



TREES

DECIDING WHICH TREE TO PLANT

Among the most important contributions trees make to a garden is to lend an air of permanence. While a holly may give up the ghost after a year or two, an oak can live for centuries. A stately tree that forms the centerpiece of your garden may well have been the legacy of a farsighted gardener from many years earlier.

The basic distinction between trees is whether they are deciduous or evergreen. Deciduous trees sprout new leaves in spring and carry them throughout the summer. In fall, the leaves may turn brilliant colors before dropping for the winter. Evergreens, on the other hand, generally retain their foliage year-round, making them ideal for screens, wind breaks, or as points of interest during winter months.¹ Evergreens do drop their old leaves as new leaves come out on the tree.

As you head off to your local nursery to pick out trees for your lawn and garden, you will want to make sure you have considered trees from both of these categories.

Before You Get That Tree

Before selecting the type of trees that will work best in your landscape, here are a few tips:

1. First, do a layout of your landscape and make a preliminary design of the kind of trees you want to plant. For example, you may want trees to:
 - protect your house from summer sun and wind damage

- provide color and flowering in different seasons of the year
 - provide a backdrop for a garden project
 - serve as habitats for wildlife
2. Next, assess each section of your landscape to determine:
 - how much sun is available in each season?
 - how much sun is available at different hours of the day?
 - which sections are wet and which are dry?
 - what is the direction of the prevailing winds?
 3. Next, test the soil to determine which areas need to be improved. (Visit the Gloucester County Virginia Cooperative Extension Office (VCE) for special instructions on soil testing for trees and to obtain test kit.)

Finally, based on your layout and assessment of landscape conditions, make a list of the purposes, i.e., shade an area, serve as a focal point, provide a border or fence, etc., you want the trees to serve.

TREES TO AVOID

Before you finalize your tree selection list, consider trees you may want to avoid. You can avoid years of hard labor by eliminating weak, offensive, or invasive trees that would be a nuisance. Most trees fitting these descriptions are fast growing and have other undesirable features. The following are a few you might want to avoid:

- **Bradford Pear** *Pyrus calleryana* – while beautiful, its weak branching structure makes it fragile and susceptible to breakage during high winds, ice, and snow storms.

¹ Bender, Steve, Editor, *Southern Living Landscape Book*. (Birmingham, Alabama: Oxmoor House, Inc., 2000)

- **Female Ginkgo** *Ginkgo biloba* – has unpleasant smelling fruit.
- **Leyland Cypress** *Cupressocyparis leylandii* – most serious problems are Seridium and Botryosphaeria dieback and canker which can cause branch dieback and, if it gets into the main trunk, can kill the tree. Bagworms and Phytophthora root rot are also common with this overplanted, fast growing but short-lived tree.²
- **Mimosa Tree** *Albizia julibrissin* – a small to medium-sized tree with showy, pink fragrant flowers. It can grow in a variety of soils, produce large seed crops, and resprout when damaged. As it is a strong competitor to native trees and shrubs in open areas or forest edges, it is considered invasive. Dense stands of mimosa severely reduce the sunlight and nutrients available for other plants.
- **Princess Tree** *Paulownia tomentosa* – also known as the Empress tree, it is a small- to medium- sized, aggressive ornamental tree that grows rapidly in disturbed natural areas, including forests, stream banks, and steep rocky slopes. It is considered invasive.
- **Russian Olive** *Elaeagnus angustifolia* – a small, usually thorny tree that can grow to 30 feet in height. This tree has been planted extensively for windbreaks, hedgerows and attracting birds but it tends to invade riparian areas. In 2001, the Virginia Department of Transportation removed the Russian Olive plants throughout the interstate system in Virginia.
- **Salt Cedar** *Tamarix ramosissima* – grows as a small tree, usually 5 to 20 feet tall, and can damage valuable cottonwood/willow, seepwillow/baccharis, and other native plant communities by producing abundant seed, rooting and proliferating from buried stems, and concentrating salt in the leaves.
- **Siberian Elm** *Ulmus pumila* – a fast-growing, small- to medium-sized tree with seeds that blow around like flurries of snow. They germinate readily and grow seedlings rapidly.
- **Sweetgum** *Liquidambar styraciflua* – may cause a litter problem when its fruit—spiny balls—fall to the ground.
- **Tree-of-heaven** *Ailanthus altissima* – a small- to medium-sized tree with smooth gray bark. It is highly invasive. The leaves when crushed produce a distinctive, offensive odor like “the smell of burnt peanut butter.” Tree-of-heaven also produces a toxin in its bark and leaves. This toxin is so effective that it is currently being studied as a possible source for a natural herbicide.³

Pamela Harper, author of *Time-Tested Plants*, cautions us about being too logical and practical in our choices. “In choosing among the plethora of trees that flower in early spring, one inevitably makes the occasional poor choice. My mistakes arose mainly from too slow a recognition that trees grow faster and larger in the warm, moist climate of coastal Virginia than they do in England, and that heat fades flowers so quickly that blooms alone seldom justify the space of such popular trees as crab apples. If one omits crab apples and cherries, both problem-prone, the majority of spring blooming trees have white flowers so color plays a part in my assessments.”⁴

There are some “givens” when considering which trees to eliminate. Unless you’re deliberately using it as a barrier, don’t plant a tree with spiny leaves, prickly needles, or sharp thorns near a walkway or building. Trees that are typically thorny include citrus, hawthorn, black locust, honey locust, palo verde, devil’s club, prickly ash, and Osage orange.

