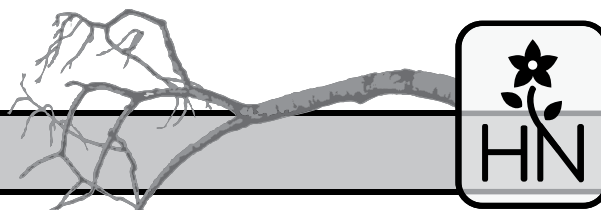


CARE GUIDE:

Pruning Trees & Shrubs



The Basics

Many people are nervous about pruning for fear of ruining a plant, or they are unsure how to train a plant the way they want. This is usually caused by either a lack of plant physiology knowledge, a lack of knowledge about plant responses to pruning, or lack of clear objectives for the plant's function in the landscape.

First, ask yourself why you are planning to prune. Several methods of pruning

may be correct for your plant, depending on what you are trying to accomplish. Plants can be pruned for many reasons, including:

- To direct growth
- To influence fruiting & flowering
- To maintain health and appearance
- To rejuvenate
- To control size
- To maintain safety

Before taking on the task of pruning, ask yourself these important questions:

- Are your goals attainable, as well as sustainable?
- Can the plant be reasonably maintained in the landscape?
- Will the results be beneficial to the landscape as a whole?

Also consider relocation or replacement of a plant that isn't performing the way you want.

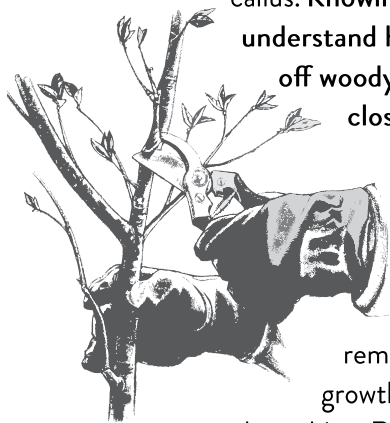
PRUNING IS WOUNDING

Woody plants have no ability to heal, and cut tissue is not repaired. Injured tissue is sealed, or compartmentalized, internally and externally by the plant. New tissue is formed externally over the wound in the form of a "woundwood" or callus. **Knowing this helps you**

understand how to properly cut limbs off woody plants to maximize

closure over cuts. Another key take-away in pruning woody plants is to understand that removing lateral (side) shoots, stimulates terminal (upward) growth, while removal of branch ends (terminal growth) stimulates lateral or side

branching. Remove lateral shoots to make a plant more "tree-like" or to thin it out or reduce size. Remove branch ends, cutting in the middle of a branch to make a plant more bushy.



WHEN TO PRUNE

Timing should be based on your pruning goal, and capitalizes on managing the energy level of the plant. For invigorating pruning, i.e. for roses, other shrubs, and

flowering trees, it is best to prune in winter, when plants are dormant and still have most of their energy stored for the next year's use. This technique is also good for rejuvenative pruning. The ideal time for dormant pruning is in late winter, from February to early March. To control size and to tame a rambunctious shrub, for instance — prune *after* budbreak, but *prior* to full leaf expansion. This will retard shoot growth.

Flowering is often a consideration when pruning. When pruning for flowers, avoid cutting away flowering wood. On plants that flower in winter or spring, such as azaleas, you want to preserve the 1 year old wood that bears the flowering buds so prune these *after* flowering. Plants that typically flower in summer or fall are ones that flower on new wood. These should be pruned when the plant is dormant.

PRUNING SPECIFICS

Always prune away dead, dying, or diseased branches. If two branches are crossed and rubbing together, one branch may be removed, allowing the other to grow unobstructed. Detailed instructions can be found in the following Pruning Trees and Pruning Shrubs sections.

AZALEA - Prune in late spring or summer, after flowering. Remove long shoots rising above the rest of the foliage. Most require little pruning, unless they are trimmed closely into a

(continued on next page)

PRUNING SPECIFICS *(continued)*

dense, formal shrub. These should be tip-pruned after flowering to promote dense growth. Shears can be used.

