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Extension Pruning Publications/Peninsula Pruning Calendar

PRUNING HANDBOOK FOR THE VIRGINIA PENINSULA

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What Extension is: Virginia Cooperative Extension responds to the needs of individuals, families, groups and organizations with educational programs in the four broad areas of agriculture and natural resources, family and consumer sciences, 4-H youth development and community viability. Citizens of Virginia can participate in our programs through their local Extension office.

Virginia Cooperative Extension

PUBLICATION 430-455

A Guide to Successful Pruning

Pruning Basics and Tools

Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

What is Pruning?

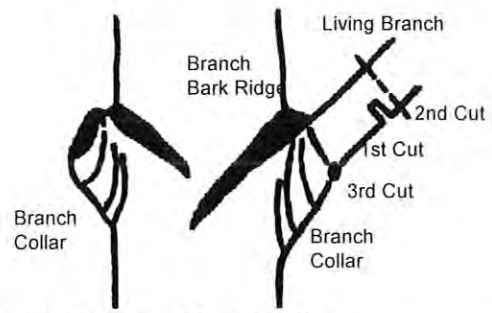
Pruning is a regular part of plant maintenance involving the selective removal of specific plant parts. Although shoots and branches are the main targets for removal, roots, flower buds, fruits and seed pods may also be pruned.

Pruning wounds plants, but plants respond differently to wounding than do animals. In plants, damaged areas are covered by callus tissue to close wounds. Simply put: animal wounds heal, plant wounds seal.

Another response to pruning occurs inside plants. Chemical boundaries form around wounded areas, walling off or compartmentalizing the wounds. Compartmentalization limits any decay that results from wounding, or from the natural death of branches. Use pruning techniques that minimize plant wounding and speed wound closure.

Current pruning recommendations advise against pruning branches flush to the trunk. Flush cutting is harmful in several ways: it damages bark as pruning tools rub against the trunk, it removes the branch collar, and goes behind the branch bark ridge.

The branch collar is the swollen area of trunk tissue that forms around the base of a branch. If you prune away the branch collar, you remove not only branch wood, but also trunk wood, opening the plant to more extensive decay.



Branch bark ridge and branch collar

The branch bark ridge on trees is a line of rough bark running from the branch-trunk crotch into the trunk bark. It is less prominent on some trees than on others. The best pruning cut is made outside the branch collar, at a 45 to 60 degree angle to the branch bark ridge. More detailed directions for pruning deciduous and evergreen trees and shrubs can be found in specific Extension publications.

Why Prune?

1) **To improve the appearance or health of a plant.** Prompt removal of diseased, damaged, or dead plant parts speeds the formation of callus tissue, and sometimes limits the spread of insects and disease. For trees, pruning a dense canopy permits better air circulation and sunlight penetration. To avoid future problems, remove crossing branches that rub or interfere with each other, and those that form narrow crotches.

2) **To control the size of a plant.** Pruning reduces the size of a plant so that it remains in better proportion with your landscape. Pruning can also decrease shade, prevent interference with utility lines, and allow better access for pest control.

3) **To prevent personal injury or property damage.** Remove dead or hazardously low limbs to make underlying areas safer. Corrective pruning also reduces wind resistance in trees. Prune shrubs with thorny branches back from walkways and other well-traveled areas. Have trained or certified arborists handle any pruning work in the crowns of large trees.

4) To train young plants. Train main scaffold branches (those that form the structure of the canopy) to produce stronger and more vigorous trees. You'll find it easier to shape branches with hand pruners when a plant is young than to prune larger branches later. Pruning often begins with young plants forbonsai, topiary, espalier, or other types of special plant training.

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4) **To train young plants.** Train main scaffold branches (those that form the structure of the canopy) to produce stronger and more vigorous trees. You'll find it easier to shape branches with hand pruners when a plant is young than to prune larger branches later. Pruning often begins with young plants for bonsai, topiary, espalier, or other types of special plant training.

5) **To influence fruiting and flowering.** Proper pruning of flower buds encourages early vegetative growth. You can also use selective pruning to stimulate flowering in some species, and to help produce larger (though fewer) fruits in others.

6) **To rejuvenate old trees and shrubs.** As trees and shrubs mature, their forms may become unattractive. Pruning can restore vigor, and enhance the appearance of these plants.

What tools are needed?

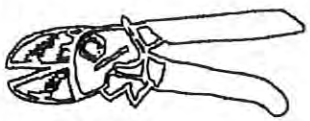
Use hand pruners to cut stems up to 3/4 inches in diameter. Two types of pruners are available: bypass and anvil. Bypass pruners have sharpened, curved, scissors-type blades that overlap. Anvil pruners have straight upper blades that cut against flat lower plates. Although anvil pruners are usually cheaper, they tend to crush stems as they cut. Furthermore, the width of the anvil can prevent you from reaching in to get a close cut on narrow-angled stems. Due to these drawbacks, bypass pruners are generally recommended.

Use lopping shears to cut through branches that are up to 1 3/4 inches in diameter. Loppers have long handles to give you extra reach and better cutting leverage. For heavy duty pruning jobs, select loppers with ratchet joints or those with gears. Also look for loppers with shock-absorbing bumpers between the blades, to lessen arm fatigue. Again, bypass blades are preferable.

Use pruning saws to remove stems you cannot cut with hand pruners or lopping shears. Pruning saws come in many sizes, with either straight or curved blades, and teeth that are either fine or coarse. Use a finely-toothed, curved pruning saw to remove branches up to 2 1/2 inches in diameter. You can make a clean cut with this type of saw where access is difficult. Use a coarsly-toothed saw for heavy branches 3 inches or more in diameter.

Use pole pruners to cut out-of-reach branches up to 2 inches in diameter. Pole pruners consist of blades attached to stationary hooks which are mounted on long wooden or aluminum poles. A cord or chain is used to control the cutting action of the spring-loaded blade. Fully extended, you can use pole pruners to reach branches 12 feet or more in height. Pole pruners are especially valuable on jobs where ladders would be inconvenient, or would damage the tree. Use great care when pruning near utility lines.

Bypasss pruners

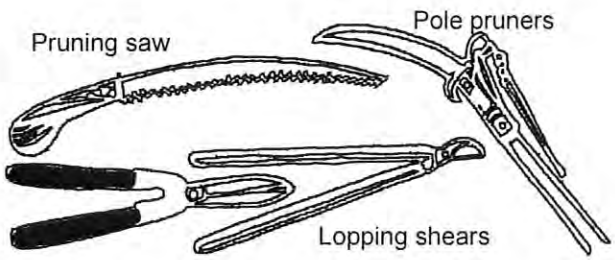


Anvil pruners

Use chain saws to remove branches greater than 3 inches in diameter. Many types and sizes of chain saws are readily available, powered by gasoline or electricity. In selecting a chain saw, carefully consider the tasks for which it will be used. The size of the engine and the length of the blade determine the branch diameter through which you can cut. Chain saws should be used only with appropriate safety gear by people who fully understand their operation.

Use hedge clippers or pruning shears to trim thin-stemmed hedges. Manual hedge clippers, and ones powered by gasoline or electricity, are available. All types shear off growth in a straight line, regardless of branch collar or bark ridge location. If you have a long hedge, you may have to use hedge clippers when hand pruning is impractical. With repeated shearing, hedges develop a profusion of outer twigs, die back in the center, and often show an increase in pest problems.

Select quality tools. They will last longer and make pruning more pleasurable. For maximum effectiveness, sharpen blades regularly and dry and oil them after each use. Use a file or whetstone for sharpening hand tools, and have an experienced professional sharpen chain saws and power hedge clippers.



Hedge clippers

Disinfect your tools between plants, or between cuts on the same plant when disease is present. Tests have shown that products such as "Lysol," "Listerine," and rubbing alcohol are good disinfectants to use. "Lysol" is very effective when used undiluted or diluted (up to 1 part per 10 parts of water). "Listerine" must be used full-strength to be effective against many diseases. Use rubbing alcohol of 70 percent, 91 percent, or 99 percent concentration. Don't use "Pine Sol" or household bleach to disinfect your tools. Tests show they are highly corrosive to metal. Remember that no disinfectant can provide complete protection against disease.

