large trees can be dangerous. If pruning involves working above ground level or using power equipment, it is best to hire a professional arborist. An arborist can determine the type of pruning that is necessary to improve the health, safety, and appearance of the tree. A professional arborist can provide the services of a trained crew, with all of the required safety equipment and liability insurance.



Topping trees makes them unattractive and causes more problems later on. Consider alternatives instead.
(Photo by Edward F. Gilman, Professor, Environmental Horticulture Department, IFAS, University of Florida.)

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References

Welsh, D.F.; Janne, E. Follow Proper Pruning Techniques. [Internet]. [date unknown; cited 2009 May 22]. Available from <http://aggie-horticulture.tamu.edu/extension/pruning/pruning.html>.

[ISA] International Society of Arboriculture. Why Topping Hurts Trees. [Internet]; 2005 [cited 2009 May 22]. Available from <http://www.treesaregood.com/treecare/topping.aspx>.

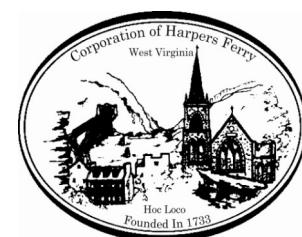
Bedker, P.J.; O'Brien, J.G.; Mielke, M.M. 1995. *How to Prune Trees*. NA-FR-01-95. Radnor, Pennsylvania: USDA Forest Service, Northeastern Area State and Private Forestry. 30 pp.

Gilman, E.F. Do Not Top Trees. [Internet]; 2008 [cited 2009 May 22]. Available from <http://hort.ifas.ufl.edu/woody/donottop.html>.

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