BOXWOOD - If a formal hedge or topiary, prune young plants hard in spring to encourage bushy growth. After established, prune or trim lightly in mid to late summer. For informal shrubs, trim long shoots to keep at desired height.

BUTTERFLY BUSH - Prune in late winter or early spring. Prune hard to 15-18" above the ground.

CAMELLIA - Requires little pruning except occasionally to shape, when needed. Prune in spring, after flowering.

CLEMATIS - See *Pruning Clematis Care Sheet*.

CREPE MYRTLE - Prune in late winter or early spring. Gently thin branches growing toward interior. If training into a tree, thin out root suckers at base to encourage 1-5 main stems. Do not cut back canopy of the tree to short stems. Tree professionals call this "crepe murder".

DAPHNE - Generally do not require much pruning.

DOGWOOD - Keep pruning to a minimum and do not hard prune. Prune from fall to early spring, removing branches within 3 feet of the ground and dead wood. On established redbud and yellowtwig dogwood shrubs, prune out about one third of the old stems to the ground every 2-3 years to maintain good winter twig color.

EASTERN REDBUD - Redbuds have a tendency to cluster their branches and form tight V-shaped crotches that are easily split by strong winds. Prune young trees in early summer, selecting 3-5 strong lateral branches that are well-spaced around the main stem. Established trees need little pruning, and do not respond well to hard pruning.

FLOWERING ALMOND, APRICOT, CHERRY, PLUM - Generally, do not prune unless necessary. Most require little pruning and only early in the life of the tree. Remove suckers and water sprouts (thin shoots that grow vertically from the tops of branches) in late winter/ early spring. Otherwise, prune after flowering to avoid taking flowering wood.

FLOWERING CRABAPPLE - Prune in autumn to early spring. Remove water sprouts in summer.

FLOWERING QUINCE - Prune in early summer, after flowering. Cut back new growth to 6 leaves. On established plants, cut back side shoots to 2-3 leaves. This "spur pruning" will stimulate more flowering. If spur systems become congested, thin to remain prolific. Older shrubs can be renovated by hard pruning over the course of 2-3 years.

GRASSES - Shear back in mid spring just before new growth emerges.

HOLLY - Prune in mid to late summer, clipping hedges and shaping trees. New leaves should be firm and glossy but shoots should not be fully ripened or too hard to cut.

HYDRANGEA - *H. macrophylla*: Prune after flowering. On established plants, cut back thin, weak shoots and 1-2 old stems to base of plant. The previous year's branches can be pruned back as much as 12". Cut back to fat buds. *H.*

paniculata: Late winter to early spring. On mature plants, cut back previous season's growth to lowest pair of healthy buds.

JAPANESE MAPLES - Do not prune when trees are putting on new leaves in spring, or ready to drop leaves in fall. Otherwise, they can be pruned almost any time, and respond well to severe pruning when needed. Trees are easily kept at a desired height or shape with regular "touch up" pruning.

LIGUSTRUM/PRIVET - Large freestanding shrubs need very little pruning. When hedging, cut back young plants at planting (in spring) to 12" above ground level. Then, cut back new growth by half each of the following 2-3 years in spring. Established hedges and topiaries can be trimmed 2-3 times between late spring and late summer. On variegated cultivars, remove shoots that have reverted to all green.

LILAC - Light, formative pruning of young plants is done in midsummer, after flowering. To rejuvenate older plants, cut up to 1/3 of older stems to the ground in late winter. For grafted cultivars, cut suckers off entirely at the ground.

NANDINA - Require little pruning. On established plants, thin out older canes, especially in the center of the plant, cutting off at ground level. Prune late winter to early spring.

PIERIS - Usually does not require much formative pruning. Deadhead old blooms after spring flowering. Neglected plants can be renovated with pruning.



PRUNING SPECIFICS *(continued)*

PYRACANTHA/FIRETHORN - Prune in mid-spring to shape, if needed. Cut back blackened shoots, or those that have the scorched appearance of fireblight. Watch out for thorns!