It is also best to be cautious selecting trees that generate suckers. Suckers are shoots that typically grow faster than ordinary branches or twigs and commonly point straight up. They take a lot of resources from the plant and they also attract sucking insects because they are full of sugars. Apple, crabapple, aspen, cottonwood, black locust, pin cherry, sourwood, and sassafras are all prone to forming suckers around their bases or farther away.⁵

² Scott, J. McLeod, Revisions 2010, *Leyland Cypress Diseases and Insect Pests* http://www.clemson.edu/extension/hgic/pests/plant_pests/trees/hgic2004.html

³ Schalau, Jeff, County Director, Agent, *Backyard Gardener: Invasive Weed Trees* (Yavapai County: Arizona Cooperative Extension, 2001), <https://ag.arizona.edu/yavapai/anr/hort/byg/archive/invasiveweedtrees.html>

⁴ Harper, Pamela J., *Time-Tested Plants* (Portland, Oregon: Timber Press, 2000)

⁵ Buchanan, Rita, *Taylor’s Master Guide to Landscaping*, (New York: Houghton Mifflin Company, 2000)

SELECTING THE HEALTHIEST TREES

Knowing the kind of trees you want to plant is one thing; picking trees that are healthy and most likely to flourish is something else. The New American Landscape Gardener offers the following suggestions:

- Pick trees that have good color, without extensive yellowing and without any trace of wilting. The leaves should be clean, free of holes or any other sign of insect damage. The trunk should have no large unhealed scars or holes.
- Beware of trees with crossed limbs, missing leaders, and broken branches.
- Choose a smaller, younger specimen over a larger, older one. The younger plant will be more vigorous than the larger, older tree.
- When you buy container-grown stock, make sure it has a good root ball. It should be large enough to fill the pot but not so large that it is pot bound.
- Talk to the nurseryman about each plant and note his recommendations.
- Unless you have a large vehicle or a small load of plants, have the nursery deliver your new purchases.⁶

Water must be supplied on a regular basis to newly planted trees. Smaller trees will require regular irrigation for several months following planting; larger trees for much longer. If you cannot meet the watering requirements of a given tree, choose it in a smaller size. Site drainage also affects the size of tree to choose. On poorly drained sites, smaller nursery trees with shallower root balls often adapt better than larger nursery trees. A nursery tree is considered large if its trunk is more than 2 inches in diameter.

The shape, depth, and size of a tree's root ball are determined by the way the tree was produced in the nursery. Trees grown directly in the ground are called field-grown. Field-grown trees that have been properly harvested and hardened off are strong and sturdy.

Container-grown trees have smaller root balls and many times more fine roots than similarly sized field-grown trees. For a variety of reasons, container-grown trees dry out more quickly, making them more sensitive to drought injury in the period following planting. To maintain optimum growth after planting, you should water container-grown plants at least as often as they were watered in the nursery. Examine the roots on the surface of the root ball. Do not buy a plant with black roots. Heat stress, freezing temperatures, or over-watering probably killed these roots. Strong trunks are thickest near the ground and taper up. They do not require stakes to support them. Trees that were staked for a long time in the nursery may not develop proper trunk taper and may fall over when stakes are removed. Branches should be distributed along the trunk and not clumped toward the top. Branches in the lower half of the tree help distribute the stress placed on the trunk when the wind blows.

Except in their dormant season, nursery trees should have foliage to the ends of all their branches. Dead tips indicate problems that need further study. If the tree is dormant and has no leaves, scrape several of its twigs with your fingernail. If the tissue revealed is greenish or white, the twig is alive. Dry brown tissue indicates that the twig or branch is dead from that part out to the tip. This condition is known as dieback. As a rule, trees with dieback should not be purchased.

"I had two trees on my property that I thought were dead. In my search for an arborist, I called the Virginia Department of Forestry (Gloucester office) and asked if they could refer me to an arborist. To my surprise, the forester volunteered to come to my home and inspect the trees. He came, identified the trees – a water oak and a deodar cedar, confirmed my fears that the trees cannot be saved, and suggested possible reasons for their demise. No charge!"

