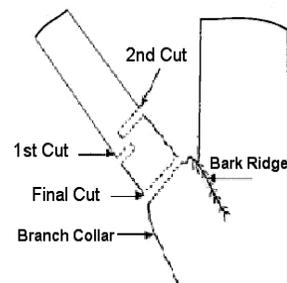


## Planting Under Trees

Trees add beauty and value to our landscapes. We sometimes desire to add shrubs, hardy herbaceous perennials, or annuals to a shady spot under our trees. Let's begin.

Our first challenge is shade. Few perennials, short of ferns, actually thrive in dense shade. To add more sunlight, consider removing some of the bottom limbs of your trees and thinning the canopy. It is important not to leave stubs, or to make a cut flush with the tree trunk. Such pruning actually damages the tree and encourages the entry of disease and insects. Trees have a slight bulge, called the branch collar, where the limbs meet the trunk. The branch collar has actively growing embryonic tissue which will cover pruning wounds in a few years. Cut just to the limb side of the branch collar for maximum healing of the tree (see illustration). Proper pruning also involves a three cut removal of big branches, as illustrated, to prevent tearing of the bark as the branch falls away.



The best time to prune is late winter. Some trees will bleed sap when cut at this time, but it does not harm the tree. Use sharp equipment. Leave the wounds open; do not cover the wounds with paint or other substances, as this has been shown to actually slow healing, seal in moisture, and encourage disease. Remove all dead or dying branches first. Some lower branches may be removed. Thin the canopy by removing small (1-2 inch diameter) branches at the outer edges of the tree. If you have to climb into the tree, or if the work is extensive, it is best to hire a certified tree care professional to do the work. Do not remove more than 15-20% of the canopy.

Another problem is roots. We seldom realize that 90% of tree roots are in the top three feet of soil; 50 to 75% of the small feeder roots are in the top foot of soil. Trees with many roots right at the surface include maples (especially silver maple), boxelders, spruce, poplars, and willows. Oak and ash tend to have few roots on the surface.

How do we plant under trees? First, do not add soil. Changing the grade by adding soil can actually kill trees. Roots need oxygen to flourish. A grade change or soil compaction will result in a slow decline and eventual death over several years. Get rid of existing, unwanted plants or sod. This is done by covering with a 2-4 inch organic mulch, actual removal, or by treating with an herbicide. If using a chemical herbicide, such as those containing glyphosate, purchase the right strength for removing lawn and weeds. Always read and follow the directions.

When planting, work with your hands and hand tools only. Do not use large power equipment. Some of the smaller roots may be removed, but do not cut roots that are over 2 inches in diameter. Avoid planting within three feet of the trunk of trees. It is best to use smaller plants when planting under trees, as these can be fitted between roots using a smaller size hole. Add compost to the planting holes to give the baby plants a good start. Add 2-4 inches of organic mulch such as compost, shredded bark, shredded leaves, cocoa shells, pine needles, or wood chips. Avoid plastics which limit air and water exchange. Stone mulches trap leaves and other trash, and are hard to remove when you eventually tire of them. Mulches will help control weeds, reduce watering needs, reduce erosion, moderate soil temperatures, add organic matter, and improve the appearance of the beds. Consider shade loving annuals to add more color to your shade garden. Water the new plants regularly to help them establish. Don't neglect to fertilize on a regular basis.

Black walnut trees can be a problem. The tree roots secrete a substance, juglone, that can kill other plants. Some shade perennials, such as hosta, astilbe, heuchera and fibrous begonia can thrive under black walnut.

Good luck with your shade gardening. For more information on what to plant in the shade, see the University of Minnesota website, [www.extension.umn.edu](http://www.extension.umn.edu).

Happy Gardening,

Joe Baltrukonis