RHODODENDRON - Prune in late spring to early summer, after flowering. Remove long shoots and dead wood; snap off old flowers just above new buds. Generally, little pruning is required.

ROSE-OF-SHARON - Prune in late spring. Prune young plants hard to encourage branching at the base. Established plants need minimal pruning. Cut any dead shoots back to live wood. If an old plant becomes unruly or unattractive, it can be renovated by removing the older branches, and cutting back remaining branches hard.

ROSES - Prune in spring, just as buds begin to swell, but prior to the unfolding of vegetative growth (usually late February or early March). Remove all basal suckers (shoots growing out from under the knotty, burlled bud graft union at the base of the plant) and dead, damaged, or diseased wood



Rose

by cutting flush to the stem or to live, green wood. Remove all inward-growing branches and any that are pencil size or smaller to form a neat, open-centered plants. Remove canes that are 4 years or older, leaving 3-5 canes of about 1/2" diameter for hybrid teas, and 5-7 canes for floribundas and grandifloras. When removing canes and suckers, make flush cuts, removing any nubs.

Reduce remaining canes leaving at least 3-5 outward-facing buds on each. Make all cuts on an angle (about 45°), no more than 1/4" above the growth bud. To promote new shoots, gently flake off old bark from the bud graft union. Don't prune climbing roses for the first 2-3 years, except to remove dead, diseased, damaged or crossing canes and suckers. After 2-3 years, remove older gray or weak canes, leaving at least 3-5 vigorous canes. Prune once-blooming roses after bloom, and climbers every 3-4 years. Roses should be "deadheaded" during the growing season. Prune away spent blooms. The cut should be 1/4" above an outward facing set of leaves that contains 5-7 leaflets. New flower buds emerge from these leaves. Control cane height by removing any set of 5-7 leaves along the stem. Cut on a 45° angle so water drains away, rather than sitting on the cut.

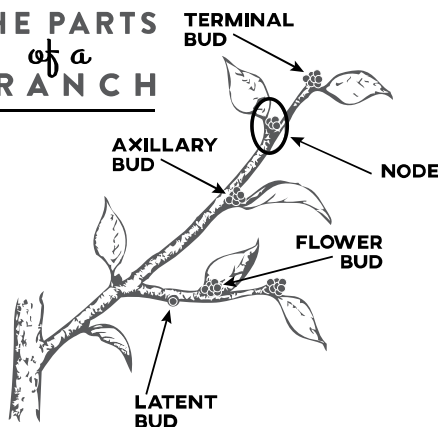
PRUNING SHRUBS

Hand pruning is more desirable than shearing, unless you are creating formal hedges or topiary. The two major shrub types, other than conifers, are broad-leaved evergreens and deciduous shrubs. Most broad-leaved evergreens are symmetrical and slow-growing. Because new growth is from terminal (end) buds, they develop a dense outer shell of foliage, and often require only minimal pruning. Many deciduous shrubs are not self-maintaining. They often have rapid growth and irregular forms, with new growth from the base. Without pruning, they flower poorly, becoming overgrown and unkempt. Maintain by removing unwanted branches at the base, and by removing 25-33% of the older branches every

1-2 years. The best techniques are "thinning" and "heading back". To thin, simply remove an entire branch at the base. Select weak, diseased, damaged, or dead branches, or a branch that crosses and rubs against a more desirable one. On certain plants, such as Nandina, older branches or canes are removed to make way for newer, more

floriferous branches. To head back, cut back a branch to a bud or other branch. This reduced height and width, and controls growth, while maintaining a natural form. Rejuvenation pruning can be done on old, unproductive or overgrown plants, or those with "bare legs", in order to stimulate foliar growth from the base. This type of pruning should be done right before bud break to encourage quick regrowth. Cut back all growth to 12" or less. For slower regrowth, rejuvenate around mid-May, and only on shrubs with latent buds. A latent bud is one that is not currently producing growth (and may never, unless stimulated, as with pruning). Plants that can't be rejuvenated include juniper, boxwood, and hybrid rhododendrons.