– Noel Priseler, GEMG

⁶ Leighton, Phoebe and Simonds, Calvin, *The New American Landscape Gardener*, (Emmaus, Pennsylvania: Rodale Press, 1987)

PLANTING TREES

Current Research on Planting of Trees⁷

The late Dr. Bonnie Appleton, professor of horticulture at the Virginia Polytechnic Institute and State University Hampton Roads Agricultural Research and Extension Center, Virginia Beach, conducted research to solve the problem of “deep structural roots”—having too much soil or substrate atop large woody roots that can lead to tree stress and death. Her research has shown that when planting balled and burlapped (B&B) or container grown trees, the roots should be bared to ensure successful planting or transplanting. Dr. Appleton cited the following problems in the production, harvest, shipping, and planting of trees:

Too deep from the nursery:

Field Production

- Seedlings planted too deep because root flare hard to detect
- Seedling planted too deep to prevent them from blowing over
- Buds/grafts planted too deep to bury the graft union (or seedling cut back “dog leg”)
- Seedlings end up too deep due to cultivation for weed control

Too deep from the nursery:

Container Production

- Seedlings planted too deep because root flare hard to detect
- Seedlings planted too deep to prevent them from blowing over
- Seedlings end up too deep due to substrate settling
- Seedlings end up too deep due to the use of long narrow propagation containers
- Buds/grafts planted too deep to bury the graft union (or seedling cut back “dog leg”)

Too deep in the landscape:

- Plant initially too deep in the container or field root ball

- Planting hole dug too deep
- Soft soil that eventually settles put underneath root ball in bottom of hole
- Excess hole soil put atop root system
- Excess mulch put atop root system

Appleton and Jim Flott, Arborist, Community Forestry Consultants, Spokane, WA, advocated bare root planting for trees that are container grown or B&B. Flott stressed root washing—soaking the tree roots in a tub to remove the soil. Appleton found success with a quicker method—pressure washing the tree roots to remove the soil. The point of both is to bare root the trees before planting them. The reasons for bare rooting at planting are the following:

- Exposes entire root system
- Reveals root collar and graft union
- Allows for repair of the root system
- Resolves the soil interface disparity issue (Soil interface disparity occurs where two structurally different soils, for example, clay and sand, meet. Plant roots that are growing in either soil are conditioned to that soil and do not spread out into the soil with the different structure. That is why a good way to plant trees is to bare root them and backfill only with the soil from the hole itself.)
- Packs soil into the roots versus against the root ball
- Virtually eliminates the need for staking (stabilization) at planting
- Lighter weight tree to handle
- Requires less equipment, less labor, and shallower planting hole
- Fewer back injuries
- Root system is kept moist (if using a root washing method)
- Trees can be compressed to fit through smaller spaces if planting in a hard-to-reach area

⁷ Appleton, Bonnie L., Flott, James J., Bare Root to Bare Root – Coming Full Circle
http://www.michigan.gov/documents/dnr/BareRootToBareRootAppletonProceedingsPaper_292993_7.pdf

While this is a good method for planting trees, there are some trees that do not do well when bare rooted.

Trees Difficult to Transplant Bare Roots⁸

- American Hophornbeam *Ostrya virginiana*
- Bald Cypress *Taxodium distichum*
- Bur Oak *Quercus macrocarpa*
- Chestnut Oak *Quercus prinus*
- Chinkapin Oak *Quercus muehlenbergii*
- Frontier Elm *Ulmus 'Frontier'*
- Ginkgo *Ginkgo biloba*
- Hornbeam *Carpinus* spp.
- Lacebark Elm *Ulmus parvifolia*
- Scarlet Oak *Quercus coccinea*
- Shingle Oak *Quercus imbricaria*
- Tulip Tree *Liriodendron tulipifera*
- Tupelo *Nyssa sylvatica*
- Washington Hawthorn *Crataegus phaenopyrum*
- White Oak *Quercus alba*

Site Preparation

When preparing the planting site, the most common mistake is digging a hole which is both too deep and too narrow. Dig a hole at least twice as wide as the root ball; the wider, the better. Make sure the hole is the correct depth to put the root flare just above ground level. While the soil is out of the hole, remove all debris (sticks, trash, stones, etc.). Do not add artificial or organic matter to the soil. Taper the side walls and roughen them to create cracks into which the roots can grow. Using the soil you have removed, form a solid soil pedestal or mound in the center of the hole. The circle around the pedestal should be

"Newly planted trees have to adjust to their new conditions and this takes time. The rule of thumb is the adjustment period is one year for each inch in diameter. So, a sapling that is 1 / 2 inch will take six months to adjust and a 2-inch diameter tree will take two years."

– Jim Newton, GEMG

deeper in order to drain the excess water away from the roots. The hole should resemble a shallow saucer with a hump or mound in the center. (Figure 1.) The mound is larger for a bare rooted tree. (Figure 2.)



Figure 1

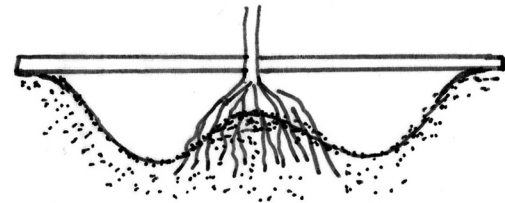


Figure 2

Prepare the Tree

Normally trees are purchased in three conditions: B&B, container grown, or bare root. If you have a B&B or container grown tree, you need to cut away the wire basket, twine and burlap or remove the container from the root ball. If it is a tree that can be bare rooted, soak overnight and use your garden hose and wash the soil off the roots. If it cannot be bare rooted, tease out the roots and loosen the ball slightly. In either case, cut all circling roots and prune out root defects—broken or damaged roots. In all cases keep the ball or roots moist.