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PUBLICATION 430-456

A Guide to Successful Pruning

Pruning Deciduous Trees

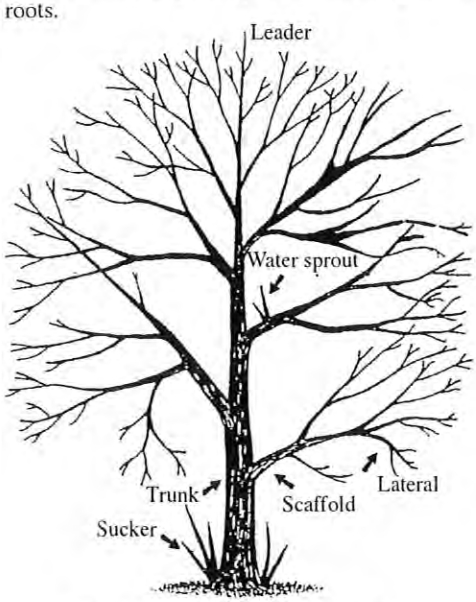
Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

Anatomy of a Deciduous Tree

Trees that shed their leaves annually are classified as deciduous. Before getting out your hand pruners, learn some basics about the anatomy, or supporting framework, of a deciduous tree.

The above-ground part of a tree consists of the **trunk**, **scaffold branches**, and **lateral branches**. The **leader** is the vertical stem at the top of the trunk. Scaffold branches are primary limbs that form a tree's canopy. Secondary branches that emerge from scaffold branches are laterals. Growth comes from buds at the tips of branches (**terminal buds**), or along branch sides (**lateral buds**).

Water sprouts and **suckers** are two types of vigorous shoot growth generally considered undesirable. Water sprouts occur along branches, usually at pruning sites. Suckers grow from the trunk or roots.



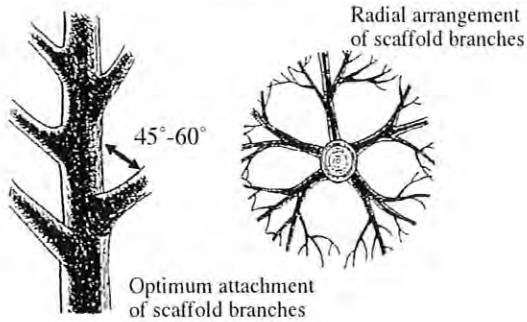
Typical above-ground tree framework

When pruning, picture how the branches are attached to the trunk. The **branch collar** is the swollen area of trunk tissue that forms around the base of a branch. The **branch bark ridge** is a line of rough bark running from the branch-trunk crotch into the trunk bark, less prominent on some trees than on others. (See Publication 430-455).

What to Prune

Corrective pruning removes damaged wood and eliminates rubbing branches. When pruning dead or diseased branches, make cuts into healthy wood, well below the affected area. Disinfect tools between each cut with products such as "Lysol," "Listerine," or rubbing alcohol. Tests have shown that "Pine-Sol" and household bleach are highly corrosive to metal tools.

Remove rubbing or poorly placed branches as early as possible. To avoid splitting, make a thinning cut to remove one branch. Water sprouts and suckers always interfere with normal growth, so prune them off completely as they appear.



Young tree pruning is often preventive, eliminating potential problems before they occur. Select permanent scaffold branches with wide angles of attachment to the trunk. Narrow angles of branch attachment signal a point of future weakness. Be sure branches are evenly spaced (at least 10 inches-12 inches apart) and arranged radially around the trunk. Don't allow one limb to remain directly above another limb, shading it out. Train trees to single leaders and prevent any laterals from growing higher than the terminal leader, unless multi-stemmed specimens are desired.

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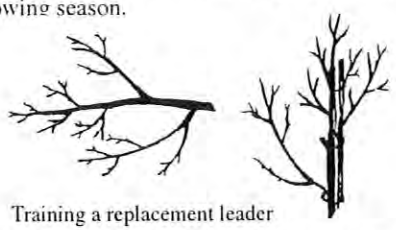
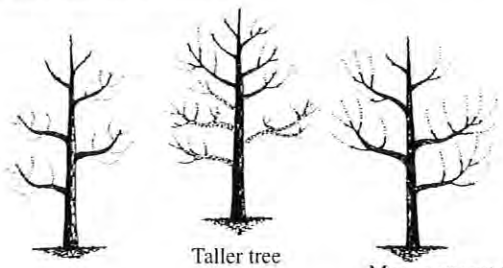
When a tree's leader is lost due to storm damage or disease, replace it by splinting an upper lateral on the highest scaffold to a vertical position. Prune all laterals immediately below the new leader. Use wood or flexible wire splints, removing them after one growing season.



Training a replacement leader

Allow some branches to grow below the lowest permanent scaffold branches. Leave these limbs for three to four years after planting, then remove them over the next two to three years. Temporary branches protect young bark from sun scald, add strength to the trunk, and help produce food.

Prune to alter the natural growth habit of trees. For a more open tree, leave terminal buds on all scaffold branches, but shorten or eliminate all laterals. For a taller tree, remove all branches up to a height of 8 feet as soon as the tree has three to four scaffold limbs above this height. For a more compact tree, shorten all scaffold branches by half, prune above outward-facing buds, and allow most laterals to develop.



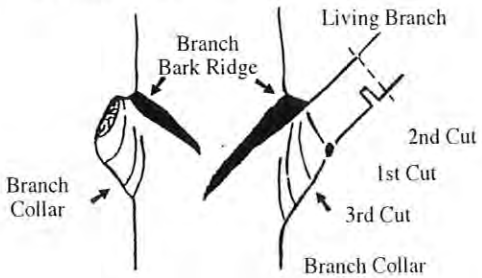
Pruning to alter natural growth

How to Prune

There are two basic types of pruning cuts: **heading cuts**, and **thinning cuts**. Make heading cuts to reduce the height of a tree by cutting back lateral branches and removing terminal buds. Heading cuts stimulate growth of buds closest to the cut. The direction in which the top remaining lateral bud is pointing will determine the direction of new growth. Don't use heading cuts (also called topping) on branches over one year old, to avoid stimulating unwanted water sprouts and suckers. Heading or topping also disfigures older trees and exposes large areas of bare wood to disease and insects.

Thinning cuts remove branches to their points of origin or attachment. When you prune a branch back to another branch, or prune a branch from the trunk, you are thinning. Thinning cuts stimulate growth throughout the tree, rather than in single branches, as do heading cuts. "Drop crotching" is a type of thinning cut that reduces a tree's size while allowing it to retain a natural shape. To drop crotch, select and cut higher branches back to laterals at least one-third the diameter of the limbs being removed. Advantages of thinning include better air circulation, improved sunlight penetration, and less wind resistance.

Make pruning cuts correctly. For heading cuts on young branches, cut 1/4 inch above a lateral bud, sloping down and away from the bud. Avoid cutting too close, or steep, or the bud may die. When making thinning cuts to larger branches, cut outside the branch collar at a 45 to 60 degree angle to the branch bark ridge. Leave the branch collar intact to help prevent decay from entering the trunk.



Branch bark ridge and branch collar

Whenever removing limbs greater than 1 inch in diameter, use the three-cut method to avoid tearing bark. First, about 12 inches from the trunk, cut halfway through the limb from the underside. Second, about 1 inch past the first cut, cut through the limb from the top side. The limb's weight will cause it to break between the two cuts. Make the third cut outside the branch collar, as described earlier. Use a handsaw to provide greater control.

Don't coat pruning cuts with tree paint or wound dressing, except in special circumstances. Some tests have shown wound dressings are beneficial when pruning trees that are susceptible to canker or systemic disease (oak wilt and Dutch elm disease). Tree paint won't prevent decay or promote wound closure, but may prevent disease-carrying insects from entering tree wounds. The best way to prevent oak wilt and Dutch elm disease, however, is to avoid pruning oaks and elms in May and June when insects are more active.

When to Prune

Pruning at different seasons triggers different responses. Late winter or early spring, before bud break, is a good time to prune many species because callus tissue forms rapidly. When pruning flowering trees, take care not to cut off flower buds. Some trees, such as cherry, plum, and crabapple, form buds on old wood. Others, such as crape myrtle, bloom on new wood.

Summer pruning tends to suppress growth of both suckers and foliage. Late summer or early fall pruning causes vigorous regrowth, which in some species may not harden off by winter, leading to possible cold damage. Whenever unexpected damage from vandalism or bad weather occurs, prune immediately.
(See VCE Publication 430-460, *Deciduous Tree Pruning Calendar*)

Virginia Cooperative Extension

PUBLICATION 430-457

A Guide to Successful Pruning

Pruning Evergreen Trees

Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

Anatomy of an Evergreen Tree

Evergreen trees have leaves that persist year round, and include most **conifers** and **some broad-leaved trees.** Evergreen trees generally need less pruning than deciduous trees.

Conifers are distinguished from other plants by their needle or scale-like leaves, and their seed-bearing cones. Because conifers have dominant **leaders**, young trees rarely require training-type pruning. The leader is the vertical stem at the top of the trunk. If a young tree has two leaders, prune one out to prevent multiple leader development. Selective branch removal is generally unnecessary as evergreens tend to have wide angles of attachment to the trunk.

