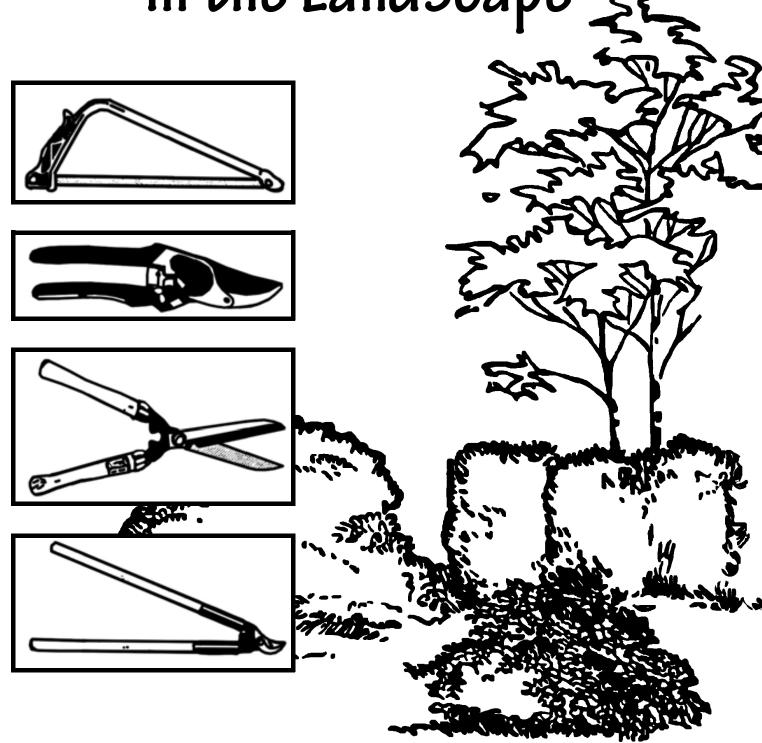


Pruning Ornamental Plants in the Landscape



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# Pruning Ornamental Plants in the Landscape

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Ornamental plants in the home landscape are pruned for many reasons. Some plants are pruned routinely to maintain a desired size or shape. Others are pruned to promote healthy vigorous growth, flowering or fruiting. Sometimes it is necessary to prune shrubs that overgrow their sites, crowd other plants or limit the view from windows. Plants damaged by insects, diseases or freezing injury may require corrective pruning.

Each plant in the landscape has its own growth habit and a different requirement for pruning. Some shrubs have dwarf growth habits and may never require pruning, while vigorous large-growing shrubs may require frequent pruning.

Anyone can prune, but not everyone prunes properly. Improper pruning, or pruning at the wrong time of the year, can result in misshapened plants, reduced flowering or plants that are more likely to be damaged by insects, diseases or winter cold.

This publication provides guidelines for proper pruning that may help assure healthy vigorous plants and lasting landscape beauty. First, we'll discuss the three basic Ts for successful pruning: tools, technique and timing. Then we'll examine the pruning requirements of specific ornamental plants in the home landscape.

## **Pruning Tools**

Like other products on the market today, pruning tools are available in a wide range of brand names, styles and prices. When purchasing tools, shop for quality and durability before price. Look for tool manufacturers that provide replacement parts on request and offer warranties against faulty materials or workmanship.

Most pruning tasks in the home landscape can be done using hand pruners, lopping shears, pruning saws, pole pruners or hedge shears (Figure 1). There are two basic types of **hand pruners**: (1) scissor-action or draw-cut pruners and (2) anvil action or snapcut pruners. The scissor-action pruner has a sharpened blade that cuts by gliding against a thicker sharp blade. The anvil-action pruner has a sharp blade that cuts against a broad, flattened, grooved blade. Scissor-action pruners usually cost more than anvil-action pruners and generally make closer, smoother cuts. Anvil-action pruners can make larger cuts easier than scissor-action pruners. Hand pruners cut small twigs and branches up to ½ inch in diameter. For larger branches, ½ inch to 1½ inches in diameter, lopping shears are best.