Plant the Tree

Place the root crown on top of the soil mound. Additionally, for a bare rooted tree, arrange the roots radially around the mound. Make sure that when properly seated on this mound the tree is planted so that the 'trunk flare' is clearly visible and the 'crown,' where the roots and top meet—determined by the dark stain on the trunk which marks the difference between root and trunk bark—is about two inches above the soil level. (See Figure 3.) This will allow for natural settling.

⁸ Bassuk, Nina L. and Buckstrup, Michelle *Creating the Urban Forest: The Bare Root Method*
<http://www.hort.cornell.edu/uhi/outreach/pdfs/bareroot.pdf>

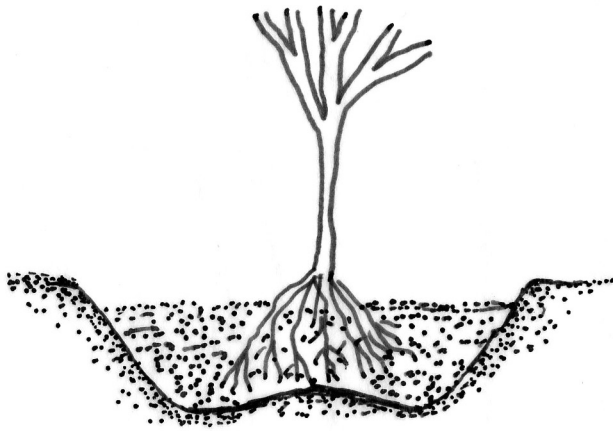


Figure 3.

Backfill the hole (only with the soil from the hole, no amendments or fertilizer), while simultaneously adding water. Use your hands to press the soil against the root ball or into the roots. This method will

ensure that air pockets are removed and re-wet the soil and roots. Place 3 to 4 inches of organic mulch on the entire planting area to reduce weeds and maintain soil moisture after the tree is planted, but not too close to the trunk.

Keep pruning to a minimum during the planting so as many leaves as possible can nourish new root growth. Broken, crossing or rubbing limbs, as well as suckers (shoots that originate from roots) and water sprouts (vigorous shoots rising straight up from a limb of the tree) should be pruned off.

Avoid planting trees in a line except as wind breakers. If you must plant in a line, make the spacing slightly irregular so that you avoid the missing tooth appearance if one or more trees dies or is injured by a storm.

FAVORITE FLOWERING TREES

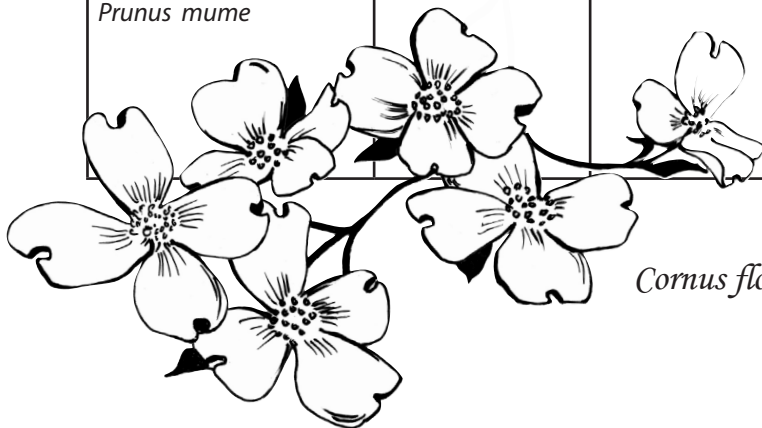
Flowering trees are the landscaper's dream. Fortunately, there are many varieties that will flourish in our area. Ornamental flowering fruit trees (*Prunus* species) are closely related to the orchard fruit trees that are grown primarily for their fruit. Although many of the ornamental flowering trees bear edible fruit, they are grown primarily for their springtime floral display and attractive form. You should consider trees that are salt-tolerant for locations on the water in Gloucester. There are many varieties from which to choose.

The table below identifies helpful facts on some of our favorite ornamental flowering trees that flourish locally:

Tree	Height / Width	Bloom Period	Description
Dogwood, Flowering <i>Cornus florida L.</i>	40 feet tall and 20 to 30 feet wide	Early April	The white flowering dogwood is a native tree to the forests of America. It flowers in early spring for 2 to 3 weeks. Oval berries of bright red are formed following the blooms and persist on the trees into fall and winter after leaves are shed, and until they are eaten by wildlife and birds. In the fall the dogwood trees are covered in brilliant red leaves that change to purple. This tree grows well underneath oak tree shade as well as under pine trees; remarkably, it will grow well in full sun. It is well adapted to stress and is very tolerant of dry weather. It does not like to be over-watered or be in soggy soil conditions.
Fringe Tree - Old Man's Beard <i>Chionanthus virginicus</i>	12 to 20 feet tall and equally wide	Late May	This native large shrub to small tree is adaptable. It produces beautiful, fragrant, white flowers and its fruit attracts birds. Easily grown in average, medium, well-drained soil in full sun to part shade. Seldom needs pruning. Tolerant of air pollution and adapts well to urban settings. Intolerant of prolonged dry conditions. Requires male and female trees to produce fruit. Only female trees bear fruit.