THE PARTS of a BRANCH

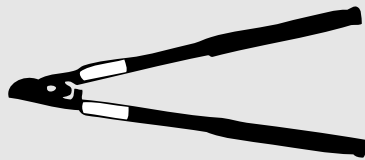


CHOOSING THE *Right Tools* FOR THE JOB



HAND PRUNERS

Use hand pruners for small branches and canes. Choose bypass pruners (blades bypass each other) instead of anvil pruners (close against each other, blade to blade).



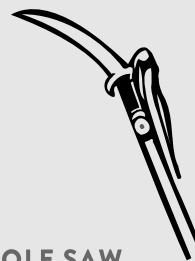
LOPPERS

Loppers are good for large branches and canes, up to 1" thick. For even larger branches, use a pruning saw.



SHEARS

Shears are handy for pruning hedges and large formal shrubs.



POLE SAW

Use a pole saw when smaller branches are too high to reach with loppers.

PRUNING TREES

The first guideline of tree pruning is never top a tree. Topping can ruin a valuable asset to a property, or even kill the tree. Never severely cut limbs larger than 3" in diameter. This will remove the normal canopy, disfigure and shock the tree, and encourage starvation and rapid regrowth. It also promotes insect infestation and disease. New limbs are often weakly attached, causing hazards.

CUTTING TECHNIQUES

- Cut back to 1/4" above a bud
- Face cuts down and away from buds
- Make cuts on a 45° angle
- Cut above an outward facing bud to direct growth away from plant's center
- See above for help in choosing the appropriate pruners for the task

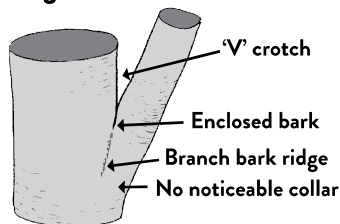
Conifers such as pine, spruce, and fir can't be pruned as other plants, except to correct form and remove dead, damaged, or diseased limbs. To control size on conifers, the new growth must be pinched back. In spring, new growth emerges in tight, slender bunches that have not expanded. These are often called "candles" because of their slim, tapered appearance. Break off or pinch back partially before needles expand.

BUILD A BETTER TREE

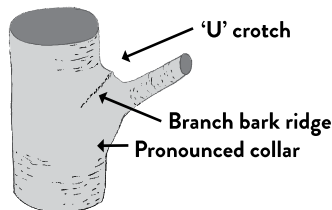
In the year after planting, prune when necessary to establish a central leader. Remove dead, damaged, diseased, or crossing branches. In the next 2-5 years, select scaffold branches. Keep branches with a wide angle of attachment (at least 45-60° to the trunk; up to 90° is best).

Vertically space scaffold branches 12-18" apart. Space radially around the trunk to keep 5-7 branches per 360°.

Weak branch union with a narrow angle of attachment



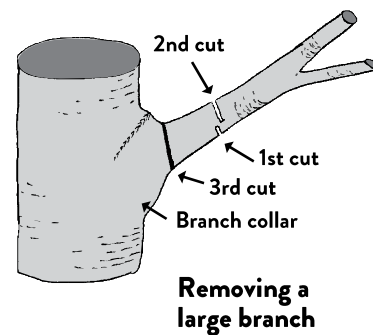
Strong branch union with a wide angle of attachment



During the first 2-5 years, remove branches that are too low or with a sharp angles of attachment, those growing within 4-6" of a scaffold branch, and outgrown leaders.

It's best to prune from February to budbreak. Avoid major pruning between budbreak and leaf expansion, and between August and leaf fall. Light or corrective pruning can be undertaken at almost any time. To properly remove larger branches and minimize damage to limbs, perform the three step cut illustrated below:

1. Undercut 1/3 of the limb.
2. Top cut further out on the limb until the limb snaps off cleanly.
3. Make a collar cut. Be sure to preserve branch collar for best wound closure.



Prepared with the assistance of certified arborist Phil Crump of Hunter Tree & Landscape, and Dr. Stuart Warren of NCSU. References: AHS Manual of Pruning & Training.