**Lopping shears**, sometimes called *loppers*, are like scissor-action hand pruners except they have larger

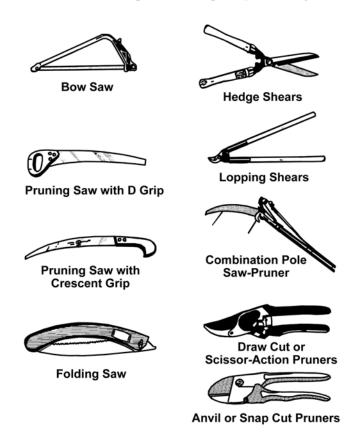


Figure 1. Pruning tools.

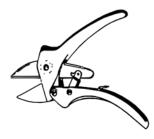


Figure 2. Pruner with ratchet action.

blades and long handles that increase leverage. When using loppers, cut in one smooth stroke to avoid injuring the branch.

Loppers and hand pruners with ratchet action are helpful to people who have arthritis or lack strength in their hands. These tools have built-in ratchets that increase leverage and allow you to prune while exerting minimum hand strength (Figure 2).

Use a **pruning saw** for branches larger than  $1\frac{1}{2}$  inches in diameter. A pruning saw has a narrower blade (for easier maneuvering) and coarser points or teeth than a common carpentry saw. Most pruning saws also have curved blades that cut on the draw stroke (pulling the blade toward you). Handle shapes vary among pruning saws and are a matter of personal preference. One type of pruning saw, the folding saw, is available for safety-conscious individuals. The bow saw, another type of pruning saw, makes large cuts but may be awkward to maneuver in tight areas.

Pole pruners remove branches from trees that cannot be reached from the ground. Most pole pruners have both a cutting blade and a saw. The cutting blade is operated from the ground by a long rope or lanyard that is pulled downward. The pole can be made from aluminum, fiberglass or plastic. Some poles fit together in three 6-foot-long sections, while newer models have a telescoping type of extension. Due to the risk of electrocution, avoid using aluminum handled pole pruners near power lines.

Use **hedge shears** (manual, gasoline-powered, electric) to shear or clip hedges or other plants only when you want a neatly trimmed appearance. Do not cut large branches with hedge shears.

To keep all pruning tools in good shape, sharpen and oil their blades at the end of each season. When sharpening loppers, hedge shears and scissor-action hand shears, sharpen only the outside surfaces of the blades so the inside surfaces remain flat and slide smoothly against one another. It is best to have pruning saws sharpened by a professional. Oil blades by wiping

them with a cloth saturated in household oil, and treat wooden handles with linseed oil.

## **Pruning Technique**

To understand why one pruning technique is preferred over another for a particular plant, and why cuts are made the way they are, it helps to review a basic botanical principle of pruning. The terminal bud (the bud at the end of a branch or twig) produces a hormone called *auxin* that directs the growth of lateral buds (buds along the side of the branch or twig). As long as the terminal bud is intact, auxin suppresses the growth of lateral buds and shoots below the terminal. When you remove the terminal bud by pruning, lateral buds and shoots below the pruning cut grow vigorously. The most vigorous new growth always occurs within 6 to 8 inches of the pruning cut (Figure 3).

## Shearing vs. Thinning

When shrubs are sheared routinely, a lot of dense, thick, new growth is produced near the outer portions of the canopy. As a result, less light reaches the interior portions of the plant, foliage within the canopy becomes sparse and the plant appears stemmy or hollow.

Thinning (cutting selected branches back to a lateral branch, a lateral bud or the main trunk), is usually preferred over shearing. Thinning encourages new growth within interior portions of a shrub, reduces size and gives a fuller, more attractive plant (Figure 4, page 5).

#### Making the Cut

A second botanical principle helps explain what happens when you make a pruning cut. When you cut a branch back to the main trunk, to a lateral branch or to



Figure 3.



Figure 4. Thinning is better than shearing.