FAVORITE FLOWERING TREES (continued)

Tree	Height / Width	Bloom Period	Description
Flowering Crabapple <i>Malus florabunda</i>	10 to 25 feet tall and 15 to 25 feet wide	April	Ornamental crabapple trees are a group of small flowering trees used for landscape plantings. They are valued for their foliage, flowers, fruit and variations in form and size. The trees have beautiful blossoms of white, pink or red flowers. Be sure to get the disease-resistant variety. They prefer a heavy-loam soil, but will tolerate clay soils as long as they are well drained but moist, with no standing water. Flowering crabs require full sun and open exposure to increase air circulation.
Yoshino Cherry <i>P. yedoensis</i>	40 to 50 feet tall and 25 to 40 feet wide	Early spring	It grows quickly to 20 feet, has beautiful bark but is a relatively short-lived tree. It has upright to horizontal branching, making it ideal for planting along walks and over patios. The white to pink flowers blooming in early spring before the leaves develop can be damaged by late frosts or very windy conditions. Prefers full sun and well-drained soil. The tree is heat tolerant.
Sweet Bay Magnolia <i>M. virginiana</i>	40 to 50 feet tall and 15 to 25 feet wide	May and June	This tree is often grown as an ornamental landscape tree because of its attractive foliage, flowers, and fruit. It occurs naturally in moist and wet soils in wetland areas such as swamps and along streams and ponds. This tree provides fragrant creamy white flowers. It tolerates wet soil but not salty soil and prefers light shade.
Japanese Flowering Cherry - Oriental Cherry <i>Prunus serrulata</i>	15 to 25 feet tall and 15 to 25 feet wide	Early to mid- spring, depending on the cultivar	It may grow about 10 feet in 10 years but is short-lived. The average life span is 15 to 20 years. The showy flowers may be white or pink, single or double; some are fragrant. Double-flowered varieties tend to hold their bloom longer. Flowers occur before or with the leaves. The tree prefers moist, fast-draining, well-aerated soil and requires full sun. Pruning is seldom necessary except to remove dead or diseased wood, or crossing branches that appear awkward or rub against each other. This tree is susceptible to many problems, including cherry virus diseases, canker, twig blight, root rot, powdery mildew, bacterial and fungal leaf spots, borers, aphids, tent caterpillars, and scale.
American Plum - Wild Plum - Goose Plum <i>Prunus americana</i>	15 to 30 feet tall and equally wide	Spring	This tree often grows along roadsides. It can be a single stemmed tree. The flowers are white, appearing before the leaves. Fruits are yellow to red and are good for making jelly.
Japanese Flowering Apricot <i>Prunus mume</i>	15 to 20 feet tall and equal / wide	March	This is a fast-growing tree when young, averaging 3 to 5 feet per year. Growth slows when the plant is about 10 to 12 years old. The growth habit may be rounded, upright, weeping, or corkscrew, depending on the cultivar. It prefers full sun and fertile, well-drained acid soil. The single or double flowers may be white, pink, rose or red, based on the cultivar.



Cornus florida

FAVORITE EVERGREEN TREES

Be sure to consider native evergreen trees for your landscape. Some of our favorites are described below.