Pruning back multiple leaders

Evergreens are grouped on the basis of their branch arrangement. Pines, spruces, and firs have **whorled** branches that form a circular pattern around the growing tip. The annual growth of a whorl-branched conifer is determined by the number of shoots that are pre-formed in the buds. Whorl-branched conifers usually have only one flush of growth each year in which these pre-formed shoots expand into stems that form the next whorl.

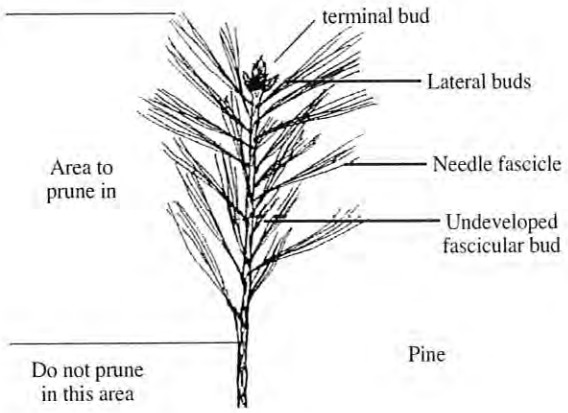
Random-branched conifer

Branch arrangement of a whorl-branched conifer (Avoid pruning into the inactive center)

The second group of evergreens are those with a **random branching** habit. Yew, arborvitae, cedar, false cypress, and juniper are all random-branched species.

What to Prune

Corrective pruning for evergreen trees consists mainly of dead, diseased, or damaged branch removal. Remove dead wood promptly, by cutting dead branches back to healthy branches. When pruning diseased branches, make thinning cuts into healthy wood, well below the infected area. Thinning cuts remove branches to their points of origin or attachment. Disinfect tools between each cut with products such as "Lysol," "Listerine," or rubbing alcohol. Tests have shown that "Pine-Sol" and household bleach are highly corrosive to metal tools.



Allow evergreen trees to grow in their natural form. **Don't prune into the inactive center (no needles or leaves attached) of whorl-branched conifers** because new branches won't form to conceal the stubs.

When a tree's leader is lost due to storm damage or disease, replace it by splinting to a vertical position the upper lateral on the highest branch. Prune all laterals immediately below the new leader. Use wood or flexible wire splints, removing them after one growing season.

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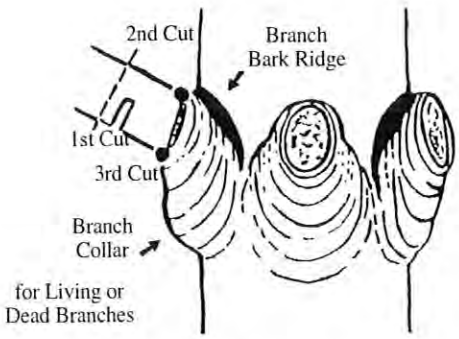
Use a splint to train a replacement leader

How to Prune

Current pruning recommendations advise against pruning branches flush to the trunk. Flush cutting is harmful in several ways: it damages bark as pruning tools rub against the trunk, it removes the **branch collar**, and it goes behind the **branch bark ridge**. The branch collar is the swollen area of trunk tissue that forms around the base of a branch. The branch bark ridge is a line of rough bark running from the branch-trunk crotch into the trunk bark, less prominent on some trees than on others.

The best pruning cut is made outside the branch collar, at a 45 to 60 degree angle to the branch bark ridge. Leave the branch collar intact to help prevent decay from entering the trunk.

Whenever removing limbs greater than one inch in diameter, use the three-cut method to avoid tearing bark. First, about 12 inches from the trunk, cut halfway through the limb from the underside. Second, about 1 inch past the first cut, cut through the limb from the top side. The limb's weight will cause it to break between the two cuts. Make the third cut outside the branch collar, as described in Publication 430-456.



Branch bark ridge and branch collar on conifers

Don't coat pruning cuts with tree paint or wound dressing, except for control of certain disease-carrying insects. These materials won't prevent decay or promote wound closure. Some tests, however, have shown wound dressings to be beneficial on trees that are susceptible to canker or systemic disease.

Pines and other whorl-branched conifers become denser if new growing tips ("candles") are pinched in half as they expand in the spring. Pinch by hand, as pruning shears will cut the expanding needles and leave them with brown tips.

Pinch back pine *candles*

When to Prune

Most evergreen pruning is done for corrective reasons, so seasonal timing is not as important as it is for deciduous species. Pruning during dormancy is the most common practice and will result in a vigorous burst of spring growth. Whenever unexpected damage from vandalism or bad weather occurs, prune immediately.

There are, however, certain evergreen pruning activities for specific times of the year. Prune random-branched conifers in early spring when new growth will cover the pruning wounds. "Candles" of whorl-branched conifers must be pinched back in mid to late spring. Maintenance pruning of random-branched conifers is done in summer to keep plants within a desired size range. Remove spent flowers of evergreen magnolias at the end of their blooming season to stimulate new growth and development of a thicker crown. During the Christmas season, minor pruning for decorative purposes usually causes no harm.

Whenever possible, avoid pruning evergreen trees in late summer and early fall. Pruning at this time can stimulate new growth that may not harden off before winter, and thus may be damaged or killed by the cold.

(See VCE Publication 430-462, *Evergreen Tree Pruning Calendar*)

Virginia Cooperative Extension

PUBLICATION 430-458

A Guide to Successful Pruning

Stop Topping Trees

Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

What is "topping"?

Topping occurs when the vertical stem (**leader**) and upper primary limbs (**scaffold branches**) on mature trees are cut back to stubs at uniform height. Topping is also referred to as heading, stubbing, or dehorning.

How does topping damage trees?

1) **Topping reduces food-making capacity.** Trees require a large leaf surface area to provide food for maintenance and growth. Topping cuts off a major portion of the tree's food-making potential and depletes the tree's stored reserves.

2) **Topping stimulates undesirable "water sprout" growth.** While removing most of the buds that would form a normal branch system, topping often stimulates the regrowth of dense, unattractive, upright branches (water sprouts) just below the pruning cut. Water sprout regrowth is vigorous. A topped tree will rapidly return to its original height, but will lack its original form.

3) Topping leava large wounds. The branch wounds left from topping are slow to close, therefore more vulnerable to insect attacks and fungal decay. An invasion by either pest can spread into the trunk, killing the tree.

4) **Topping creates a hazard.** Weakened stubs are more prone to wind and storm breakage because they generally begin to die back or decay.

S) **Topping injures bark.** Increased sun exposure on trunk and branches can lead to severe bark damage.

6) **Topping disfigures trees**. Ugly branch stubs, conspicuous pruning cuts, and a broom-like branch growth replace natural beauty and form. Topping reduces the real estate value of trees by 20 - 100 percent. A correctly trimmed tree increases in value at each pruning.

Before Tree Topping *After*

Why are trees topped?

Some homeowners and unprofessional tree pruners practice topping whenever trees reach an undesirable height. They mistakenly believe that topping will reduce the storm hazard of falling branches, when in fact, topping has the opposite effect. People also top trees when they interfere with utility wires, buildings, solar collectors, or sunny garden areas.

Selection of trees that only reach desired maximum heights eliminates severe pruning later. If you must prune a tree heavily every five to seven years, the tree is too large for the site. Replace it with a smaller species.

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The National Arborist Association considers topping an unacceptable practice and advises against it. Unfortunately, even some legitimate tree service companies indiscriminately top trees. Before selecting a tree service, find out which companies advocate topping and avoid patronizing them.

What are the alternatives?

In order to avoid topping, newly planted trees should be properly pruned to develop a good branch structure as they grow. When a mature tree's height must be reduced, an alternative to topping is "**drop-crotching**".

Drop-crotching is a type of thinning cut that reduces a tree's size while preserving its natural shape. To drop-crotch, select and cut higher branches back to laterals at least one-third the diameter of the limbs being removed. Cut outside the branch collar at a 45 to 60 degree angle to the branch bark ridge. Leave the branch collar intact to help prevent decay from entering the trunk. This type of thinning cut will stimulate growth throughout the tree and discourage water sprout development.

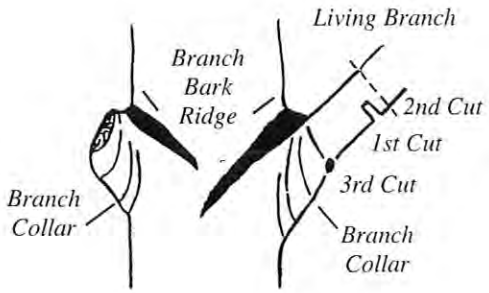
Drop-crotching

Lateral limbs are pruned where they join large diameter side branches.