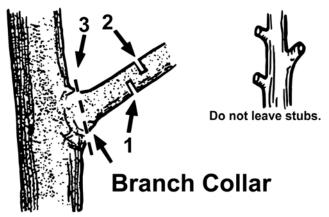


Figure 6. To remove heavy branches without damaging the tree, a three-cut sequence is recommended. Cut to the branch collar (swollen area where the branch joins the main trunk) and avoid leaving a stub.

a lateral bud, a higher concentration of hormones in these areas causes the wound to heal rapidly. When you leave a stub, the distance from the hormonal source increases and the wound heals slower if it heals at all. Insects and diseases may enter the cut portion of a stub and cause it to die back.

Therefore, regardless of whether you are pruning a small twig or a large branch, you can avoid leaving a stub by always cutting back to a bud, a lateral branch or the main trunk (Figure 5).

When you remove large limbs from trees, the bark along the main trunk may strip or tear due to the weight of the falling limb. Avoid damaging the bark by making a "jump cut," which consists of three separate cuts. First, cut about one-fourth to one-half way through the lower side of the limb about a foot from the main trunk. Then make a second cut on top of the limb a few inches away from the first cut. Remove the remaining stub by cutting it back to the branch collar (Figure 6).

Research shows that wound dressing compounds do not promote healing or protect a wound from decay, regardless of the size of the cut. Aesthetically, wound dressings may have some merit, but if you prune properly, the wound heals rapidly and you do not need a wound dressing.

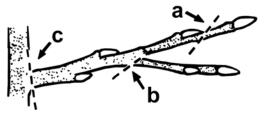
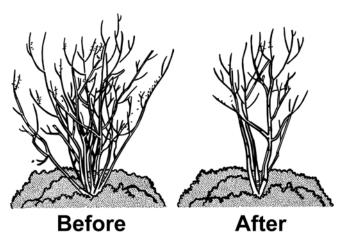


Figure 5. Always cut back to a bud (a), a lateral branch (b) or main trunk (c), and avoid leaving a stub.



**Figure 7.** Multiple trunk tree-form crape myrtle shaped from a shrub.

## **Shaping Tree-Form Shrubs**

Common landscape shrubs can be shaped into tree forms (shrubs shaped like a tree with one or more main trunks). Plants such a crape myrtle, yaupon holly, wax myrtle and wax-leaf ligustrum are commonly pruned to tree forms. The best time to begin a tree form is early March before spring growth begins.

It is easiest to start a tree form from a one-year-old plant, but you can also use older, mature plants. Select one to three of the most vigorous growing branches (depending on the number of main trunks desired) and prune all other branches to ground level (Figure 7). Remove lateral branches that are fewer than 4 feet off the ground along the main trunk and thin the canopy by getting rid of inward growing branches or branches that cross one another. Avoid shearing unless you want a high-maintenance topiary.

You can get a multiple-trunk tree-form from a single trunk by pruning back to ground level, selecting three to five of the most vigorous new shoots during the growing season to serve as main trunks and removing all others.

You can easily remove undesirable shoots by hand while they are young and succulent.



Figure 8. Renewal pruning.

It may take three to five years to shape a tree-form plant, but the interest and accent it lends to the landscape may be worth the extra effort.

#### **Pruning Overgrown Shrubs**

Some homeowners make the mistake of planting large-growing shrubs along the foundation of the home, which eventually overgrow the site, crowd other plants, hide windows and draw attention away from the home. When this occurs, you may need to prune severely (called *renewal pruning*) to bring the plants within bounds.

Renewal pruning means cutting the plants back 6 to 12 inches above ground level (Figure 8). In this instance, timing is more important than technique.

The best time to prune severely is when spring growth begins — mid-March in north Georgia and mid-February in south Georgia. Pruning in late fall or mid-winter may encourage new growth that can be injured by cold. Renewal pruning should result in abundant new growth by mid-summer (Figure 9). Once the new shoots are 6 to 12 inches long, prune the tips to encourage lateral branching and a more compact shrub.