Tree	Height/Width	Description
Foster's Holly <i>Ilex x attenuate</i>	20 to 30 feet tall and 10 to 20 feet wide	It likes moist, acid soil and part shade to sun. It is primarily used as a screen and is noted by its red berries. For the best berry production and most compact growth, choose a sunny spot. Poor fruiting on hollies is a problem experienced by many gardeners. This could be due to poor pollination; young, immature plants; high nitrogen levels in the soil; or a late spring frost which injured the flowers.
Eastern Red Cedar <i>Juniperus virginiana</i>	40 to 50 feet tall and 10 to 20 feet wide	This pyramidal to columnar evergreen is very common in the wild. It is best with moist conditions, but is drought-tolerant. It has green scale leaves. This tree grows best in well-drained rocky or sandy sites. Its wood, which is in demand, releases an odor that repels moths. It is a slow growing tree.
Southern Magnolia—Bull Bay <i>M. grandiflora</i> <i>M. 'Little Gem'</i>	60 to 80 feet tall and 30 to 50 feet wide	<p>This grand lady of southern trees is preferred for its fragrant plate-size white flowers that bloom in early summer and sporadically through the rest of the growing season, its dark lustrous leaves and striking fruit, as well as its overall size and stature. It can be used as a lawn specimen, screen, or, with smaller, dense cultivars, as a hedge. Grows in full sun to part shade in humus-rich, moist but well-drained acidic soil. Once established, this tree thrives in full sun. Otherwise, plant the tree in partial shade. The growth rate is variable, depending on the seedling, but generally it grows at a slow to medium rate (1 to 2 feet yearly). It responds to water and fertilization with faster growth. It is a long-lived tree. It blooms in May and June; some cultivars bloom sporadically throughout the summer. This tree requires a lot of space and should be reserved for large properties. This tree is mostly problem-free. When planting, allow enough space so the lower limbs can drape the ground, hiding the fallen leaves, which will provide necessary nutrients as they decompose.</p> <p>A dwarf cultivar that grows well in our warmer climate. It is a slower growing form with a columnar shape which reaches about 14 feet high and 4 feet wide. It flowers heavily over an extended period and bears medium-size cup-shaped flowers.</p>
Live Oak <i>Quercus virginiana</i>	40 to 80 feet tall and 60 to 100 feet wide	This tree is extremely long-lived and becomes picturesque and stately with age. Long, yellow catkins decorate the tree in the spring and dark brown to black acorns ripen in late summer. Grows best in full sun and adapts to most soil types and moisture conditions. Grows moderately fast when young, producing 2 to 2½ feet of growth per year, if properly located and maintained. It is best known for its massive horizontal limbs that give old trees their majestic character and is reminiscent of the Old South, especially when planted along avenues or drives leading to old plantations. Although used extensively for street tree plantings, in time the roots will lift sidewalks or streets if planted too close. It will do well as a lawn specimen provided it is given plenty of space. Although it responds best to plentiful moisture in well-drained, sandy soils, it tolerates drier, more compacted sites. Once established, it is drought-resistant. It prefers sun but tolerates more shade than other oaks because its leaves function throughout winter. Live oak is susceptible to leaf blister, a fungal gall that disfigures leaves but does no appreciable harm.
Japanese Cryptomeria or Japanese Cedar <i>Cryptomeria japonica</i>	50 to 80 feet tall and 20 to 30 feet wide. Heights of 100 to 125 feet are not uncommon.	This is a splendid evergreen that becomes even more handsome as it matures. The growth rate is slow to medium (20 feet in 20 years). This tree is a handsome specimen for windscreens, borders, and groupings on large properties. It works well as a lawn specimen on smaller properties because of its narrow canopy and relatively slow growth rate. The ideal planting site is in moist, acidic, well-drained soil. Although it is moderately adaptable to dry sites, it needs irrigation during drought. While it prefers full sun, it tolerates partial shade. The tree site should have good air circulation to help prevent disease but should not be exposed to high winds.

FAVORITE DECIDUOUS TREES

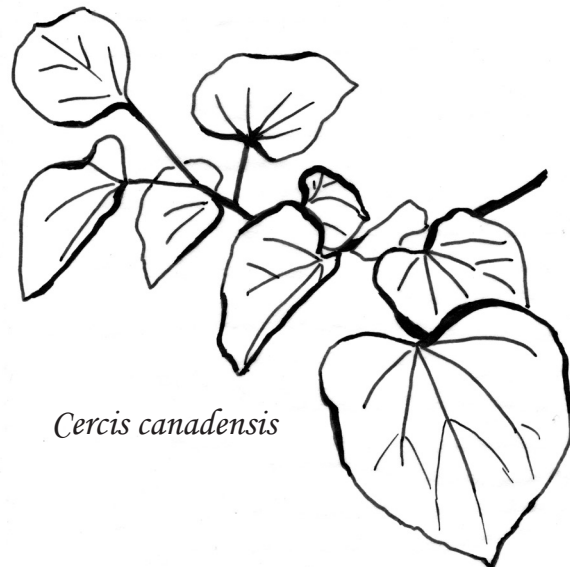
In this next table you will find deciduous trees that do well in Gloucester.

