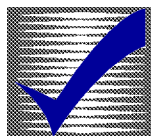




## HOW-TO BOOKLET #3138

# DECIDUOUS TREES & SHRUBS



### TOOL & MATERIAL CHECKLIST

- Pruning Shears
- Tarpaulin
- Pocketknife
- Garden Hose
- Spade
- Mulch
- Shrubs
- Trees
- Tine Rake
- Garden Fork
- Wooden Stakes
- Wire or Heavy Twine
- Wheelbarrow or Garden Cart

*Read This Entire How-To Booklet For Specific Tools and Materials Not Noted in The Basics Listed Above*



Trees and shrubs have a special place in our hearts and our landscapes. As children, we create secret hideaways in the tangle of an overgrown forsythia and swing on ropes suspended from a towering oak. Later in life, we anticipate the first cherry blossoms in spring and enjoy the fiery leaves of sweet gum or burning bush in fall. We welcome the cool shade beneath a maple on a sweltering summer's day. In winter, the handsome bark of the sycamore or the striking silhouette of the weeping willow provides relief from snowy monotony.

Trees and shrubs often become lifelong companions, so you should choose them with care. In this How-To Booklet, we'll introduce deciduous trees and shrubs, suggest ways you can use them, and outline how you can get started growing them.

### WHAT IS A DECIDUOUS TREE OR SHRUB?

Plants that shed all of their leaves at the end of a growing season are called deciduous. Maple, ash, birch, pecan, horse chestnut, and crab apple are a few of the many common deciduous trees. Lilac, forsythia, hydrangea, mock orange, sumac, flowering quince, and spirea number among the many handsome deciduous shrubs.

In general, trees have a single main stem, or trunk, while shrubs have multiple stems. Given that multistemmed birches are popular landscaping trees, the distinction is not a hard and fast one. Height isn't much help either. A shrub border of lilacs can tower over a diminutive flowering cherry tree. Fortunately, most of us "know" a shrub or a tree when we see one, based on a commonsense judgment involving height, growth habit, and landscape use.

## USES IN THE LANDSCAPE

Trees and shrubs are versatile plants. They can do a lot of work in the landscape—creating privacy, screening unwanted views, muffling noise, providing shade, and protecting people, structures, and other plants from wind and driving rain or snow. Trees and shrubs often define the boundaries of our property and delineate spaces for recreation, entertaining, and other activities within those boundaries.

Deciduous trees and shrubs are pleasing as well as practical. They offer lovely flowers, handsome foliage, and attractive fruit. There are a wide variety of shapes and sizes, from ground-hugging shrubs to towering trees. Some trees have a spreading shape; others form rounded crowns or rise in a pyramid. Unusual forms, often specially selected and propagated, are popular. There are columnar English oaks and gingkos, and weeping cherries, beeches, and willows. Shrubs provide virtually any shape you wish, either by growing that way naturally or by being trained to do so.

**Creating shade.** Of all the practical services trees render, none is more appreciated than shading us from the sun. A leafy canopy can lower temperatures beneath it by 15°F. Properly placed in relation to morning, midday, or afternoon sun, a tree can make your patio or deck a welcome haven even in the heat of summer. Morning and early afternoon shade can prevent the buildup of heat inside your house, too, saving money on air-conditioning. In cold-winter areas, deciduous trees are ideal, as they drop their leaves and allow the sun to warm the house in winter. You can also plant trees and shrubs to shelter favorite shade-loving plants.

Consider the kind of shade you desire when selecting trees. Spreading trees with low branches and lots of leaves, such as copper beech and Norway maple, cast a deep shade conducive to solitary musings but not to many understory plants. Smaller leaves and an upright form, as found in birches, provide a cheerful atmosphere of dappled sunlight encouraging more convivial gatherings and

supportive of a wider range of understory plants. To create a shade garden, choose trees with deep roots; many plants have difficulty competing for water and nutrients with shallow-rooted trees such as maples.