The center leader is cut back to a large diameter secondary branch so that a modified leader remains.

This does not change the direction of growth. It encourages stimulation of the apical growth point.

Whenever removing limbs greater than 1 inch in diameter, use the three-cut method to avoid tearing bark. First, about 12 inches from the trunk, cut halfway through the limb from the underside. Second, about 1 inch past the first cut, cut through the limb from the top side. The limb's weight will cause it to break between the two cuts. Make the third cut outside the branch collar, as described earlier. Use a handsaw to provide greater control.



Branch bark ridge and branch collar

Don't coat pruning cuts with tree paint or wound dressing, except for control of certain disease-carrying insects. These materials won't prevent decay or promote wound closure.

Can topping be corrected?

A professional arborist can improve the condition of a tree, even after it's been severely topped and shows heavy water sprout regrowth. As the water sprouts begin to gain caliper, they can be selectively "thinned out" using properly placed branch collar cuts. New growth can be directed outward to expand and round out the crown. This process will need repeating for a few years. The scars, both physical and visual, will never completely disappear.

A wiser alternative to topping is careful selection and training of your young trees. Avoid topping altogether. Allow your trees to realize their full potential for health and beauty in the landscape.

Virginia Cooperative Extension

PUBLICATION 430-459

A Guide to Successful Pruning

Pruning Shrubs

Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

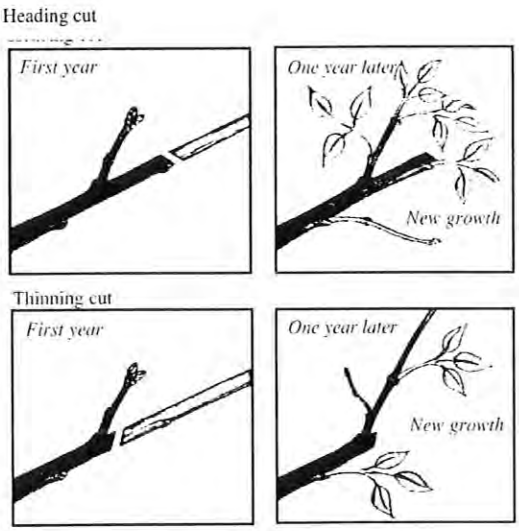
Growth Habit

Understanding the **natural "habit"** or **shape** of shrubs will help you determine how to prune them. All shoots grow outward from their tips. Whenever tips are removed, lower buds are stimulated to grow. Buds are located at nodes, where leaves are attached to twigs and branches. Each node produces from one to three buds, depending on shrub species.

Shrubs have **mounding**, **cane**, or **tree-like** growth habits. Those with mounding habits, such as evergreen azalea and spirea, generally have soft, flexible stems, small leaves, and are often used in mass plantings.

Shrubs with cane habits include forsythia and nandina. These shrubs spread by sending up erect new branches, called canes, from their base.

Tree-like shrubs have woodier, finely divided branches. Witch hazel and rhododendron are examples of shrubs with tree-like habits.

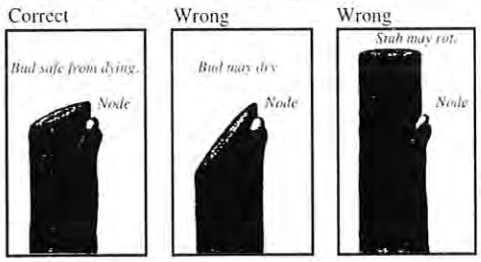


Heading and thinning cuts
Heading and thinning cuts have different effects on subsequent growth.

How to Prune

There are two basic types of pruning cuts: heading cuts, and thinning cuts. Heading cuts stimulate growth of buds closest to the wound. The direction in which the top remaining bud is pointing will determine the direction of new growth. Make heading cuts selectively to reduce shrub height and retain natural form. Non-selective heading cuts made indiscriminately will stimulate rapid regrowth from buds below the cut. These vigorous shoots are unattractive and make shrubs bushier, but not smaller. Non- selective heading cuts are only justifiable when using hedge clippers on a hedge or topiaried shrub.

Thinning cuts remove branches at their points of origin or attachment. Used in moderation, thinning cuts reduce shrub density without stimulating regrowth.



Proper pruning angle

Make pruning cuts correctly. For heading cuts, prune 1/4 inch above the bud, sloping down and away from it. Avoid cutting too close, or steep, or the bud may die. When pruning above a node with two or more buds, remove the inward-facing ones. Make thinning cuts just above parent or side branches and roughly parallel to them.

Don't coat pruning cuts on shrubs with paint or wound dressing. These materials won't prevent decay or promote wound closure.

Maintenance Pruning

Deciduous shrubs require maintenance pruning to keep them healthy and in scale with their surroundings. Maintenance

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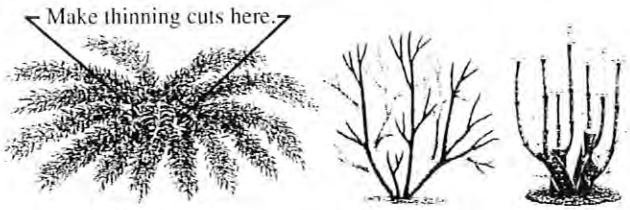
pruning practices should begin at the time of planting, or after rejuvenation of older shrubs.

Always remove dead, diseased, or broken branches promptly. When pruning dead or diseased branches, make thinning cuts into healthy wood, well below the affected area. Disinfect tools between each cut with products such as "Lysol," "Listerine," or rubbing alcohol. Tests have shown that "Pine-Sol" and household bleach are highly corrosive to metal tools.

To reduce the height of shrubs with a cane habit, first remove the tallest canes by cutting or sawing them out near ground level. Then, thin out any canes crowding the center, as well as those growing in an unwanted or unruly direction.

For height maintenance of mounding-type shrubs, prune only the longest branches. Make thinning cuts well inside the shrub mass where they won't be visible. This method reduces mounding shrubs by up to one-third their size without sacrificing their shape.



Mounding Tree-like Cane

Shrubs with a tree-like habit are the most difficult to shorten. After removing any rubbing branches, prune to open up the center of the shrub. Keep the crown open and maximize light penetration by careful use of thinning cuts. Prune branches that touch the ground and suckers originating from the roots. Wait until the very end of the job to make any heading cuts. Tree-like shrubs can usually tolerate removal of one-eighth to one-fourth of their branches.

Rejuvenation Pruning

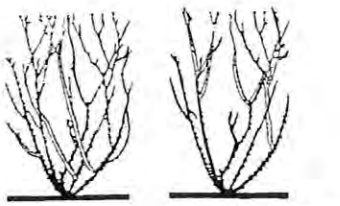
Older shrubs often grow out of proportion with their surroundings, and may have large amounts of unproductive wood. Two techniques are used to restore old shrubs, provided they still have sufficient vigor and are growing in a favorable location. Keep the following in mind with rejuvenation pruning:

1) **Select an appropriate species.** Not all shrubs respond well to drastic pruning.
2) **Observe proper timing**. The preferred time for renovative pruning is just before bud break in early spring.
3) **Give extra care to heavily pruned shrubs.** Fertilization, watering, and pest control will be critical factors.
4) **Consider the shrub's new appearance.** What will be the immediate impact on the landscape?

Extensive rejuvenation

The first technique involves complete removal of the entire plant 6-10 inches above the ground. Use heavy lopping shears and a pruning saw. Remove half of the new canes that develop by mid- summer, and head back some of the remaining canes. When using a heading cut, be sure to prune to outward-pointing buds so that the inner portion does not become too dense. Shrubs that tolerate extensive rejuvenation are: abelia, dogwood, honeysuckle, hydrangea, lilac, mallow, rose-of-Sharon, spirea, and St. John's wort (hypericum).

The second technique for shrub rejuvenation removes growth more gradually. The first year, remove one-third of the oldest, unproductive branches. The next year, take one-half of the old, lingering stems. Finally, in the third year, prune out the remainder of the old branches. New, productive stems should quickly replace the old wood. This method takes longer to complete, but the shrub stays more attractive throughout the rejuvenation period.



Unpruned shrub Gradual rejuvenation

When to Prune

Pruning at different seasons triggers different responses. Late winter or early spring, before bud break, is usually the best time to prune many species because new tissue forms rapidly. However, pruning should be delayed for most spring-blooming shrubs until immediately after flowering to avoid reducing the floral display.

Summer pruning tends to suppress growth of both suckers and foliage. Summer-blooming shrubs should be pruned in early spring prior to bud set, or in summer immediately following flowering.