Tree	Height/Width	Description
Black Gum— Black Tupelo <i>Nyssa sylvatica</i>	30 to 50 feet tall and 20 to 30 feet wide	One of the most attractive native trees around. Summer leaves are a dark green with a high-gloss appearance. The fall foliage is spectacular with many shades of yellow, orange, bright red, purple or scarlet that may appear on the same branch. Bark matures to medium gray and resembles alligator hide. Fruit is bluish-black and is loved by many birds. Makes a strong specimen tree. Prefers well-drained, acid soils, and full sun to partial shade. The species is recommended for stabilizing shorelines.
Crape Myrtle <i>Lagerstroemia species</i>	10 to 30 feet tall and 15 to 25 feet wide	This is a handsome, summer-flowering, deciduous small tree or shrub. It is a favorite among Southern gardeners because of its beauty and low maintenance. Old specimens can reach 40 feet at maturity. It grows at a moderate to fast rate and has a moderate to long life span. It is valued for its long period of striking summer flowers, adapts well to confined spaces, and can provide shade in deck and patio areas. The flowers of some selections, however, may stain car paint; the honeydew drops from aphids on the plant may stick on cars or patio furniture. The ideal planting site is in well-prepared, well-drained soil, with full sun exposure and good air circulation. A tree planted in partial or full shade will have reduced flowering and increased disease susceptibility. The tree will tolerate slightly alkaline to acidic (5.0 to 6.5 pH) clay and other soil textures. Although it tolerates drought, it requires irrigation until it is well established (approximately two years). Severe pruning has become a common practice to maintain shrub size. This ruins the natural, graceful effect of the tree. Powdery mildew is a problem during the spring and fall. Planting in full sun and providing good air circulation can prevent it.
Honey locust (Thornless) <i>Gleditsia triacanthos var. Inermis</i>	50 to 75 feet tall and 30 to 50 feet wide	This tree lives about 120 years. With its compound leaves, it casts a light shadow and is hence a superior lawn tree. Its long twisted fruit pod can be up to 50 centimeters long. An alcoholic liquid is obtained by fermenting the seed coat. The fruit is also a source of food for birds and mammals. The tree has thorns on its branches that are dangerous when the tree is young. In the past, these hard thorns were used as nails. This tree is very hardy in that it adapts well to many types of soils. It thrives best, however, in moist soil. Its reddish-brown wood is hard, strong and heavy. It resists humidity and decay but is not very pliable. It is used in carpentry and for railway ties.
Japanese Maple <i>Acer palmatum</i>	15 to 25 feet tall and 10 to 25 wide	This tree thrives in moist soil and partial shade. There are many cultivars. Red-leafed cultivars are the most popular, followed by cascading green shrubs with deeply dissected leaves. Some tolerate sun and others like shade. Almost all are adaptable and blend well with companion plants. The trees are particularly suitable for borders and ornamental paths because the root systems are compact and not invasive. Well drained soil is preferred and the trees grow strongest when not over-fertilized. Many varieties are successfully grown in containers. Anthracnose, powdery mildew, leaf spot, leaf scorch, root rot, aphids, scales, and borers may trouble this tree.
Chaste Tree <i>Vitex agnus-castus</i>	10 to 20 feet tall and wide	It is a sprawling plant with branched flower clusters in late spring and early summer. Not only is the tree strikingly beautiful when in full bloom, but it is also fragrant and attracts pollinating bees and hummingbirds. Flowers are white or violet to blue to deep purple and are followed by a fleshy fruit that contains four seeds that are sometimes used as seasoning (monk's pepper). Grow in full sun or light shade in moist, well-drained soil. It is tolerant of salt spray drift and is drought resistant. It make a good specimen tree.

Favorite Deciduous Trees (continued)

Tree	Height/Width	Description
Redbud—Judas Tree <i>Cercis canadensis</i>	20 to 30 feet tall and 15 to 35 feet wide	This tree is an outstanding, deciduous ornamental tree with rosy pink blossoms opening early in spring. This tree always remains small and growing in the sun will be compact and rounded; when grown in shade, its form is loose, open, and tall. It grows at a moderate rate, about 7 to 10 feet in five to six years. It tends to be short-lived. The heart-shaped leaves are reddish as they emerge, and gradually turn dark green in summer. The fall color is yellow. This tree is best used in naturalized areas, where the flowers are contrasted against evergreens or woodlands. Although it does well in most soil types, it prefers a moist, well-drained site. It does not, however, like a site that is permanently wet. It tolerates acid or alkaline soils. It grows well in full sun but prefers some shade in the heat of summer. Although it will grow in fairly dense shade, it blooms more heavily when exposed to sun. It tolerates moderate dry spells but does better when irrigated in summer droughts. Canker is its most destructive disease. Wounds created by pruning serve as entry points for the fungus that infects the wood and causes cankers. Insects such as treehoppers, caterpillars, scales, and leafhoppers can also cause damage.
River Birch <i>Betula nigra</i>	90 feet tall and 30 to 50 feet wide	It grows at a medium to rapid rate (30 to 40 feet over a 20-year period). Birches situated in moist areas are long-lived. One of the most appealing features of the birch is the bark, which, on larger, young branches and stems, is reddish to pinkish brown and peels off in papery strips. The graceful elegance of the birch allows it to be used as a specimen or for naturalizing; it is best used in large areas. Although the river birch thrives in wet areas, it does not require excessive amounts of water. It tolerates fairly dry soils once it is established. It requires acidic soil but will suffer from iron deficiency if pH level is 6.5 or higher. This species requires full sun and tolerates high temperatures. Leaf spot diseases, aphids, and early leaf drop may trouble this tree in wet climates. It drops branches during heavy winds and storms.

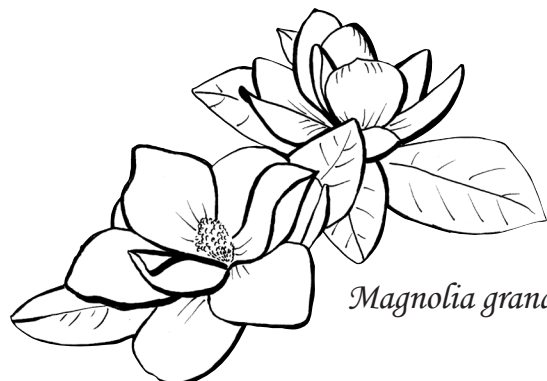
“Natchez (white) Crape Myrtle tends to provide more of an umbrella canopy than the variety of pinks and purples. Crape Myrtles grow well in the Gloucester area but need full sun and they need to be pruned in February.” – Sally Moore, GEMG



Cercis canadensis

“The Vitex or Chaste Tree does very well in our area. It grows to medium height of 10 to 12 feet. It is flowery, similar to the butterfly bush, but has a very attractive shape.”