Most broadleaf shrubs (such as azaleas, camellias, ligustrum, abelia, nandina, cleyera and crape myrtle) respond well to renewal pruning. Boxwoods, however, recover slowly and may even die when severely pruned. Junipers, pines, cypress, cedar, arborvitae and other narrow-leaf evergreens do not respond well when pruned severely and may die when over half of their foliage is removed. Transplanting instead of pruning narrow-leaf evergreens when they overgrow a site is a possibility.



Figure 9. Regrowth can be quite rapid after renewal pruning.

Skirting, lifting the canopy by removing lowgrowing branches and shaping a tree form, is an alternative to renewal pruning. A tree form may adapt well to the landscape scheme and will appear less harsh than a severely pruned shrub.

## **Pruning Time**

Because flowering ornamentals form their flower buds at different times of year, pruning times must be adjusted accordingly. Many spring-flowering plants such as azalea, dogwood, forsythia, redbud and rhododendron set flower buds in the fall, so pruning during the fall or winter months eliminates or decreases their spring flower display. Plants that typically flower during the summer form flower buds on new growth and can be pruned during the winter with no effect on their flowering. Examples of this type of plant are crape myrtle and abelia.

As a general rule, plants that flower before May should be pruned after they bloom, while those that flower after May are considered summer-flowering and can be pruned just prior to spring growth. One exception to this rule is the oakleaf hydrangea, a summer-flowering shrub that forms flower buds the previous season. Another exception is late-flowering azalea cultivars, which bloom during May, June or even July. Prune both the oakleaf hydrangea and the azalea cultivars after they bloom. Table 1 provides suggested pruning times for other plants.

Table 1. Suggested Pruning Time for Common Flowering Trees, Shrubs and Vines

#### Prune after Flowering

Azalea Japanese Pieris

Beautybush Lilac

Bigleaf hydrangea Mockorange

Bradford Pear Oakleaf hydrangea

Bridalwreath Spirea Pearlbush
Clematis Pyracantha
Climbing roses Redbud

Crabapple Saucer Magnolia
Deutzia Star Magnolia

Dogwood Shrub Honeysuckle
Doublefile Vibernum Thunberg Spirea
Flowering Almond Vanhoutte Spirea

Flowering Cherry Weigelia
Flowering Quince Winter Daphne
Forsythia Wisteria
Japanese Kerria Witchhazel

#### Prune before Spring Growth Begins

Beautyberry Goldenrain Tree
Camellia Japanese Barberry
Chaste Tree (Vitex) Japanese Spirea

Cranberrybush Viburnum Mimosa
Crape myrtle Nandina

Floribunda roses Rose-of-Sharon (Althea)

Frangrant Tea Olive Sourwood

Grandiflora roses Anthony Waterer Spirea

Glossy Abelia Sweetshrub

Hedges

Ornamental plants that are not grown for their showy flowers can be pruned during the late winter, spring or summer months. Avoid pruning during the fall or early winter because it may encourage tender new growth that is not sufficiently hardened to resist the winter cold.

Some shade and flowering trees tend to bleed or excrete large amounts of sap from pruning wounds. Among these trees are maple, birch, dogwood, beech, elm, willow, flowering plum and flowering cherry. Sap excreted from the tree is not harmful, but it is unsightly. To minimize bleeding, prune these trees after the leaves have matured. Leaves use plant sap when they expand, and the tree excretes less sap from the wound.

## Guidelines for Pruning Specific Plant Groups

### **Deciduous Shade and Flowering Trees**

Trees are like children; training at an early age will influence how they develop. Many homeowners are reluctant to prune a young tree, particularly when it is nothing more than a single stem or a few scrawny branches, but this is precisely when pruning should begin.

Ideally, deciduous shade trees (those that lose their leaves during the winter) and flowering trees should have one central trunk (leader) and five to eight strong lateral branches along the main trunk. Major limbs should begin about 5 feet above the ground and have good spacing around the main trunk.

