

GREEN SPRING GARDENS

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NON - NATIVE TREES AND LARGE SHRUBS - FOR THE WASHINGTON, D.C. AREA -

Non-native trees are some of the most beloved plants in the landscape due to their beauty. In addition, these trees are grown for the shade, screening, structure, and landscape benefits they provide.

Deciduous trees, whose leaves die and fall off in the autumn, are valuable additions to landscapes because of their changing interest throughout the year. Evergreen trees are valued for their year-round beauty and shelter for wildlife. Evergreens are often grouped into two categories, broadleaf evergreens and conifers. Broadleaf evergreens have broad, flat leaves. They also may have showy flowers, such as *Camellia oleifera* (a large shrub), or colorful fruits, such as Nellie R. Stevens holly. Coniferous evergreens either have needle-like foliage, such as the lacebark pine, or scale-like foliage, such as the green giant arborvitae. Conifers do not have true flowers or fruits but bear cones. Though most conifers are evergreen, exceptions exist. Dawn redwood, for example, loses its needles each fall.

The following are useful definitions:

- Cultivar (cv.) a cultivated variety designated by single quotes, such as 'Autumn Gold'. A **variety** (var.) or **subspecies** (subsp.), in contrast, is found in nature and is a subdivision of a species (a variety of Cedar of Lebanon is listed).
- Full Shade the amount of light under a dense deciduous tree canopy or beneath evergreens.
- Full Sun at least 6 hours of sun daily.
- Part Shade the amount of light in an area shaded part of the day, among deciduous trees with high branches, among deciduous trees with foliage that is not heavy, or among thinned deciduous woods.
- Street Tree a tree that tolerates stresses common near roads such as soil compaction, confined root zones, drought, air pollution, high salt levels, and high heat levels. To retain more water for street trees, the following can be used: street swales, rain gardens and larger tree pits or median strips.

Tree selection and placement should be done carefully - trees are dominant features in the landscape due to their stature and potential for long life. The following is a list of non-native trees and large shrubs that perform well in the Washington, D.C. area. Most of these plants prefer full sun but tolerate light shade. Most also prefer a moist, well-drained site. Deciduous trees are listed first, then evergreen trees. Special cultural requirements or tolerances are noted in the comments column. Recommended cultivars are noted, including Gold Medal Award winners [Gold Medal Plant Awards are given annually by the Pennsylvania Horticultural Society to underused woody plants that perform especially well in gardens from New York City to Washington, D.C.].

When selecting non-native trees and large shrubs, purchase only non-invasive species.

Invasive non-native trees that are still sold in the nursery trade are listed in a section near the end of this information sheet.

Non-Native Large Deciduous Trees (60+ Feet Tall)

Scientific Name	Common Name	Comments
Ginkgo biloba	Ginkgo	Tolerates dry sites. Can be used
('Autumn Gold' – male selection)		as a street tree.
Metasequoia glyptostroboides [Gold Medal Award]	Dawn Redwood	Moist or wet sites
8		Similar look to the native
'Gold Rush' or 'Ogon' [Gold Medal		Taxodium distichum (bald
Award; gold foliage so harder to incorporate into the landscape]		cypress). Bald cypress is much more tolerant of periodically dry sites & a better tree in most situations.
Platanus acerifolia -	London Plane Tree,	Very large tree so best for large
Reliable cultivars include 'Bloodgood' & 'Columbia'	Hybrid Plane Tree	public spaces. Very dry soil around this species so hard to garden under.
		Tougher than one of its parents in drier settings, the sycamore (<i>P. occidentalis</i> is native to Virginia; the other parent is native to western Asian & southeastern Europe).

Note: The following two non-native species have performed well in this region, but growing similar native species is preferred.

NON-NATIVE MEDIUM-SIZED DECIDUOUS TREES (30-60 FEET TALL)

NON-NATIVE WEDIOM-SIZED DECIDOOGS TREES (30- 00 FEET TALL)		
Common Name	Comments	
Red Horsechestnut	Grown mainly for showy flowers in May. Prone to foliar diseases in late summer. Slowly grows to mature height.	
	One of its parents is less disease prone, the eastern U.S. native <i>A. pavia</i> (Red Buckeye) – grow the native if you want red flowers in a site with some	
	shade. The hybrid is more tolerant of sunny sites, & only the hybrid has selections with pink flowers.	
	Common Name	

^{*} Fagus sylvatica (European Beech; native to Europe & Western Asia) - Some unusual cultivars are available that are different from the species type, but the native Fagus grandifolia (American Beech) is preferred in most landscapes.