– Florace Arnold, GEMG Emeritus



Magnolia grandiflora

“Beware of the Black Walnut trees! There are a number of plants that are impossible to grow near them, including your tomato plants.”

– Alma Eacho, GEMG Emeritus

TREES THAT TOLERATE SALT AND WIND

Given that Gloucester has so much waterfront property, it is good to know those trees that can tolerate salt and wind. The following table describes some trees that do well on or near the shoreline.

Tree	Height/Width	Description
Eastern Red Cedar <i>Juniperus virginiana</i>	40 to 50 feet tall and 10 to 20 feet wide	Refer to FAVORITE EVERGREEN TREES.
Honey Locust <i>Gleditsia triacanthus</i>	30 to 70 feet tall	Refer to FAVORITE DECIDUOUS TREES.
Japanese Black Pine <i>Pinus thunbergiana</i>	35 to 60 feet tall	This small, irregular, and open tree is a favorite for seashore planting. Performs well in full sun in sandy or gravelly soil and tolerates drought
Live Oak <i>Quercus virginiana</i>	40 to 80 feet tall and 60 to 100 feet wide	Refer to FAVORITE EVERGREEN TREES.
Southern Magnolia <i>Magnolia grandiflora</i>	60 to 80 feet tall and 30 to 50 feet wide	Refer to FAVORITE EVERGREEN TREES.
Salt Cedars <i>Tamarix species</i>	10 to 15 feet tall and 10 to 20 feet wide	A genus of deciduous shrubs and small trees from coastal sites and dry or marshy, often salt-rich areas inland. Grow best in full sun in well-drained soil
Yaupon Holly <i>Ilex vomitoria</i>	15 to 20 feet tall and 10 to 15 wide	A small evergreen shrub or tree that bears scarlet-red fruit and is useful as a screen or hedge in a swampy area. It is a native plant that has multiple uses in the landscape.

TREES FOR SONGBIRDS AND OTHER WILDLIFE

Try to plant a variety of canopy tree species—penthouse sanctuaries for birds--in your landscape. While space will probably be a concern for most homeowners, proper planning will consider tree size at maturity and other concerns such as the provision of shade, litter accumulation, and root interference. Some hardwood species that are bird friendly in our region include oaks, hickories, maples, tulip poplars, sweetgum, sycamore, and elm. All of these species provide cover for nesting canopy birds such as red-eyed vireos (*Vireo olivaceus*), summer tanagers (*Piranga rubra*), scarlet tanagers (*P. olivacea*), Baltimore orioles (*Ictera galbula*), orchard orioles (*Ictera spurius*), and a variety of warblers and other species. Many hardwood species also provide important foods (acorns, nuts, and fruits) for birds and deer.

Pines also make good additions to the landscape since many species will grow anywhere. Their cones

provide important food resources for a number of species of birds and they also provide important cover year-round.

A few stories down from any penthouse lies the understory. Species such as dogwood, sourwood, holly, sparkleberry, persimmon, mulberry, and redbud provide some of the most abundant stores of fruits and berries to be found in the forest.

The Virginia Department of Wildlife Resources encourages property owners to create backyard wildlife habitats by providing information on how we can care for wildlife's needs at home. Their website provides information and encourages corporate landowners, private landowners, schools and homeowners to improve habitat in their community that will benefit Virginia's songbirds, mammals, amphibians and other wildlife.⁹

⁹ Habitat for Wildlife, Virginia Department of Wildlife Resources
<https://dwr.virginia.gov/wp-content/uploads/media/Habitat-at-Home.pdf>

REFERENCES

Below are sources for general factual information on trees (i.e., soil conditions, height, problem areas):

Chaplin, L.T. (1994). *The southern gardener's book of lists: The best plants for all your needs, wants, and whims*. Dallas, TX: Taylor Publishing.

Clemson Extension Home and Garden Information Center. *Trees*. Retrieved from:
<http://www.clemson.edu/extension/hgic/plants/landscape/trees/>

Cox, J. *Landscaping with nature: Using nature's designs to plan your yard*. Emmaus, PA. Rodale Press.

Department of Conservation & Recreation. (2009). *Invasive alien plant species of Virginia*. Retrieved from: http://www.dcr.virginia.gov/natural_heritage/documents/invlist.pdf

Holmes, R. (Ed.). (1996). *Taylor's Guide to Fruits and Berries*. Boston: Houghton Mifflin.

Below is a list of Virginia Cooperative Extension publications that address trees. This is but a partial list; there are many publications devoted to specific trees and to specific planting conditions.

The websites where these can be found are <https://Resources.ext.vt.edu> or <https://vtechworks.lib.vt.edu>. (Type in the publication number [e.g. 456-018] in the search box.)

24 ways to kill a tree, 430-210 (SPES-307)

A guide to successful pruning: Deciduous tree pruning calendar, 430-460

A guide to successful pruning: Evergreen tree pruning calendar, 430-461

Planting trees, 426-702

Problem-free trees for Virginia landscapes, 450-237

Selecting landscape plants: Flowering trees, 426-611

Selecting landscape plants: Rare and unusual trees, 426-604

Notes:
