

Pruning shade trees in the landscape

Cleaning the canopy

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Introduction: If regular pruning is not performed, most trees develop canopies containing dead, detached, cracked, or damaged branches. If left untreated, these branches could pose a risk to the health of a tree or to people under it. Not only do dead branches serve as entry points for infection to the rest of the tree, but because these branches are weakly attached, they may also pose a hazard to nearby people and property.

A canopy cleaning consists of removing dead, detached, diseased, and damaged branches. It can be performed on trees of any age but is most common on medium-aged and mature trees. Removing live branches from mature trees is often unnecessary and could even be harmful. Cleaning could also shorten branches with included bark to reduce likelihood of breakage. It might include removing suckers and some water sprouts. But if the tree has many water sprouts, it may have a health problem that should be treated. The treatment for many trees with an abundance of water sprouts is to leave them alone.



Suckers: Solution - Remove suckers (sprouts from the base of the plant or from roots) as they appear. Sprays and paints containing NAA (synthetic auxin) applied to the pruning cuts can help reduce subsequent suckering on some species. **Included bark: Problem** - There is included bark in the branch union making the union weak. Branch 'a' is more likely to split out from the tree because of included bark. **Solution** - 1) Either remove branch 'a' entirely back to the base of the included bark, 2) reduce the weight on the end of branch 'a' by removing lateral branches toward the end of the branch, 3) consider shortening branch 'a' with a reduction cut, or 4) consider installing a cable system.

Dead or touching branches: Solution - Remove detached, dead, broken, and diseased branches especially those more than one inch in diameter. Never remove the swollen expanding collar growing around the base of dead branches. Cut just to the outside of this collar. If two branches touch, remove or shorten one of them so they no longer touch.

Water sprouts: Solution - Remove some water sprouts, if you wish. But remember that trees usually produce water sprouts due to a stress like root loss, root damage, storm damage, loss of branches, topping, disease, over-pruning, improper thinning, and other reasons. Determine the cause of sprouting and correct it. It is often best to leave many of the sprouts unless there are more than a dozen or so on a branch. Space the sprouts along the branch by removing some. If too many sprouts are removed at once, they will grow back. Objectives: Reduce conditions in the tree that could place people or property at risk.

Execution: Remove dead, dying, diseased, and broken branches and suckers at the base of the tree. Specify that dead branches more than a certain diameter should be removed from the tree. For example, you might decide to remove dead branches that have a diameter of one inch or greater knowing that smaller ones pose less of a danger. Remove or shorten branches with cracks. Shorten or remove limbs with bark inclusions by removing lateral branches toward the end of the limb.

Further information:

Gilman, E.F. 2002. Illustrated guide to pruning, second edition. Delmar Publishers, Albany, NY. 330pp.
Gilman, E.F. 2001. Illustrated pruning and planting CDROM. Horticopia, Inc., Purcellville, VA.
American National Standards Institute (ANSI A300). 1995. *American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices*. New York: American National Standards Institute.

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