Once the framework (trunk and main branches) of the tree is established, some annual maintenance pruning will be required. Each tree is different in its growth habit, vigor and pruning requirements, but there are some general considerations that may help direct your pruning decisions:

- A major limb growing at a narrow angle to the main trunk (less than a 45-degree angle) is likely to develop a weak crotch and may split during heavy winds and ice loads. Remove branches that have narrow crotch angles.
- Remove branches that grow inward or threaten to rub against nearby branches (Figure 10, page 8).
- Remove branches that grow downward from the main limbs which may interfere with mowing and other maintenance practices.
- Prune branches damaged by insects, diseases, winter cold or storms below the damaged area. Prune branches of pear, pyracantha or loquat damaged by fireblight disease several inches below the infection. To prevent spreading the disease, sterilize pruning tools between cuts by dipping the blades in rubbing alcohol or a solution prepared from one part household bleach to 10 parts water.
- Trees such as bradford pear, ornamental cherry, crabapple and ornamental plum form vigorous shoots (or suckers) at the base of the trunk and many upright succulent shoots (or water-sprouts) along the main branches. These shoots starve the tree of valuable nutrients and detract from the tree's overall appearance. Remove them while they are young.

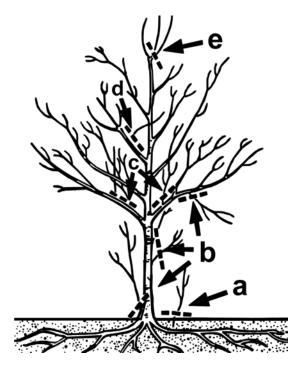


Figure 10. Remove suckers originating from belowground roots (a), low-growing branches that interfere with maintenance (b), upright grow-ing shoots or watersprouts (c), branches that grow inward or rub other branches (d), and branches that compete with the central leader for dominance (e).

Some trees develop upright shoots that compete with the main trunk for dominance. Remove these shoots if you want to maintain a conical or pyramidal growth habit.

#### **Broadleaf Evergreen Trees**

Broadleaf evergreens, like magnolias and hollies, usually require little or no pruning. In fact, most develop a naturally symmetric growth habit when left alone. Low-sweeping branches at ground level lend a natural southern charm to our landscapes.

You may want to prune some during the early life of the tree to balance the growth or to eliminate multiple trunks and/or multiple leader branches. Otherwise, routine annual pruning is not recommended.

# Shrubs (Deciduous and Broadleaf Evergreen)

Some shrubs in the landscape have an inherent dwarf growth habit and require little or no pruning. Japanese boxwood, dwarf yaupon holly, helleri holly, rotunda holly and gumpo azaleas are a few examples. These shrubs can be sheared, but routine shearing will encourage a dense outer canopy and sparse foliage on the inside. Do not shear too many shrubs into uniform shapes — the landscape may appear monotonous and

unnatural. If you must prune dwarf shrubs, thin their growth instead of shearing it.

Pruning requirements of larger shrubs depend on a number of factors including age, growth habit, vigor, flowering time and location in the landscape. Begin pruning with the shrub is young to encourage vigorous, compact growth. Occasional thinning cuts control shrub size and decrease the need for severe pruning.

Prune **azaleas** after they bloom. Because azaleas set their flower buds for the following season during mid to late summer, prune them after they bloom. Light pruning after bloom encourages branching and increases the number of flower buds the following year. Pruning after mid-July reduces spring flower display.

Use hand pruners to cut back shoots that are dying from disease or winter cold or that have become leggy. Always cut dying shoots back to healthy green wood to prevent further dieback. Once new shoots are 6 to 8 inches long, they can be pinched or "tip pruned" to encourage branching, compact growth and more blooms. A young, vigorous azalea may require light pruning several times during the growing season to develop a dense, compact growth habit.

Certain types of azaleas, such as the southern indica cultivars common to southern Georgia, grow vigorously and sometimes overgrow their planting site. You can severely prune them just prior to the spring growing season, as described in a previous section on pruning overgrown shrubs, to reduce their size. If you need to prune severely, do so before the plant flowers, because the flowering process robs the plant of valuable food needed to boost new growth.

