



GREEN SPRING GARDENS

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

Native trees are some of the most beloved plants for the shade, beauty, screening, environmental benefits, and wildlife habitat they provide. Most of these plants are native to Virginia: these plants existed in Virginia before Jamestown, Virginia was founded in 1607. A few listed species are not native to Virginia but are native to adjacent states in the southeastern U.S.

Deciduous trees, whose leaves die and fall off in the autumn, are valuable additions to landscapes because of their changing interest throughout the year. They are the dominant trees in most woodland plant communities in our region. 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 southern magnolia, or colorful fruits, such as American holly. Coniferous evergreens either have needle-like foliage, such as the eastern white pine, or scale-like foliage, such as the American arborvitae. Conifers do not have true flowers or fruits but bear cones. Though most conifers are evergreen, exceptions exist. Bald cypress, for example, loses its needles each fall.

The following are useful definitions:

- Cultivar (cv.) - a cultivated variety designated by single quotes, such as 'Brandywine'. A **variety (var.)** or **subspecies (subsp.)**, in contrast, is found in nature and is a subdivision of a species.
- 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.
- Naturalistic use – native plants that, when properly sited, perform well with minimal care; best used in an informal design that suggests a natural landscape, or for the restoration of native plant communities.
- 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 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.].

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| <p>Carya species native to Virginia & in the Green Spring collection: <i>C. cordiformis</i> (Bitternut Hickory) <i>C. glabra</i> (Pignut Hickory) <i>C. ovalis</i> (Red Hickory; very similar to <i>C. glabra</i>) <i>C. ovata</i> (Shagbark Hickory) <i>C. tomentosa</i> (<i>C. alba</i>; Mockernut Hickory)</p> <p>Carya species native to adjacent states but not Virginia: <i>C. illinoensis</i> (naturalized in Virginia; tallest species; found in bottomland forests.) <i>C. laciniosa</i> (Shellbark Hickory) - 'Selbers' at Green Spring.</p> <p>Hybrids: <i>C. 'Burlington'</i> (cross of <i>C. illinoensis</i> & <i>C. ovata</i>; other cultivars available)</p> | <p>Hickory</p> <p>Pecan</p> <p>Hican</p> | <p>Most of them are found in moist to dry sites in nature.</p> <p>Generally need to buy small plants – taprooted. Can purchase locally.</p> <p>Shade tolerant species: <i>C. cordiformis</i>, <i>C. glabra</i>, <i>C. ovalis</i>, & <i>C. ovata</i></p> <p><i>Carya</i> that like sun & are shade intolerant: <i>C. illinoensis</i> & <i>C. tomentosa</i></p> <p>For nut production in our region (grow in full sun; available from a few mail order nurseries): <i>C. laciniosa</i> 'Selbers' (not self pollinating) & <i>C. 'Burlington'</i> (a hican – a hybrid between pecan & shagbark hickory). Hicans have tasty nuts & are sometimes sold at local farmer's markets.</p> |
| <p><i>Diospyros virginiana</i></p> | <p>American Persimmon</p> | <p>Tolerates dry sites & some plants in nature also tolerate periodically wet sites. Beautiful chunky bark & edible fruit.</p> |
| <p><i>Fagus grandifolia</i></p> | <p>American Beech</p> | <p>Shade tolerant. Cannot garden close to trunk – inhibiting compounds & very dry (enjoy the beautiful smooth gray bark). Very sensitive to root disturbance & compaction.</p> |
| <p><i>Gymnocladus dioica</i> ('Espresso')</p> | <p>Kentucky Coffee Tree</p> | <p>Tolerates dry sites</p> |
| <p><i>Juglans nigra</i></p> | <p>Black Walnut</p> | <p>Tolerates dry sites & shade. Tasty edible nuts. Plants produce juglone to limit the growth of surrounding plants. This compound is toxic to a few plants like tomatoes. The growth of some plants is slowed down both by this compound & the dry soil around this species, so it is seldom planted locally but enjoy natural stands.</p> |
| <p><i>Liquidambar styraciflua</i> ('Moraine' & other cultivars available)</p> | <p>Sweet Gum</p> | <p>Tolerates wet sites & tolerates drier sites once established. Non-fruiting cultivars have been reported to revert back to the species type: have not grown at Green Spring.</p> |