^{*} Zelkova serrata (Japanese Zelkova; 'Green Vase' [Gold Medal Award]) – Originally recommended as a replacement for *Ulmus americana* (American Elm) due to Dutch elm disease (also tolerant of dry sites). The habit of Japanese Zelkova is more formal & not as beautiful as American Elm. American elm cultivars resistant to Dutch elm disease & other large native trees are preferred in most landscapes. In addition, Japanese Zelkova produces many seedlings in gardens beds.

Cercidiphyllum japonicum Weeping forms are available for large sites.	Katsura Tree	Consistently moist sites. Burnt sugar smell to leaves in late summer & fall, & nice fall color.
A large shrub for smaller gardens - 'Heronswood Globe' (reported to grow 15 ft tall). Fall color is not as showy as some species type plants.		
Prunus sargentii - the species type is for large sites & is seldom available except by mail order. Cultivars with a narrower habit include 'Columnaris', 'Pink Flair', & 'Rancho'.	Sargent Cherry	Moist sites best to prevent borer damage (an insect pest) & canker. White-flowered forms now appear to be unavailable: less showy than pink-flowered forms.

NON-NATIVE SMALL DECIDUOUS TREES AND LARGE DECIDUOUS SHRUBS (12-30 FEET TALL)

Scientific Name	Common Name	Comments
Acer henryi	Henry Maple	Tolerates part shade. Grown for long pendulous fruit & attractive trunk.
Maples with green-striped bark: Acer rufinerve – the showiest Asian species in this group that remains at Green Spring (A. davidii is not as showy) (A. capillipes & A. tegmentosum	Asian Snakebark Maple	Light shade to part shade best. Dry conditions makes them more prone to verticillium wilt if it is in the soil. Also do not like periodically wet conditions. Note: The native species of striped
died at Green Spring).		maple is <i>A. pensylvanicum</i> – this species is preferred for general use.
Maples with exfoliating bark [both Gold Medal Award winners]: Acer griseum A. triflorum	Paperbark Maple Three-Flowered Maple	Tolerate part shade but best fall color in full sun to light shade
Hybrids between <i>A. griseum</i> & <i>A. nikoense</i> (<i>A. maximowiczianum</i>) are also available – 'Cinnamon Flake' is one cultivar & some are unnamed.		
Other maples (Japanese maple - types): Acer japonicum 'Aconitifolium' [Gold Medal Award]. 'Vitifolium' is another cultivar.	Fullmoon Maple	Tolerate part shade but best fall color in full sun to light shade. A. palmatum (Japanese maple) has been susceptible to verticillium wilt at Green Spring in dry years in several locations.

Cornus kousa (subsp. chinensis & cultivars including 'Southern Cross') Hybrids between C. kousa, C. florida (native to Virginia), &/or C. nuttalli (western U.S. native) are available but they have little or no fruit production, so not as beautiful in the fall as the native C. florida.	Kousa Dogwood	Moist sites in full sun to light shade best for heaviest flowering. Flowers later than the native <i>C. florida</i> (Flowering Dogwood). C. mas is the most tolerant species of dry sites.
C. mas 'Golden Glory' [Gold Medal Award] & 'Spring Glow'. 'Aurea' has golden foliage (fades with the heat of summer).	Cornelian Cherry Dogwood	
C. officinalis 'Kintoki' [Gold Medal Award]- similar to C. mas but has exfoliating bark Has not been as tough as C. mas at Green Spring.	Japanese Cornelian Dogwood	
Cotinus coggygria (shrub-like: 10 - 15 ft; Eurasian species). Purple-foliage cultivars most commonly grown, such as 'Royal Purple' [Gold Medal Award]	Smokebush, Smoketree	Full sun; tolerate dry sites; a large shrub. Often grown as a cutback shrub for foliage effect (cut back yearly in early spring).
The golden-foliaged Golden Spirit ('Ancot') doesn't keep the golden foliage color for long (personally like the purple foliaged cultivars better).		Note: for a taller, green foliaged species <i>C. obovatus</i> is usually grown (American Smoketree) – native to TN, KY, & several other states. 'Grace' is a hybrid between the native species & the Eurasian species.