Because azaleas are shallow-rooted plants, a large portion of the root system is destroyed when you transplant them. Therefore, prune the top to eliminate some foliage and to reduce the demand for water and nutrients. Remove one-third to one-half of the canopy unless the plant is overgrown and requires renewal pruning. Plants are more likely to withstand shock if they are transplanted before flowering and just prior to the spring growing season.

Camellia japonica varieties require little pruning. If a plant is misshapen or too large, remove undesirable limbs by cutting them back to a lateral branch or lateral bud inside the canopy. Eliminate suckers that rise from the base of the shrub. Some camellia growers also recommend that you remove small interior foliage that can become a haven for scale insects.

**Camellia sasanqua** varieties may require considerable pruning. For a more natural appearance, thin branches instead of shearing the plant.

Some camellias bloom during the fall, some during the winter and some during the spring. If pruning is needed, it's best to prune the fall and winter bloomers in early March and the spring bloomers just after they bloom.

In terms of pruning, **crape myrtle** is one of the most versatile plants in the landscape. It can be pruned to a tree form by selective thinning or to a shrub by pruning it to within a foot of ground level. It is a summer-flowering shrub, so prune it during late winter or early spring. You can encourage a second flush of bloom during late summer if you remove the seed clusters after the flowers fade and if you thin some of the new growth.

Crape myrtle shaped as a tree form often sends up vigorous shoots or suckers from the base that can easily be removed by hand when they are young and succulent. Some garden centers also sell a sprout-inhibiting compound you can apply to the base of the plant to prevent the growth of suckers.

Prune **roses** when the buds begin to swell. Buds start swelling about mid-February in southern Georgia and by mid-March in northern Georgia.

Prune hybrid tea and grandiflora type roses (those commonly grown for cut flowers) in the following sequence. First, thin out or remove any canes that are dead, diseased or damaged from winter cold. Cut back canes that show die-back symptoms to healthy wood. Next, select three to five of the most healthy, vigorous canes and cut them back to a lateral branch or bud within 15 to 18 inches of ground level. Then, thin out any vigorous shoots that compete with the main canes and remove suckers that grow from the base of the main trunk (Figure 11). Do not prune floribunda types of roses as heavily as hybrid teas and grandiflora types. Select three to five healthy, vigorous canes and prune them to within 18 to 24 inches of ground level.

Prune climbing roses after the first flush of bloom in spring. Prune old canes back to ground level, and leave five or six of the healthiest, most vigorous canes. You can thin excessive growth on the remaining canes to a side branch or bud. New canes may flower abundantly for two or three years before declining. When they decline, replace them with younger, more vigorous shoots.

**Nandina** and **Chinese mahonia** (*Mahonia fortunei*) are pruned differently than most shrubs. They grow like bamboo, sending up numerous shoots from the root. As the plants age, thin out older canes by cutting them back to within 6 to 8 inches of ground level.

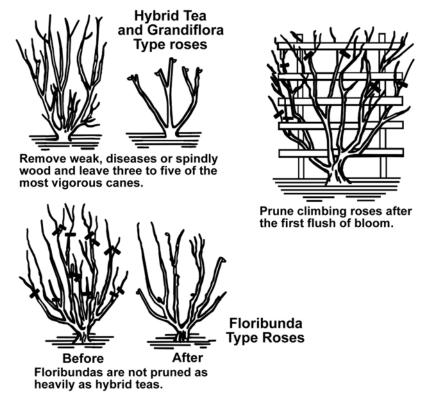


Figure 11. Pruning roses.

Old, overgrown plants can be severely pruned to ground level. Because the berries are often used for holiday decorations, prune nandina after the Christmas season.

**Pyracantha** blooms during the spring from buds formed the previous season. Therefore, it's best to wait until after blooming to prune this plant so you don't remove the clusters of berries that provide fall color.

Pyracantha forms a lot of lanky growth, so light periodic pruning during the summer season may be necessary to encourage branching and more compact growth. It can also be trained to grow against a wall (called an *espalier*), but you will need to prune frequently to maintain its shape. Old, overgrown plants can tolerate severe pruning, but expect the berry crop to be light for at least two seasons.