Late summer or early fall pruning causes vigorous regrowth, which in some cases may not harden off by winter, leading to possible cold damage. Whenever unexpected damage from vandalism or bad weather occurs, prune at once.

(See VCE Publication 430-462, *Shrub Pruning Calendar*)

Virginia Cooperative Extension

PUBLICATION 430-461

A Guide to Successful Pruning

Evergreen Tree Pruning Calendar

Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

Comments:

1.) Seldom needs pruning - remove multiple leaders, dead and broken branches
2.) Don't prune into old wood having no leaves or needles
3.) Prune during growing season to make more compact or dense
4.) To avoid reducing berry production, don't prune during bloom period
5.) Prune to prevent oak wilt infection
6.) Prune to remove cankers
7.) Flower buds set on previous season (old) wood; winter pruning will reduce spring flowering

= Best time to prune

= Do not prune except to correct damage, hazards or structural defects

Where no or timing is not critical

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Comments
Arborvitae	✓	✓			✓	✓	✓				✓	✓	1,2
Atlas Cedar	✓	✓									✓	✓	1,2
Deodar Cedar	✓	✓			✓	✓					✓	✓	1,2,3
Chamaecyparis	✓	✓									✓	✓	1,2
Fir	✓	✓									✓	✓	1,2
Hemlock				✓	✓	✓	✓						1,2, 3
Holly (Evergreen)	✓	✓									✓	✓	4
Juniper/Red Cedar	✓	✓									✓	✓	1,2
Leyland Cypress	✓	✓					✓				✓	✓	1,2,6
Magnolia, Southern	✓	✓									✓	✓	1,7
Oak, Live	✓	✓									✓	✓	1,5
Pine				✓	✓	✓							1,2,3
Spruce					✓	✓							1,3

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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Comments
Goldenraintree										❦	❦	❦	
Hackberry													2
Hawthorn						❦	❦						4
Hickory													
Honeylocust									❦	❦			
Horsechestnut					❦	❦	❦						4
Katsura													
Linden								❦	❦	❦			
Magnolia					❦	❦	❦						4
Maple					❦	❦	❦				❦	❦	1,2
Mimosa													
Mountain Ash													
Mulberry													
Nyssa, Black Gum													
Oak											❦	❦	2
Peach, Flowering						❦	❦						4
Pear, Flowering						❦	❦						4
Plum, Flowering & Purple						❦	❦						4
Poplar										❦	❦	❦	1
Redbud					❦	❦	❦						2,4
Serviceberry					❦	❦	❦						4
Sophora										❦	❦	❦	
Sourwood										❦	❦	❦	
Stewartia	❦											❦	
Sweetgum													
Sycamore, Plane													
Tuliptree													
Willow													1
Zelkova													

❦ = Best time to prune

= Do not prune except to correct damage, hazards or structural defects

Where no ❦ or [ ] timing is not critical

Exception: Timing varies across USDA climate zones - zones within Virginia range from 8a in the Virginia Beach area to 5b along the West Virginia border

Virginia Cooperative Extension

PUBLICATION 430-462

A Guide to Successful Pruning

Shrub Pruning Calendar

Susan C. French, Extension Technician
Bonnie Lee Appleton, Extension Horticulturist

Comments:

1.) Flowers are produced on new (current season) wood
2.) Flowers are produced on wood from past season, pruning while dormant will reduce flowers
3.) Make pruning cuts well below diseased wood (fire blight) – disinfect shears between cuts
4.) Remove old stems to ground yearly to renew
5.) Midseason shear if a formal hedge is desired
6.) Do not cut into old wood that has no leaves or needles
7.) Spring/summer prune to remove azalea caterpillars and galls
8.) Fall/early winter pruning can reduce winter hardiness
9.) Snap candles (new growth) in half when needles are 1/2 to 2/3 their normal mature length

= Best time to prune

= Do not prune except to correct damage, hazards or structural defects

Where no ❦ or ▭ timing is not critical

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Comments
Abelia	❦	❦									❦	❦	1,4
Almond, Flowering					❦	❦	❦						2,4
Arborvitae	❦	❦	❦			❦	❦				❦	❦	6
Aucuba						❦	❦						2
Azalea, Deciduous					❦	❦	❦						2
Azalea, Evergreen					❦	❦	❦						2,7
Barberry, Deciduous					❦	❦	❦						2,4
Barberry, Evergreen					❦	❦	❦						2,4
Bayberry			❦	❦	❦	❦							
Beautyberry	❦	❦	❦								❦	❦	1
Beautybush													
(Kolkwitzia)						❦	❦						2,4
Boxwood	❦	❦	❦	❦	❦	❦	❦				❦	❦	5
Broom (Cytisus)						❦	❦						2

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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Comments
Butterfly-bush	❦	❦	❦								❦	❦	1
Camellia, Japanese				❦	❦	❦							2
Camellia, Sasanqua			❦	❦	❦								1
Chastetree (Vitex)	❦	❦	❦										1
Cherrylaurel (Prunus)	❦	❦	❦	❦	❦	❦	❦				❦	❦	5
Clethra, Summersweet	❦	❦	❦								❦	❦	1
Cotoneaster, Deciduous	❦	❦									❦	❦	3
Cotoneaster, Evergreen	❦	❦									❦	❦	3
Crape Myrtle	❦	❦	❦										1,8
Daphne, Fragrant or Winter				❦	❦	❦	❦						2
Deutzia						❦	❦						2,4
Dogwood, Redtwig	❦	❦	❦								❦	❦	1,4
Eleagnus, Thorny	❦	❦	❦	❦	❦	❦	❦				❦	❦	
Euonymus, Deciduous	❦	❦	❦								❦	❦	
Euonymus, Evergreen	❦	❦	❦	❦	❦	❦	❦				❦	❦	5
Forsythia				❦	❦	❦	❦						2,4
Fothergilla					❦	❦	❦						2
Gardenia	❦	❦									❦	❦	1
Harry LauderÕs Walking Stick					❦	❦	❦						2
Hibiscus, Rose-of-Sharon, Althea	❦	❦	❦								❦	❦	1
Holly, Deciduous	❦	❦										❦	1
Holly, Evergreen						❦	❦						2,5
Honeysuckle					❦	❦	❦						2,4,5
Hydrangea, Spring-blooming						❦	❦						2
Hydrangea, Summer-blooming	❦	❦	❦										1
Hypericum, St. Johnswort	❦	❦	❦										1
Indian Hawthorn (Raphiolepis)					❦	❦	❦						2
Jasmine, Winter				❦	❦	❦	❦						2
Juniper	❦	❦	❦								❦	❦	6
Kerria (Globeflower)						❦	❦						2,4
Leucothoe						❦	❦						4
Lilac						❦	❦						2,4
Mahonia, Oregon Grapeholly					❦	❦	❦						2,4
Mockorange						❦	❦						2,4

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Comments
Mountain-laurel (Kalmia)						❦	❦						2
Nandina	❦	❦	❦										1,4
Osmanthus, Holly	❦	❦				❦					❦	❦	1,5
Pearlbush						❦	❦						2
Photinia	❦	❦			❦	❦	❦				❦	❦	5
Pieris					❦	❦	❦						2
Pine, Mugo	❦			❦	❦	❦						❦	9
Pittosporum		❦	❦	❦	❦								
Privet, Deciduous (Ligustrum)	❦	❦	❦	❦	❦	❦	❦				❦	❦	5
Privet, Evergreen (Ligustrum)	❦	❦	❦	❦	❦	❦	❦				❦	❦	5
Potentilla	❦	❦	❦							❦	❦	❦	1,4
Pyracantha						❦	❦						2,3
Quince				❦	❦	❦	❦						2,4
Rhododendron						❦	❦						2
Rose		❦	❦				❦	❦					1,3,4
Serviceberry				❦	❦	❦							
Smoke Tree	❦	❦									❦	❦	1
Spirea, Springblooming					❦	❦							2
Spirea, Summerblooming	❦	❦											1
Sumac	❦	❦	❦					❦	❦	❦	❦	❦	1,4
Sweetshrub, Carolina Allspice							❦	❦					1
Viburnum, Decid.					❦	❦	❦						2,4
Viburnum, Evergr.					❦	❦							2
Weigela					❦	❦	❦						2,4
Willow, Pussy				❦	❦	❦	❦						2
Witchhazel				❦	❦	❦	❦						2
Yew	❦	❦	❦		❦	❦	❦				❦	❦	5

Exceptions:

1.) Timing varies across USDA climate zones - zones within Virginia range from 8a in the Virginia Beach area to 5b along the West Virginia border

2.) Prune anytime to correct vandalism damage and hazards created by equipment or weather

3.) Hedges maintained formally (tight shapes) require more pruning than hedges maintained informally (in their natural form)

Virginia Cooperative Extension

PUBLICATION 430-451

Pruning Crapemyrtles

Bonnie Appleton, Extension Horticulture Specialist, Hampton Roads Agricultural Research and Extension Center; James Orband, Extension Horticulture Agent, York County; Kathleen Bartkus, Graduate Student, Virginia Tech.