Hamamelis species - grown as small trees or large shrubs. The most important species in landscapes is H. intermedia (H. x intermedia)	Asian Hybrid Witch Hazel (hybrids between <i>H. japonica</i> & <i>H. mollis</i> – sold as cultivars)	Best in full sun to light shade in moist sites. Deer love to eat many witch hazel selections. Mostly winter & early spring bloomers (sometimes have light fall bloom but the best fall bloomer is a Virginia native, H. virginiana or common witch hazel).
H. mollis (fragrant yellow flowers, & some cultivars have some red tinting at the base of the petals)	Chinese Witch Hazel	H. intermedia has the greatest diversity of flower colors & some of the showiest cultivars. Some cultivars
H. japonica - usually has yellow flowers that start to bloom later than the above species (some	Japanese Witch Hazel	have fragrant flowers. Fragrance can vary from person to person & from one location to another (better on warmer days & earlier in the season).
have red tinting), but few forms are fragrant. Excellent fall color (mostly yellow). Less commonly available & grown than other species & hybrids.		Some cultivars are very susceptible to a leaf blight caused by the fungus <i>Phyllosticta hamamelidis</i> (plant in sunnier areas with good air circulation to control the fungus).
H. vernalis (native to MO, AR, OK, & TX). This species tolerates periodically	Vernal Witch Hazel	'Arnold Promise' & 'Pallida' are a few susceptible cultivars.
wet sites & clay soils. Mostly winter & early spring bloomer. The species type is fragrant but most		Many cultivars have nice fall color - varies from year to year.
plants hold at least some leaves in the winter – some lightly & others heavily.		Green Spring purchases most plant from a wholesale nursery & sells a few cultivars in the plant shop. RareFind Nursery & Broken Arrow
Hybrids with <i>H. vernalis</i> parentage Note: Green Spring has a national	Hybrid Witch Hazel (the other parent usually has Asian ancestory)	Nursery are retail mail order sources in the eastern U.S. Many cultivars are hard to find.
collection of <i>Hamamelis</i> as part of the Plant Collections Network (https://publicgardens.org/programs-about-plant-collections-network).		
Development & evaluation of the collection will continue over time.		
Lagerstroemia indica & hybrids: Tree-types (23 – 33 ft. tall) that perform well in our area include	Crape Myrtle Many new cultivars	Tolerate dry sites & long bloom period in summer so popular in landscapes.
'Biloxi' & 'Natchez' Intermediate types (13 – 20 ft. tall) that perform well in our area include 'Catawba' & 'Osage'.	available in the nursery trade, including some with purple foliage.	Some cultivars are borderline hardy, but established plants of hardier cultivars will resprout if they die back in the winter – best to grow hardier selections.
		Best to plant in spring or early summer – less susceptible to winter kill than if planted in the fall.

Magnolia hybrids (pink or purplish flowers): M. 'Ann' (shrub-like & wide) & 'Jane' (gets more powdery mildew but durable) 'Coral Lake' 'Daybreak' & 'Galaxy' [both Gold Medal Award winners]. 'Spring Petticoats' (Green Spring is testing other cultivars as well.)	Pink-Flowered Magnolia Cultivars For all flower colors: More cultivars are being carried by the local nursery trade, & there are mail order nurseries as well.	Perform well in full sun but are equally lovely as understory trees in open woods. Later bloom than saucer magnolia so flowers less likely to freeze. Protect bark from deer by using cages when young if branches are not close to the ground.
M. soulangeana	Saucer Magnolia	Early flowering so gets hit by frost some years. Old trees are grand, like in the Mixed Barder et Croop Spring
Magnolia hybrids with yellow flowers) (one parent is the native M. acuminata - Cucumbertree Magnolia). Cultivars in the Green Spring collection include 'Butterflies', 'Daphne', 'Elizabeth' [Gold Medal Award], 'Golden Gift', 'Hattie Carthan', 'Judy Zuk', 'Lois', 'Sunsation', 'Yellow Bird', 'Yellow Fever', & 'Yellow Lantern'.	Yellow-Flowered Magnolia Cultivars	in the Mixed Border at Green Spring. Later flowering
Other <i>Magnolia</i> (mostly white flowers but some cultivars pink		
& white): M. stellata (can be shrub-like) - white-flowered cultivars include 'Centennial' [Gold Medal Award] & 'Lyle's Legacy'.	Star Magnolia	Early flowering but petals seem to be more cold tolerant than some species & selections.
Its hybrid <i>M.</i> × <i>loebneri</i> can have white flowers, such as 'Donna' & Spring Welcome ('Ruth'), but some are pink & white ('Leonard Messel').	Loebner Magnolia	Blooms slightly later.
M. 'Wada's Memory' (white drooping flowers & beautiful pyramidal habit)	Wada's Memory Magnolia	Later bloom period

Malus – disease resistant species	Disease Resistant	Tolerate dry sites
& cultivars. Some have white	Flowering Crabapples	,
flowers including 'Adirondack'		Can be used as street trees
(columnar) & 'Donald Wyman'		
[both Gold Medal Award winners]		Note: the two species of crabapples
		native to Virginia have thorny
Some have shades of pink		branchlets & are not disease
including M. floribunda (Japanese		resistant. Hybrids of non-native
Flowering Crabapple; pink & white)		origin are common in the wild but not
& 'Prairifire' (deep pink)		considered to be invasive.
Royal Raindrops ('JFS-KW5') has		Weeping cultivars include Green
pink flowers & purple foliage.		Spring's <i>M. sargentii</i> 'Candymint
		Sargent' – this cultivar does not have
Note: M. sargentii is a dwarf		the classic weeping form, but other
species for small spaces – some		cultivars are available.
nice forms of the species are		
available, as well as cultivars such		
as 'Tina'. Evaluating other dwarf		
cultivars as well.		
Prunus mume - many cultivars	Flowering Apricot,	Full sun & moist sites best to
including 'Matsubara Red' &	Chinese Plum	minimize borer problems (an insect
'Peggy Clarke'		pest) – need more care than some
		woody plants since not drought
P. 'Okame' [Gold Medal Award]	Okame Cherry	tolerant so can be short lived. Deer
-	,	eat cherry foliage and stems.
Less available cherry hybrids		, c
include 'Dream Catcher' (seedling		Green Spring has a mass of
of 'Okame') & 'First Lady' (one		P. cerasifera 'Atropurpurea'
parent is 'Okame')		(Purpleleaf Plum). Purple-leaved
		selections are harder to incorporate
P. serrulata – several cultivars &	Japanese Flowering	into landscapes.
hybrids available including	Cherry	
'Kanzan' (a hybrid – formerly		Weeping cherry cultivars
'Kwanzan') & its purple-leaved		(P. subhirtella parentage) need
sport 'Royal Burgundy' (narrow in		consistently moist sites. Cultivars
youth). Less available cultivars		include Snow Fountains ('Snofozam';
include 'Shirofugen', 'Shirotae' ('Mt.		can be grown in smaller gardens; no
Fuji'), 'Shogetsu', & 'Tai Haku'.		longer grown at Green Spring) &
		'Pendula Rosea' (for large sites).
P. 'Snow Goose'	Snow Goose Cherry	
		Note: Native Prunus species (native
P. subhirtella 'Autumnalis' (blooms	Higan Cherry	cherry & native plum) tend to be
lightly in the fall & heavier in the		more for naturalistic use.
spring.		
'Accolade' is a hybrid that is only		
available through mail order		
(P. subhirtella x P. sargentii).		
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P. yedoensis— most common	Yoshino Cherry	
species in Washington, D.C. Tidal		
Basin. 'Akebono' [Gold Medal		
Award]		

Stewartia rostrata - one of the easier species to grow but less showy bark.	Stewartia	Full sun to part shade in consistently moist, acid sites (best when gets some shade during the day). Showiest when they get older & larger – only for
S. sinensis & hybrids		attentive gardeners. Have not been able to establish <i>S. monadelpha</i> at
(connoisseur trees)		Green Spring. S. pseudocamellia & hybrids are in decline at Green Spring.
		Note: the two species native to Virginia are difficult to grow, so they are seldom available.
Styrax japonicus & cultivars: 'Sohuksan' ('Emerald Pagoda') [Gold Medal Award]	Japanese Snowbell	Best bloom in full sun to light shade; moist sites best
'Pink Chimes', & Snow Cone		Note: the two species native to
('JFS-D'; conical or pyramidal habit		Virginia are best for naturalistic use –
so more formal). Some new		only <i>S. americanus</i> is commonly
cultivars also look promising.		available.

NON-NATIVE LARGE EVERGREEN TREES (60+ FEET TALL)

Scientific Name	Common Name	Comments
Calocedrus decurrens	Incense Cedar, California Incense Cedar	Full sun to light shade. Native to the western U.S.
Cedrus atlantica & Glauca Group (blue-needled plants; synonym is 'Glauca') ('Fastigiata' & 'Glauca Fastigiata' are narrower than the species type)	Atlas Cedar	Full sun. Large spaces for the species types.
C. libani - similar to above & has green foliage (var. stenocoma is a hardy form from Turkey)	Cedar of Lebanon	
Picea orientalis	Oriental Spruce	Full sun for large spaces. Native to southeastern Europe & southwestern Asia.
'Skylands' is a dwarf golden form that is more shrub-like		Note: P. pungens (Colorado Spruce) does not fit in well in local landscapes. Shorter cultivars are listed in the non-native shrub information sheet.
Pinus wallichiana	Himalayan Pine, Bhutan Pine	Full sun – best in large public spaces. A graceful long-needled pine.
		Note: best to grow native species like eastern white pine (<i>P. strobus</i>) in most landscapes.

NON-NATIVE MEDIUM-SIZED EVERGREEN TREES (30-60 FEET TALL)

Pinus bungeana	Lacebark Pine	Full sun; Japanese white pine is
('Rowe Arboretum')		salt tolerant
P. parviflora & many cultivars such as 'Gimborn's Ideal' & 'Glauca'	Japanese White Pine	Note: The medium-sized <i>P. koraiensis</i> (Korean Pine) is a nice plant but is very similar to the
Smaller cultivars are also available such as 'Glauca Nana'.		native <i>P. strobus</i> . Korean pine keeps its lower branches as it gets older, while eastern white pine loses them.
Thuja 'Green Giant' [Gold Medal Award; one parent is native to the western U.S., T. plicata]. A similar plant (or possibly the same plant) is Spring Grove	Green Giant Arborvitae	Full sun to light shade Note: The species native to Virginia (<i>T. occidentalis</i>) is also good for landscapes.
('Grovepli'). For a slower-growing variegated tree in our area: <i>T. plicata</i> 'Zebrina' (the species is native to the western U.S.). A good greenfoliaged cultivar of this species is 'Atrovirens'.	Western Arborvitae, Western Red Cedar	These plants are superior to Leyland cypress in many situations (<i>Cupressocyparis leylandii</i> ; a hybrid of 2 western U.S. natives) – leyland cypress is susceptible to canker in dry sites & is overused in local landscapes.

NON-NATIVE SMALL EVERGREEN TREES AND LARGE EVERGREEN SHRUBS (12-30 FEET TALL)

Scientific Name	Common Name	Comments
Buxus sempervirens (large shrub)	Common Boxwood	Full sun to light shade. Prefer soils with a pH of 6 or higher (more alkaline). Moist sites best.
		Note: Boxwood blight has now been found in Fairfax County – if it spreads boxwood will no longer be planted as a landscape plant.
Camellia oleifera ('Lu Shan Snow'; large shrub). Many other cultivars of other species & hybrids reach a large size over time, such as C. japonica 'Faith'.	Tea-Oil Camellia	Light shade to part shade This species has been widely used in breeding programs to produce more cold hardy camellia cultivars that bloom in the fall.
Chamaecyparis obtusa 'Crippsii'	Golden Hinoki Falsecpyress (Cypress)	Full sun to light shade; prefers moist soil. Place carefully in the landscape since golden in color. Opens up more with age – prune off lower limbs to highlight attractive bark.