## **Conifers (Needle Evergreens)**

Most upright-growing plants in this group, such as spruce, pine, cedar and fir, have branches spaced evenly around the main trunk. They develop symmetrical growth habits and become quite large at maturity. If planted in open areas and given plenty of room to grow, they require little or no pruning.

If you remove about half of the new shoots while new growth is in the candle stage (small immature needles packed around the stem resembling a candle), you can thicken the growth of pines and spruce. Avoid cutting back into the hardened older wood, because new shoots will not grow and the form of the plant will be destroyed (Figure 12).

**Upright and broad-spreading junipers,** such as Torulosa, Pfitzer, Hetzi and Parsoni, sometimes overgrow their sites and must be reduced in size. You can make thinning cuts within the canopy to reduce plant size without destroying the natural shape. You can also



Figure 12. Pruning Conifers. You can tempor-arily control the size of conifers by pruning the young, vigorous growth (candles) during the spring (a) or by pruning back to an inner bud (b). Avoid cutting into older wood.

shear, but shearing is recommended only when you desire formal shapes.

Like pines and spruces, junipers do not generate new growth from old wood, so never severely prune more than half of the foliage. You can reduce the length of individual branches by cutting them back to a lateral branch. This technique maintains a natural appearance while it decreases the size of the shrub.

#### Vines/Ground Covers

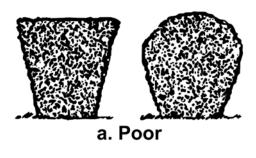
Certain vines in the landscape, such as honeysuckle, English ivy, clematis, wintercreeper euonymus and trumpetcreeper, climb trees or other supports and can grow rampant if they are not controlled. The amount of pruning these plants need each year depends on their vigor, growth habit and spread. Vines trained to an arbor may require only minor thinning or tip pruning to encourage branching, while those growing in trees or competing with other plants may need more severe pruning to control their size.

Pruning time is important for flowering vines. Prune summer-blooming vines, such as star jasmine and trumpetcreeper, before new growth begins. Prune spring-blooming vines, like wisteria, Japanese honeysuckle, winter jasmine and periwinkle, after they flower. (See Table 1 on page 7 for times for other vines).

Ground covers are pruned primarily for three reasons: To thin their canopy when they grow thick and dense, to keep them within bounds, and to rejuvenate their growth after a harsh winter has damaged their foliage.

Horizontal junipers, like Blue Rug, Bar Harbor and Prince of Wales, tend to form new foliage on top of older foliage and become thick and dense once their canopies meet. Thinning cuts improve air circulation within the canopy and prevent insect and disease problems.

Prune **ground covers**, such as English ivy, pachysandra, Algerian ivy, Japanese honeysuckle, St. John's wort, liriope and mondo grass, to rejuvenate them after a harsh winter has damaged their foliage. You can mow off the foliage of these ground covers with a lawnmower set at the highest possible cutting height. Be sure not to injure the crown or main trunk of the plant when you mow. Prune ground covers before spring growth begins — late January in south Georgia and by mid-February in north Georgia.



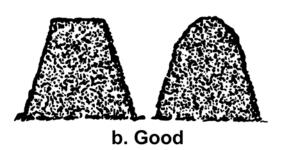


Figure 13. Hedge Pruning. Tapering toward the bottom reduces light penetration and causes leaves to thin near the base (a), while tapering toward the top (b) allows sunlight to reach the lower canopy and prevents a "see-through" hedge.

## Hedges

Because hedges are used primarily as privacy screens, begin pruning early to encourage a compact growth habit. Head back newly planted hedge plants to within 12 inches of ground level, and prune new shoot tips during the growing season to encourage branching. To develop a dense, compact hedge that provides privacy, prune regularly while the plants mature.

Once a hedge reaches the height you want, you must decide whether you want an informal or formal pruning style. An informal style is best if you want a low-maintenance landscape. Informally pruned hedges assume a natural growth habit. Prune only "as needed" to remove dead or diseased wood, to thin branches or to tip prune selected branches where more dense compact growth is needed.