**Large shade trees:** • Green ash • Lacebark elm  
• Honey locust • Sugar maple • Gingko

**Smaller shade trees:** • Dogwood • Redbud  
• Silver-bell • Honey mesquite • Bradford pear

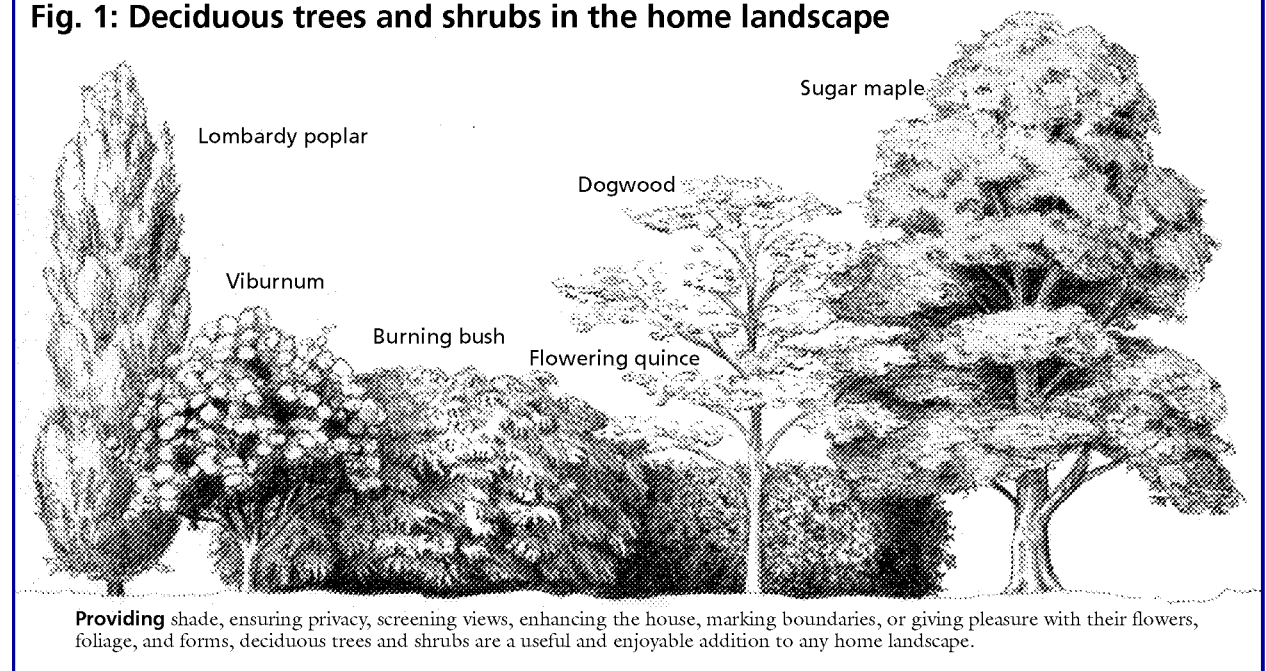
**Screening and privacy.** Trees and shrubs can keep others from observing our private activities, block unwanted views from our eyes, or frame a desirable vista. While more limited for these purposes than are evergreens, which don't lose their foliage in winter, deciduous screens are common, and they can offer more color in flowers and autumn foliage than do evergreens.

Hedges, uniform plantings of trees or shrubs selected for dense branching and foliage, are

frequently used as screens as well as for creating “outdoor rooms” on a property. A number of deciduous shrubs, such as burning bush, can be trained and shaped into formal hedges. Shrubs with stiffly upright or unruly growth habits are not attractive when heavily pruned but make handsome screens if left “natural” or lightly pruned.

Trees and shrubs in an informal massed planting can do double duty, providing a screen and a pleasing composition on their own. A row of columnar trees, such as Lombardy poplars, effectively screens nearby objects that are tall or large, such as a neighbor's house. By placing a single tree in the line of sight, you can block a view of a distant object from a picture window, patio, or other specific vantage point. Wind can be annoying to people and damaging to plants. Carefully placed trees and shrubs, planted singly, in groups, or as hedges, can break the force of prevailing winds.

**Fig. 1: Deciduous trees and shrubs in the home landscape**



**Providing** shade, ensuring privacy, screening views, enhancing the house, marking boundaries, or giving pleasure with their flowers, foliage, and forms, deciduous trees and shrubs are a useful and enjoyable addition to any home landscape.

**Shrubs for shaped hedges:** • Flowering quince  
• Willow leaf cotoneaster • Privet • Barberry

**For natural screens:** • Rugosa rose • Sweet pepperbush • Burning bush • Red-stem dogwood  
• Highbush blueberry

**Planting for pleasure.** Useful as deciduous trees and shrubs can be, we often choose to grow them because of the pleasure they give. Flowers are prominent among those pleasures. They can be exotic, like those of the star magnolia or deciduous azalea; simple, like pussy willow or winter jasmine; or fragrant, like viburnums, sweet pepperbush, or winter honeysuckle.

Flowers are fleeting, so consider other qualities when making choices. Leaves provide color for months—greens of every hue, the shimmering two-tone foliage of aspens, the deep purple of copper beech. A number of trees (red maples, for instance) are striking when buds appear in early spring. Maples, sourwood, and others earn their place with spectacular fall foliage colors. Fruit, nuts, and seed-pods, both edible and ornamental, recommend certain trees (crab apple) and bushes (plum) for both humans and wildlife. In winter the striking bark of sycamores and crape myrtle catch the eye, as do the wispy shoots of weeping cherries or willows.

**Eye-catching trees:** • Redbud • Scarlet oak  
• Sour gum • Hawthorn • Tree lilac • Paper birch

**Attractive shrubs:** • Blueberry • Mock orange  
• Red-twig dogwood • Shrub roses • Chokeberry

**The right plant for the site.** Because trees and shrubs are long-lived and often expensive plants, you want to make sure they are well suited for the conditions on your site. Consider their preferences for temperature, sunlight, water, and soil. If you live with sweltering summers, drying winds, high humidity, or drought, take those conditions into account, too.

Trees and shrubs must be able to withstand the rigors of seasonal change. The most common measure of this ability is the minimum temperature a plant can survive. Horticulturists have divided the

country into 11 “hardiness zones,” based on average minimum temperatures. The hardiness zone rating is frequently noted on plant labels and in catalogs.

Given the large amounts of water required by many trees and shrubs, it makes sense to select those whose needs correspond to the normal rainfall in your area. It is also difficult to alter large areas of soil for the extensive root systems of many trees and shrubs. Homeowners in the Southwest, where soils are typically alkaline, should avoid azaleas, for example, which are more at home in acidic soils.

Don’t forget to consider the mature size of the plant. A full-grown sugar maple can overwhelm a small lot; shrubs that tuck in nicely beneath a picture window when young can block the view in a few years. Rather than devote yourself to years of nonstop pruning, choose plants whose mature size will be in keeping with their place in your landscape.

Well-chosen trees and shrubs are more likely to succeed for you and to require less regular care. Knowledgeable staff at a nursery or garden center can help identify plants that will serve your purposes while doing well in your conditions.

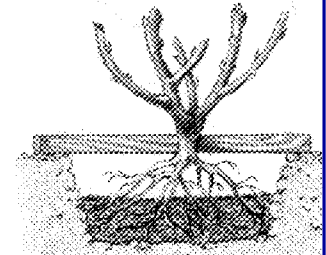
## PLANTING AND INITIAL CARE

Deciduous trees and shrubs are sold in several ways. “Bare-root” plants are dormant, with leafless branches and roots bare of any soil. “Balled-and-burlapped” plants, usually trees, are dug from a growing field while dormant, the mass of roots and attached soil (the “ball”) wrapped in some material (formerly burlap, now often plastic). Trees and shrubs are also grown and sold in plastic or metal containers, which allow them to retain all their roots. Plants sold bare-root are planted in late winter or early spring. Balled-and-burlapped and container-grown plants can be planted from spring to fall in cold-winter areas and from fall to spring where winters are mild.

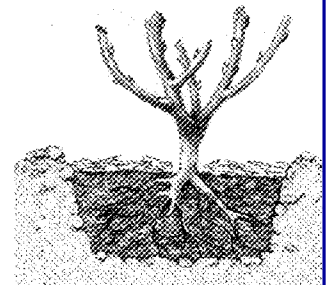
When you select a tree or shrub at the nursery or garden center, examine it carefully. Avoid plants with damaged bark or branches. If the plant is in leaf, moist soil and healthy-looking leaves (not

**Fig. 2: Planting a bare-root shrub**

**Spread the roots** on the bottom of the planting hole. (A stick across the hole helps position the plant at its previous soil depth.) Backfill halfway with native soil, working soil in around the roots as you go. Fill the hole with water and allow to drain.



**Continue working in soil to ground level;** tamp it firmly. Mound a soil “dike” around the hole’s perimeter to hold water, then add mulch and soak the plant. (Follow the same procedure for bare-root trees, adding support stakes if necessary.)



wilted or discolored) are some indication of adequate care at the nursery. Roots growing on top of or out of the bottom of a container are signs that the plant has been too long in its pot.

While most homeowners can plant small trees and shrubs with little difficulty, large balled-and-burlapped plants pose daunting problems of transportation and planting. Nurseries selling these large plants will usually offer planting services or be able to recommend capable professionals.