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| <i>Liriodendron tulipifera</i> | Tulip Tree | Shade tolerant; easy to garden under. Tallest native tree in the eastern U.S. Seldom planted in home landscapes due to large size. |
| <i>Nyssa sylvatica</i> & Red Rage ('Haymanred') | Sour Gum, Black Gum, Black Tupelo | Full sun (best fall color) to part shade; tolerates dry sites & periodically wet sites. |
| <i>Platanus occidentalis</i> | Sycamore | Very large tree for large sites: best by water or in consistently moist sites. Tolerates periodically wet sites. Seldom planted in landscapes – the hybrid <i>Platanus acerifolia</i> with this species as one parent (London Plane Tree) is more commonly planted in large public spaces. |
| <p><i>Quercus</i> - species that tolerate dry sites best (most prefer moist sites):</p> <p><i>Q. alba</i> [Gold Medal Award] (street tree use for large settings) <i>Q. bicolor</i> (dislikes extremely dry conditions) <i>Q. coccinea</i> (species with most reliable red fall color) <i>Q. imbricaria</i> <i>Q. palustris</i> (does not tolerate extremely dry conditions. Sometimes used as a street tree but other species are better). <i>Q. phellos</i> (also tolerant of periodically wet sites) <i>Q. rubra</i> <i>Q. shumardii</i> <i>Q. texana</i> (<i>Q. nuttallii</i>; similar to <i>Q. palustris</i> but reported to be a tougher plant. Has performed well at Green Spring; native to KY, TN, & other southern states; also tolerant of wet sites).</p> <p>Less available oaks that tolerate dry sites (if sold by nurseries usually small since have taproots): <i>Q. falcata</i> <i>Q. laurifolia</i> <i>Q. macrocarpa</i> <i>Q. marilandica</i> <i>Q. muehlenbergii</i> <i>Q. montana</i> (<i>Q. prinus</i>) <i>Q. stellata</i> <i>Q. velutina</i></p> | <p>White Oak Swamp White Oak Scarlet Oak Shingle Oak Pin Oak</p> <p>Willow Oak</p> <p>Red Oak Shumard Oak Nuttall Oak</p> <p>Southern Red Oak Laurel Oak Bur Oak Blackjack Oak Chinkapin Oak Chestnut Oak Post Oak Black Oak</p> | <p>Oaks are generally easy to garden under. Most tolerate at least some shade. Species that tolerate dry soils and that available in the nursery trade are used as street trees in larger spaces.</p> <p>Oaks readily hybridize - some plants in the Green Spring collection are hybrids.</p> <p>Sometimes see larger plants of <i>Q. macrocarpa</i> for sale at the retail level.</p> |

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| <p>Oaks that tolerate wet sites or periodically wet sites: <i>Q. bicolor</i> (also tolerates drier sites) <i>Q. lyrata</i> <i>Q. michauxii</i> <i>Q. nigra</i> <i>Q. palustris</i> (also tolerates drier sites. Sometimes used as a street tree but other species are better). <i>Q. phellos</i> (also tolerant of dry sites) <i>Q. texana</i> (<i>Q. nuttallii</i>; similar to <i>Q. palustris</i> but reported to be a tougher plant. Has performed well at Green Spring; native to KY, TN, & other southern states; also tolerant of drier sites)</p> | <p>Swamp White Oak Overcup Oak Swamp Chestnut Oak Water Oak Pin Oak Willow Oak Nuttall Oak</p> | <p>Swamp white oak can be used as a street tree in large sites. Fairly small plants of <i>Q. lyrata</i>, <i>Q. michauxii</i>, & <i>Q. nigra</i> are sold due to taproots.</p> |
| <p><i>Taxodium distichum</i> - the more formal Shawnee Brave ('Mickelson') is beautiful as well. Note: <i>T. distichum</i> var. <i>imbricatum</i> (<i>T. ascendens</i>; Pond Cypress) has a finer texture than the above.</p> | <p>Bald Cypress</p> | <p>Moist to wet sites best. <i>T. distichum</i> 'Peve Minaret' is an unusual plant that is slower growing than the species & slower to leaf out in the spring – personally prefer taller selections.</p> |
| <p><i>Ulmus americana</i> - Cultivars resistant to Dutch elm disease include 'New Harmony', 'Princeton', & 'Valley Forge'.</p> | <p>American Elm</p> | <p>Tolerates dry or periodically wet sites; very tolerant of soil compaction. Can be used as a street tree. Two other native species are sold by some native plant nurseries – have not evaluated.</p> |