Formally pruned hedges, on the other hand, require frequent shearing, sometimes three to five times during the growing season, to maintain their shape. If a formally pruned hedge best fits your style of landscaping, prune in a pyramidal shape with the narrowest part of the hedge at the top tapering to a wider base. A pyramidal shape allows adequate light to reach the lower portion of the canopy. As a result, the foliage will remain dense all the way to the ground (Figure 13).

## **Specialty Types of Pruning**

## **Espalier**

Espalier (pronounced "es-PAL-er") is a French term used to describe a plant trained to grow along a flat plane, such as a wall or fence. The Romans originated the pruning technique and the Europeans refined it into an art form still popular today. In England, fruit trees are often espaliered along walls to save space. A wall with southern exposure helps protect the espaliered fruit from cold injury.

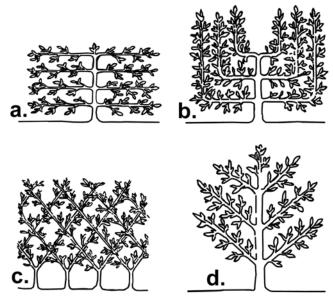


Figure 14. Some common formal espalier pat-terns are Tiered or Horizontal T (a), Palmette Verrier (b), Belgian Fence (c), and Oblique Palmette (d).

In the typical American landscape, espaliers are often used to add interest to a bare wall. Other times they accent a trellis or fence or add accent in confined areas where spreading trees and shrubs are not practical.

Almost any plant can be espaliered. Look for plants having flexible branches, good pest tolerance and attractive foliage, flowers or fruit. The type of pattern you want to achieve, formal or informal, will influence your choice of plants. A slow-growing espalier may be best if you do not like to clip and prune regularly. Pyracantha is the most commonly espaliered ornamental plant. Others include Bradford pear, southern magnolia, foster holly, ligustrum, crape myrtle, loquat, creeping fig and wisteria.

Formal espaliers can be simple or quite complex. Figure 14 shows some common espalier patterns.

Informal patterns are free-form and require less care than formal patterns. An informal espalier may be simply a vine climbing along a wall. Informal espaliers usually require no structural support.

Framework for formal espaliers is the form on which the espalier is trained to grow. It may be constructed from rot-resistant wood such as cypress, cedar or redwood, or from wire or nylon cord. Avoid cotton rope because it decays rapidly. When attaching the framework to a wooden wall, use blocks of wood as spacers to keep the framework 6 to 8 inches from the wall. This will provide good air circulation around the plant and prevent the plants from staining the wall.

Attach the framework to a masonry wall with special anchoring devices. Your local hardware supplier should carry masonry staples or concrete nails for this purpose. Lead expansion shields or plastic rawl plugs can be placed in the mortared joints between bricks.

Some garden centers sell vine ties (small plastic discs with twist-ties imbedded in them for holding branches) that attach to masonry or wooden walls. They are not as permanent and as strong as framework anchored into the wall, however.

Formal espaliers require regular pruning and training to maintain their shape. Prune branches that grow

outward away from the intended pattern. Tie branches to the support to keep them in place. Be careful to prune flowering ornamentals according to the proper line.

#### **Topiary**

Topiary is another form of plant sculpture that originated with the Romans and became popular in European formal gardens. A topiary is a plant that has been pruned to an unnatural form, such as a geometric shape or a whimsical animal. Some topiaries, called "stuffed" or "mock" topiaries, are vines trained to grow on the outside of wire frames. Other topiaries, such as the life-like characters you see at Walt Disney amusement parks, are plants trained to grow within a wire frame.

Plants often shaped into topiaries are boxwood, Japanese holly, yaupon holly, ligustrum, arborvitae, juniper, yew and podocarpus.

Topiaries, like formal espaliers, require frequent pruning to maintain their shape. Their use should be limited in landscapes to areas where a focal point, accent plant or conversation piece are desired.

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