## Preparing the planting hole.

**1** Dig the hole large enough to accommodate the root ball easily. Depth is critical; the tree or shrub should be planted no deeper than it has been growing. This is easy to determine on container-grown plants. On balled-and-burlapped and bare-root plants, look for a change of color near the juncture of stem and roots. Don’t disturb the soil at the bottom of the hole or it will settle, placing the stem or trunk too deep.

- 2 When you dig the soil, place it on a tarp nearby and remove rocks and other debris. Recent research shows that trees and large shrubs do best when planted in native, unamended soil. Small shrubs placed in beds with perennials will do fine in the amended soil.
- 3 With a rake or garden fork, loosen the soil on the sides of the hole to encourage root penetration into surrounding soil.
- 4 Poor drainage can doom a plant. To check, fill the hole with water; if the water is gone within 24 hours, drainage is fine. If much water remains, consider planting in another, better-drained spot.
- 5 Strong winds can damage newly planted trees. To provide support, drive two sturdy stakes on opposite sides of the planting hole and a foot or so outside its perimeter. Secure the trunk of the tree to the stakes with strong twine or wire. (Protect the trunk from abrasion by threading the wire through a section of old garden hose.) The fastenings should allow some movement, so the trunk grows strong enough to withstand the wind.

### Planting container-grown tree or shrub.

- 1 Before planting, soak the container. When the soil is moist but not soggy, slide off or cut off the container. Try to disturb the root ball as little as possible, but if there are a great many roots visible on the surface of the ball, gently untangle them.
- 2 Carefully place the plant in the hole, spreading disentangled roots so they don't encircle the ball.
- 3 Fill the hole about halfway with the soil you removed, working it in with your hands to eliminate air pockets. Adjust the trunk of a tree so it is upright and orient the stems of a shrub as you wish.
- 4 Fill the hole with water; when it has drained, add the remaining soil, tamping it firmly.

- 5 Build a small soil mound around the circumference of the planting hole to help hold water. A generous mulch of chipped bark, compost, or other organic material will retard evaporation.

### Planting bare-root. (Fig. 2)

The procedure for planting a bare-root tree or shrub is much the same. Put these plants in the ground as soon as possible after purchase. If the roots appear dry, soak them for a day in a weak solution of liquid fertilizer. Prune off broken roots or stems.

- 1 Place the tree or shrub in its planting hole, spreading the roots to prevent circling. Holding the plant upright with one hand, add soil, working it in thoroughly around the roots.
- 2 When the hole is half full of soil, proceed as outlined previously for a containerized plant, making sure of good soil-to-root contact.

### Planting balled-and-burlapped. (Fig. 3)

In some ways, a balled-and-burlapped plant can be thought of as growing in a large flexible container. Keep the soil moist, both to protect the plant and to hold the root ball together. In the past, when balled plants were wrapped in real burlap, the wrapping was left in place during planting because it rotted off in time. Today's wrappings are likely to be synthetic and must be removed, or they will kill the plant.

- 1 Supporting the plant under the ball, not by the trunk or stems, move it next to the planting hole.
- 2 Cut the twine and begin to unwrap the ball. If the root ball and soil are firmly intact, lift the ball carefully and place it in the hole. If the root ball is fragile, leave it wrapped while lowering it into the hole. There, unwrap and carefully shift the ball so you can slide the wrap out from under it.
- 3 From this point, proceed as described from Step 1 of containerized plants.

**Providing a good start.** Purchased from a reputable nursery or garden center, a new tree or shrub should not require pruning other than trimming branches damaged in transport or planting. If gnawing critters, such as rabbits, are in the area, you can protect the trunk with a wrapping of aluminum foil, extended above the height of anticipated snow cover.

Providing a regular supply of water is most important in the first year (dry winters are hard on trees, too). Trees usually don't need fertilizer in the first year; in the second and subsequent years sprinkle a light dressing of a balanced granular fertilizer (10-10-10) on the soil in early spring.

### Fig. 3: Planting a balled-and-burlapped tree

If the root ball is loose, keep it wrapped as you lower it into the hole.

Shifting the plant carefully to preserve the root ball, remove the synthetic "burlap" and twine.

Half-fill the hole with native soil and soak it thoroughly. After it has drained, add soil up to ground level, tamping it in place. Build a low earthen dike, add mulch, then water. In windy spots, loosely tether the tree to stakes.