llov 'Mony Noll'	Mary Nell Helly	Full our to part shade
Ilex 'Mary Nell'	Mary Nell Holly	Full sun to part shade.
I. 'Nellie R. Stevens'	Nellie R. Stevens Holly	Sets fruit without a male plant for pollination.
Ilex Red Holly Hybrids - 'Mary Nell' is a parent. Cultivars include Robin ('Conin') & Oakleaf or Oak Leaf ('Conaf'). Oakland ('Magland') is a similar cultivar.	Red Holly Cultivars	Note: The native <i>I. opaca</i> (American Holly) is a beautiful plant as well but a larger plant.
Juniperus chinensis 'Kaizuka' ('Torulosa')	Chinese Juniper Cultivars	Full sun
'Robusta Green' is another good pyramidal cultivar.		Note: Shorter selections of the native <i>J. virginiana</i> (Eastern Red Cedar) are also available – they fit in better with the local landscape. See the native tree information sheet for details.

Invasive Non-Native Deciduous Trees And Large Shrubs Still In The Nursery Trade:

- A. Grow with Caution or Avoid Due to Invasive Potential (Possibly Too Much Reseeding of These Non-Natives):
 - *Acer buergerianum (Trident Maple) reseeding excessively at Green Spring, although not officially reported as invasive.
 - *Osmanthus heterophyllus (Holly Osmanthus) green foliaged plants reseeded excessively at Green Spring so removed. Naturalizing in Rock Creek Park in the Washington, D.C. & in some areas of NC.
- B. Non-Native Deciduous Trees to Avoid Because Invasive (heavy reseeding) remove whenever possible; marked with (VA List) if on the Virginia Invasive Plant Species List (http://www.dcr.virginia.gov/natural-heritage/invsppdflist). If the species is not on the official list then other information is given:
 - *Acer platanoides (Norway Maple)(VA List)
 - *Albizia julibrissin (Mimosa, Silktree) (VA List)
 - *Castanea mollissima (Chinese Chestnut) naturalized in VA & several other states. A carrier for chestnut blight. Reseeding in woodland at Green Spring.
 - *Firmiana simplex (Chinese Parasoltree) naturalized in VA, MD, & other states. Reseeded heavily at Green Spring so removed.
 - *Paulownia tomentosa (Princess Tree) (VA List)
 - *Pyrus calleryana including 'Bradford' (Callery Pear) (VA list)
 - *Quercus acutissima (Sawtooth Oak) naturalized in VA, MD, & other states. Seeding into Green Spring from outside locations.
 - *Salix alba (White Willow) & its hybrid (Weeping Willow; often sold as S. babylonica but misapplied) naturalized in VA, MD, & other states
 - *Ulmus parvifolia (Chinese Elm) naturalized in VA, MD, & other states. Reseeded readily at Green Spring so removed trees we had planted but one stray seedling has gotten established. Also found the hybrid 'Frontier' to reseed excessively.

Scientific Names Of Plants - Current Names Are From:

- **Encyclopedia of Life** (http://eol.org/) institutional partners include Harvard University, the Missouri Botanical Garden, the Smithsonian Institution, and The Field Museum.
- Tropicos from the Missouri Botanical Garden (http://tropicos.org/)

If a second scientific name is given, it is usually an old name that is still seen in some references or used by some nurseries. However, the above databases do not always agree on names.

Other References: -

Flora of Virginia. Alan Weakley, J. Christopher Ludwig, and John Townsend. 2012. BRIT Press. Botanical Research Institute of Texas.

The **Kemper Center for Home Gardening Plantfinder** at the Missouri Botanical Garden is an excellent reference for plant names, gardening information, and photographs (http://www.missouribotanicalgarden.org/plantfinder/plantfindersearch.aspx).

It features plants in their Kemper Center display gardens and is an excellent website about ornamental plants.

The Lady Bird Wildflower Center at the University of Texas in Austin has developed the **Native Plant Information Network** for native plants (http://www.wildflower.org/explore/).

USDA PLANTS Database (http://plants.usda.gov/java/) - this database focuses on plants native to the U.S. and to U.S. Territories and Protectorates, as well as naturalized non-natives and invasives. It is also used to determine distribution within Virginia by county.

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