The appeal of crapemyrtle

One of Virginia's most popular yet mistreated landscape plants is the beautiful crapemyrtle (*Lagerstroemia indica, L. fauriei,* and *L. indica* with *L. fauriei* or *L. speciosa* hybrids). Selected and prized for their long summer bloom period (often called the "plant of the 100 day bloom"), cultivars have a range of flower colors, with an interesting seed head following the flower. In addition, crapemrytles have lustrous green leaves that change to bright fall colors, subtle to stunning multicolored bark, and unique winter architecture that makes this plant exceed most landscape choices for four-season interest and appeal.

Choose the right cultivar for your landscape

Crapemyrtles are low-maintenance and easy to grow if provided with sunny locations and soil with moderate moisture and fertility. Various nurseries, private breeders, and The United States National Arboretum have developed a wide variety of crapemyrtle cultivars (cultivated varieties) that can fit almost any landscape need. Cultivars now range in size from dwarfs that can be grown in containers and hanging baskets, or used as shrubby ground covers, to shrub (up to about 15 feet) and tree forms (to 25 to 30 feet).

Choosing the right crapemyrtle for your landscape requires evaluating where it will be planted, not just what color its flowers are. Will the plant be used in a perennial border or near a building foundation, or will it be a centerpiece specimen in a large grassy area or bed? The smaller the space available, the smaller the crapemyrtle (at maturity) should be, so be sure to

Crapemyrtles range in size from small, low shrubs to small trees.

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choose a cultivar that will not require pruning to make it "fit" into the landscape (see cultivar listing at the end of this publication).

These crapemyrtles require yearly pruning because they are a cultivar that grows too large for this location.

Preventing "crape murder"

Crapemyrtles generally require a minimum amount of pruning when properly chosen and maintained. Though some pruning may be beneficial, there is a definite right way and a definite wrong way to prune these plants, with the wrong way often referred to as "crape murder."

The wrong way to prune. A misconception that crapemyrtles need to be severely cut back in late winter or early spring in order to flower well in summer has led to the unhealthy practice of topping these plants. If necessary, crapemyrtles can be reduced in height without being topped.

Topping (buck horning or dehorning) involves cutting stems back at an arbitrarily chosen height rather than pruning back to a bud, side branch, or main stem. Topping trees and shrubs is harmful in many ways and regarded as an unacceptable practice by trained horticulturists and arborists (see *A Guide to Successful Pruning: Stop Topping Trees!*, Virginia Cooperative Extension publication 430-458). Research shows that stem decay significantly increases when topping cuts are made, and that more dead branches also occur within the canopy (Gilman, E.F. and G.W. Knox. 2005. Pruning type affects decay and structure of crapemyrtle. *Journal of Arboriculture* 31(1):48-52.).

Topping crapemyrtles results in numerous vigorous shoots originating from the top of the cut stems. This ruins the natural form of the plant, which is especially obvious in winter after leaf drop. These quick growing, succulent shoots are poorly attached. The large bloom that develops on the end of each shoot is top heavy, often causing the shoot to break off in strong winds.

All of these crapemyrtles have been improperly pruned or topped.

Topping crapemyrtles can lead to stem decay and eventual plant death.

In addition, topping can greatly reduce the number of bloom days because only one main flower cluster is borne on the end shoots instead of many smaller flower clusters with staggered bloom times.

Numerous vigorous shoots develop where stems are topped (top left and top right). These stems may become top-heavy with flower clusters (center), and will often break off (right).

The same cultivar, naturalistically pruned (above) and topped (right). Note the "witches' broom" appearance of the topped plant.

Another problem caused by topping is increased susceptibility of the succulent shoots to pest problems (especially aphids), resulting in otherwise unnecessary use of pesticides.

Plants wounded by topping often produce large numbers of basal suckers. Though re-suckering can sometimes be suppressed by applying naphthalene acetic acid (NAA) after pruning, picking the wrong cultivar relative to height and then having to repeatedly top or prune back the plant results in added expense. Avoid fertilizing crapemyrtles unless a soil test indicates a special need because excessive fertilization can encourage sucker growth and reduce flowering.

Basal suckers frequently develop on topped plants (left and below), and will need to be cut back each year (bottom).

Crapemyrtles that have previously been topped can, to an extent, be "untopped." Select two or three of the stronger shoots per "topping knuckle" (the knob that develops where the topping cut was made) and prune the others off. Then prune (head back) the selected shoots above outward facing buds to begin to develop a new branch pattern. The plant will never again have its true or natural crapemyrtle form, but it can be improved.

The right way to prune. Some of the prettiest crapemyrtles in Virginia are old, unpruned plants along roadsides. Individual flower clusters are often smaller but the number of flower clusters is generally far greater than on over-pruned plants, and the bloom season is extended.

Because crapemyrtles are summer-blooming trees, producing flowers from new wood or current season stems, the proper time to prune is late winter or early spring prior to new growth. Do not prune crapemyrtles in late summer or early fall because new shoots that grow may freeze if they fail to go fully dormant.

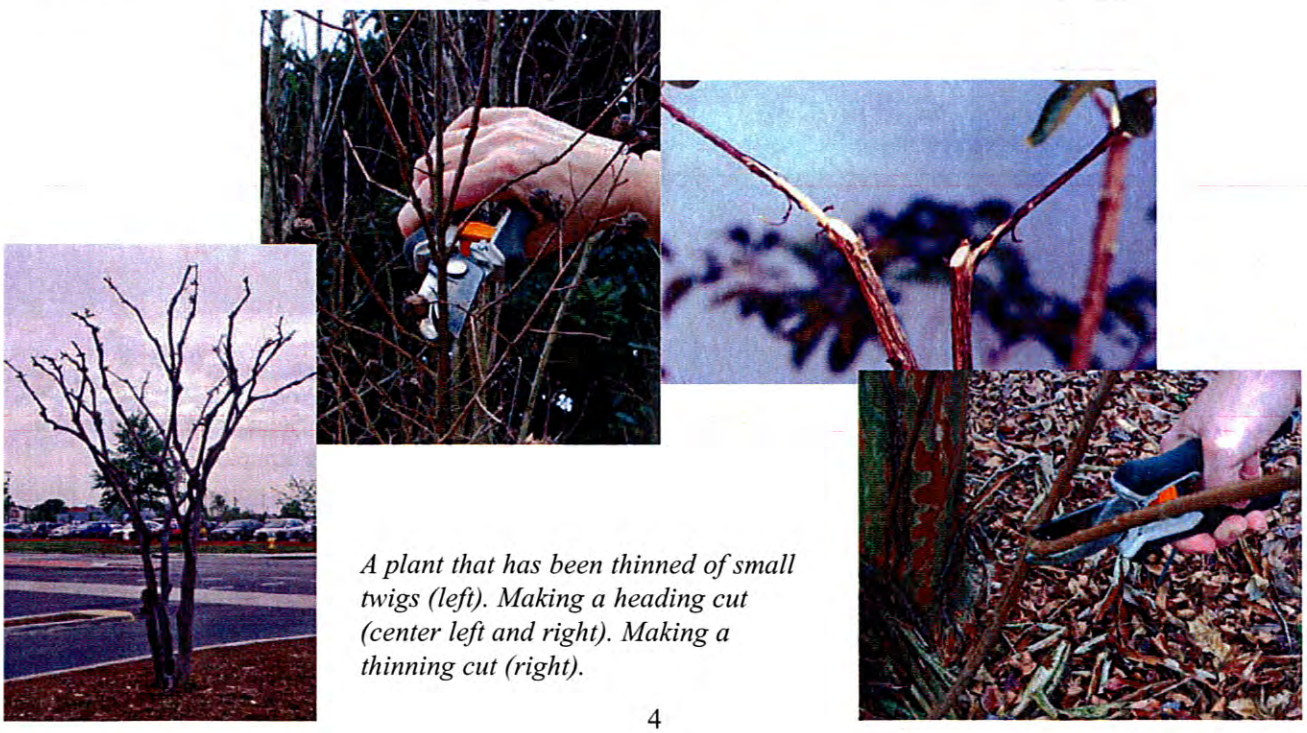
Pruning a crapemyrtle requires the same procedures used for any tree or shrub. Proper pruning techniques will ensure an abundance of blooms, as well as a healthy plant for many years to come. See *A Guide to Successful Pruning: Pruning Basics and Tools*, Virginia Cooperative Extension publication 430-455, and *A Guide to Successful Pruning: Pruning Shrubs*, Virginia Cooperative Extension publication 430-459, for details.

When pruning crapemyrtles, practice naturalistic pruning that maintains the shape and form of each unique cultivar. Start early in the life of the plant by removing dead, diseased, broken, crossing, and rubbing branches to improve overall plant health and appearance. A well-trained crapemyrtle will not need yearly pruning so continue that practice only as needed to develop sound structure and enhance the plant's health.

If only part of a branch needs to be removed make a heading cut above an outward facing bud or side branch. If an entire branch needs to be removed, make a thinning cut just outside the branch collar of the stem to which the branch is attached. Do not apply any materials (pruning paint, etc.) to the cut ends. Encouraging new stems to grow away from the center opens up the plant, increasing light penetration and air movement, and reduces potential wind damage and insect (aphids) or disease (powdery mildew) problems.

If suckers develop, rub them off while they're young and succulent or prune them off with a thinning cut back to the main stem. Sometimes branch tips are cut back after flowering occurs to remove old flower clusters or prevent seedpods from forming. Though summer tip pruning may lead to a second flowering in cultivars that bloom before mid-July, its generally impractical, produces inconsistent results, and isn't necessary to promote flowering the following year.

If larger and more profuse flowers are desired on dwarf crapemyrtles used in containers or as low plants in shrub borders, prune them back severely (to within six inches of the ground) each year.



A plant that has been thinned of small twigs (left). Making a heading cut (center left and right). Making a thinning cut (right).

Select Crapemyrtle Cultivars for Virginia

Cultivar	Flower Color	Trunk Color	Fall Foliage Color	Form
Dwarf shrub or ground cover - 3 to 5 feet				
Centennial	bright purple	tan	orange	compact globe
Chickasaw	light pinkish lavender	light gray	bronze red	compact miniature
Pocomoke	deep rose pink	light gray	bronze red	compact miniature
Victor	dark red	tan	yellow	compact upright
Semi-dwarf shrub – 5 to 10 feet				
Acoma	white*	light gray	red purple	spreading semipendulous
Caddo	bright pink	light cinnamon brown	orange red	low spreading
Hopi	light pink*	light gray brown	orange red	dense, rounded
Pecos	clear medium pink*	dark brown	maroon	low dense
Tonto	fuchsia	cream to taupe	maroon	dense
Zuni	medium lavender	light brown gray	dark red orange	dense
Large shrub to small tree – 10 to 20 feet				
Catawba	violet purple	light gray brown	red orange	dense
Centennial Spirit	dark wine red	beige	red orange	upright
Comanche	coral pink	light sandalwood	purple red	broad
Lipan	medium lavender	near white	orange russet	broad
Osage	clear pink*	mottled chestnut brown	red	open spreading
Pink Velour	hot pink	tan	red	upright
Powhatan	medium purple	light gray brown	yellow orange	dense
Raspberry Sundae	pinkish red with white	tan	maroon	almost columnar
Sarah's Favorite	white	cinnamon brown	red orange	upright
Sioux	dark pink	medium gray brown	red purple	dense upright
Yuma	lavender	light gray	yellow orange	broad
Large tree – 20 feet and larger				
Biloxi	pale pink	dark brown	orange red	upright vase
Choctaw	bright pink	light cinnamon brown	bronze maroon	upright rounded
Dynamite	cherry red	light beige	crimson	upright rounded
Miami	dark coral pink	dark chestnut brown	red orange	rounded vase
Muskogee	light lavender	light gray brown	red orange	broad tall
Natchez	white	cinnamon brown	yellow to red orange	tall arching
Potomac	clear pink	light gray brown	yellow orange	upright
Red Rocket	cherry red	tan	red orange	upright
Tuscarora	dark coral pink*	mottled light brown	red orange	vase
Tuskegee	dark pink to red	mottled light gray to tan	red orange	broad

**high recurrent flowering*

Single vs. multiple-trunk tree forms

If you want a tree-form crapemyrtle, select a taller growing cultivar and be sure you have adequate space for its crown to mature without excessive pruning. Crapemyrtles to be used as small trees can be purchased or pruned either into single or multiple trunk forms. To develop a single trunk form, start with just one stem or rooted cutting. To develop a multi-trunk tree form, select three to five evenly spaced stems and remove all others at ground level. As the tree grows, gradually remove lower branches (crown raising) to no more than one-third to one-half way up the plant.

The Natchez cultivar trained as a single stem (left) and a multi-stem (right).

Continue to remove lower branches until the desired form or clearance under the tree is attained. Limbing up exposes more attractive bark for winter landscape interest. Also continue to remove small interior branches.

Selecting crapemyrtle cultivars

The preceding table of cultivars commonly grown and sold in Virginia can help with selecting the right crapemyrtle cultivar for specific landscape situations or locations. (Heights are approximate and will vary across Virginia based on hardiness zone, other local environmental conditions, and maintenance.)

Resources on the Web

For an extensive listing of crapemyrtle cultivars consult Crapemyrtle in Florida - *www. edis.ifas.ufl.edu/pdffiles/MG/MG26600.pdf*

To see pictures of many of the cultivars well adapted to Virginia go to The United States National Arboretum Crapemyrtle Introductions Photo Gallery on the Web at *http://www.usna.usda.gov/PhotoGallery/CrapemyrtleGallery/*

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CALENDAR FOR PRUNING LANDSCAPE TREES AND SHRUBS FOR THE VIRGINIA PENINSULA

The following information will guide you through the pruning process. There are BEST times to prune and we captured those times in this calendar. You can prune dead, diseased, damaged or dangerous plant parts throughout the year. (See page 3)

January Prune and bring in longer branch cuttings from forsythia, pussy willow, and other early spring flowering shrubs. Placed in water, the warmer temperatures indoors can force bloom.

February An excellent month to prune <u>most</u> plants. <u>Do not prune spring flowering plants</u>. Prune shade trees; trees will "bleed" which will not hurt them. Prune tree and small fruit. Prune lateral branches 1/4" above the bud at a 45 degree angle. Do not cut off the branch collar on trees. (See page 4) Prune hybrid tea and grandiflora roses to 3 or 4 strong canes 18 inches long by *February 15.* Prune summer blooming plants such as crape myrtle, vitex, and butterfly bush. Prune santolina back hard; thin nandina stalks and reduce canes by 1/3. Spray a horticultural dormant oil (follow label for temperatures) on plants to reduce pest population. Remove all debris, including fallen leaves, from area. Put 3-4 inches of mulch around plants. Keep mulch off of plant stem (collar).

March "Rejuvenation" pruning, to reduce the size of overgrown broadleaf evergreens should be done the earlier part of this month. If need be, cut well-established plants back to within 12-18 inches of the ground. Fertilize and water. This can be done to gardenia, hollies, ligustrum, nandina, photinia, pyracantha, and other broadleaf evergreens. Refer to the publications listed on the reverse, on other plants because they do not tolerate drastic pruning. Drastic pruning on spring flowering plants now will eliminate spring flowering on those plants. Do not drastically prune needled evergreens.

April Azaleas and other spring flowering plants, such as forsythia, are pruned **immediately after they bloom**. Prune by the renewal method. (See page 4) These plants should not be sheared. Complete pruning by June 1. Mow or cutback evergreen ground covers such as English ivy, vinca major, vinca minor, ajuga, liriope, and mondo [at the highest mower setting > 4 inches]. Do not prune <u>summer</u> flowering plants. These should have been pruned in February. Pruning, by April 10, now will reduce their bloom because they bloom on the current seasons growth.

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May To achieve dense growth on pines, break or cut the new "candles" in half. Pinch annuals to induce branching. Start pinching mums and continue until July 15 for spray types. For large specimen mum blooms, grow 1 to 3 stems per plant and disbud to one bud later in the season.

June Keep faded flowers of annuals and some perennials picked for continuous bloom. Prune climbing roses immediately after blooming. Keep roses open for light and air penetration.

July Light pruning only if any. Heavy pruning will cause stimulation and late season growth that will not be winter hardy. **Cut back** scraggly annuals such as petunia, and **fertilize** for bloom until frost. **Clip** sheared hedges and screens regularly to maintain the desired size - always taper their growth from narrow at the top to broad at the base. Thin out hedges to allow light penetration. (See page 4)

August **Disbud** mums and camellias. Pruning activities on shrubs and trees are on a "have to" basis. Late pruning can stimulate new growth, especially on the peninsula with our late warm summers.

September **Disbud** camellias for larger bloom. **Halt** pruning on all shrubs and trees; the new growth induced by fall pruning is susceptible to winter injury. **Root prune** plants to be moved next year, to encourage development of a fibrous root system and reduce planting shock.

October No drastic pruning this month. Check trees and shrubs and remove any dead or diseased wood.

November **Prune** perennials such as phlox and asparagus to the ground to remove dead stalks and attached insect eggs and diseases. **Prune** back whips on roses to about 4-6 feet; do heavy pruning in February.

December Lightly **Prune** evergreens for use as Christmas decorations.

Anytime **Remove** dead or diseased wood from any tree or shrub. **Prune** the weaker of two rubbing or interfacing branches. Take care not to make bark wounds. **Remove** watersprouts on limbs or suckers at base of plants. Always use the proper tool and make sure it's sharp and clean. Never leave stubs or ragged cuts. Never use pruning paint; let wound heal naturally. Be sure to leave the branch collar.

For further information, contact your local extension office for the following pruning publications or go to www.ext.vt.edu.

Pruning Series

430-455	Pruning Basics and Tools
430-456	Pruning Deciduous Trees
430-457	Pruning Evergreen Trees
430-458	Stop Topping Trees
430-459	Pruning Shrubs
430-460	Deciduous Tree Pruning Calendar
430-461	Evergreen Tree Pruning Calendar
430-462	Shrub Pruning Calendar
422-021	Training and Pruning Apple Trees
426-840	Small Fruit in the Home Garden
426-841	Tree Fruit in the Home Garden

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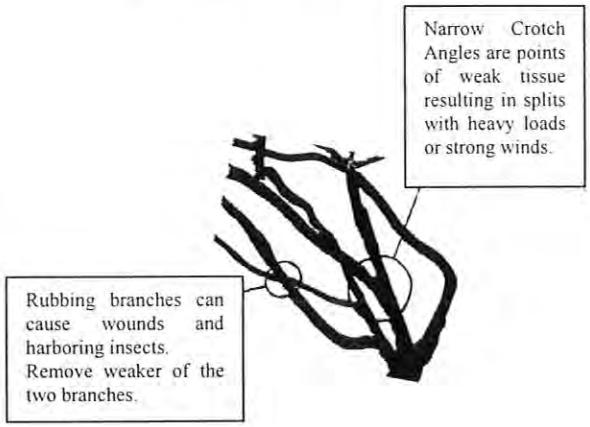
Pruning Ornamental Trees and Shrubs

Pruning can be divided into a three step task: 1) determine the reason for pruning, 2) choose a method that will suit the purpose, and 3) prune. Sharp tools and a clear understanding of some basic principles are invaluable aids.

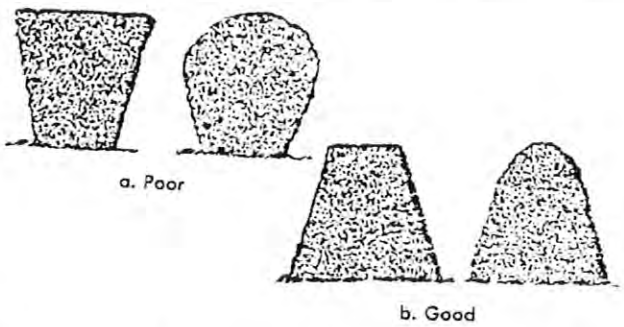
Why Prune?



- **To train young plants** - Young trees need pruning/ training to establish a strong scaffold of major branches and to remove crossing branches and narrow-angle crotches.
- **To maintain tree and shrub health** - Thinning lets light penetrate into the center of the plant, encouraging healthy growth of inner and lower branches. Renewal pruning of older wood encourages new growth that conducts nutrients effectively.
- **To remove dead, diseased, or damaged branches** - This category is the major exception to the rules on when pruning should be done. Diseased areas should be removed as soon as the disease is noticed to stop the disease from spreading in the plant. Remember to cut off the section well beyond (6 - 12 inches) the part that is obviously affected so that all of the disease is removed.
- **To reduce size** - An overgrown plant may be reduced by heading back, or thinning. However, select the proper plant to ensure that the mature height of the plant will not exceed the landscape location. This will reduce the need for reductive pruning.
- **To develop a special form** - Hedges, espalier, and topiary forms are created by pruning to change the natural shape of the plant.

Shaping bushes and hedges

The best hedge shapes are those which allow light to reach the lower part of the plant. Taper sides of hedge to attain the shape of wide at the base and narrow at the top. Informal shapes do not require frequent clipping.



Pruning Methods

Correct pruning can be broken down into two questions: when? and how? Fortunately a few basic rules apply for almost all plants. Non-flowering and summer flowering trees and shrubs should be pruned when they are dormant. February is generally the ideal time. However, spring flowering trees and shrubs should be pruned just after they finish blooming because they set their flowers buds in the previous summer and winter pruning will remove these buds. There are three basic methods of pruning: 1) Heading back, 2) Thinning out, and 3) Renewal pruning. (See page 4)

HEADING CUTS

(HEADING BACK)

This is cutting off the end of a shoot, reducing the plant size and encouraging it to grow fuller. Always cut back to about ¼" above a bud or branch. This pruning method is good for shaping trees and bushes as the direction of new growth can be influenced by where the cut is made. If the end bud is left on the inside of the branch, the new growth will be inward, if the bud is on the outside of the branch, the new growth will be away from the rest of the plant.

THINNING

(THINNING OUT)

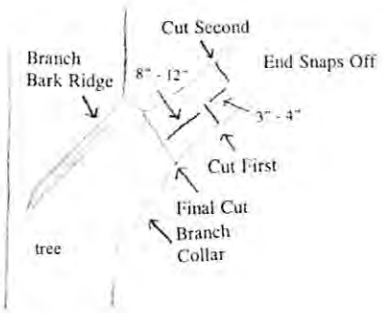
To thin a plant, remove branches by cutting them back to the point where they join the parent stem. This method of pruning is used to encourage the inner part of needle-bearing plants to maintain their needles and to promote leaves in the inner sections of other trees and shrubs. Thinning out can also be used to reduce plant density by selectively thinning out crowding branches.

REDUCTION

(RENEWAL PRUNING)

Renewal pruning is the removal of the oldest branches of a shrub by cutting them off at or near ground level, leaving only young vigorous branches. It is most often used with shrubs that grow in a cane form. Most deciduous shrubs can be rejuvenated by pruning branches at about 18" above the ground.

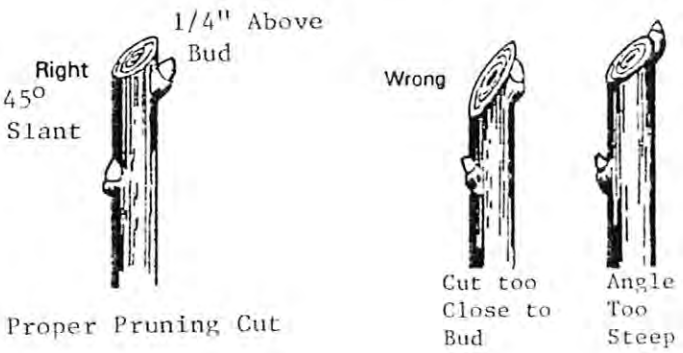
Pruning Cuts Made in the Proper Order

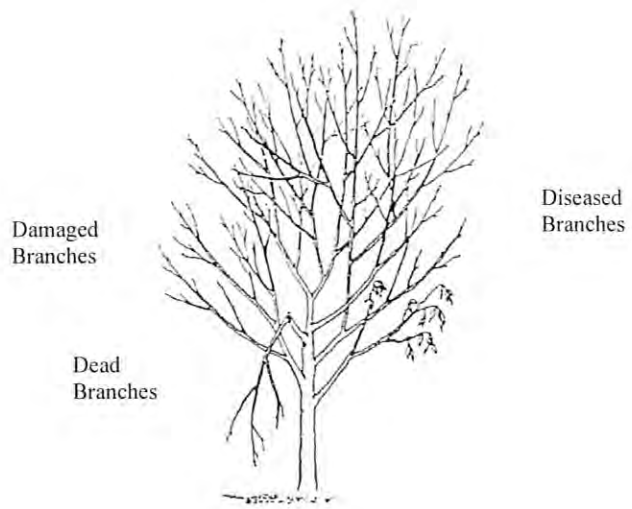


Prune to a branch collar. The resulting wound will heal efficiently and reduce opportunities for rot.

* NO PRUNING PAINT OR OTHER PRODUCTS ON PRUNING WOUNDS

Proper & Improper Pruning Cuts



What to Remove

Remove all broken or dead branches on the tree. Remove infected and infested branches. Remove low hanging, dangerous branches.