Large Native Trees Primarily for Special Habitat Uses or Naturalistic Use:

Celtis occidentalis (Northern Hackberry) & 'Magnifica' (a hybrid between *C. occidentalis* & *C. laevigata* – 2nd species is native to eastern Virginia). Plants in this genus are important butterfly host plants. Green Spring is also growing the smaller *C. tenuifolia* (Dwarf Hackberry; more drought tolerant)
Morus rubra (Red Mulberry) – many Red Mulberry plants also have some White Mulberry parentage (*M. alba* – an invasive Asian species). Host plant for mourning cloak butterfly.
Prunus serotina (Black Cherry) – butterfly host plant & provides nectar for adult butterflies.
Robinia pseudoacacia (Black Locust; outside original natural range in the mountains) – butterfly host plant & showy fragrant white flowers. Suckers readily and thorny, so generally do not plant.
Salix nigra (Black Willow) & smaller native species – for sunny, periodically wet to wet sites. Butterfly host plants.

Note: *Fraxinus americana* (White Ash) & *F. pennsylvanica* (Green Ash) should no longer be planted - an introduced insect pest, emerald ash borer, is killing trees in the region. Several trees at Green Spring have been treated with a systemic insecticide to prevent them from being killed by the borer.

Native MEDIUM-SIZED DECIDUOUS TREES (30- 60 FEET TALL)

| Scientific Name | Common Name | Comments |
|---|---|--|
| <i>Carpinus caroliniana</i> | American Hornbeam | Tolerates shade & dry sites |
| <i>Cladrastis kentukea</i> (once <i>C. lutea</i> [Gold Medal Award]) (native to NC, TN, KY, & other states)(pale pink form: 'Rosea' or 'Perkins Pink') | Yellowwood | Full sun to light shade. Best to prune in summer – bleeds extensively in winter & spring. |
| <i>Halesia tetraptera</i> (was called <i>H. carolina</i> but a different species now) (also pale pink-flowered forms like 'Rosea' or 'Arnold Pink', & 'Rosy Ridge') Note: The later blooming, small tree <i>H. diptera</i> var. <i>magniflora</i> (Two-Winged Silverbell) is beautiful in bloom; native to SC & other southern states [Gold Medal Award]. | Mountain Silverbell | Light shade to part shade in reliably moist sites |
| <i>Magnolia macrophylla</i> <i>M. tripetala</i> (smaller leaves than the above & sometimes a small tree in stature) Note: <i>Magnolia acuminata</i> (Cucumbertree Magnolia) is usually a large tree with cream colored flowers – for large sites mostly in public spaces & for naturalistic use. | Bigleaf Magnolia Umbrella Magnolia | Tolerate part shade. Sensitive to bark injury from deer rubbing & from frost cracking in the winter – plant away from pavement & cage when young to protect from deer. <i>M. fraseri</i> (Mountain Magnolia) is also native to Virginia but is no longer at Green Spring (seldom available from nurseries). |
| <i>Ostrya virginiana</i> | American Hop Hornbeam | Tolerates dry sites & shade |
| <i>Oxydendrum arboreum</i> | Sourwood | Tolerates part shade; consistently moist sites best. |
| <i>Sassafras albidum</i> | Sassafras | Tolerates dry sites in shade but likes more moisture in full sun |

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

| Scientific Name | Common Name | Comments |
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| <i>Acer pensylvanicum</i> | Striped Maple, Moosewood | Light shade to part shade best; green striped bark (protect from deer when young). Young stems of the grafted cultivar 'Erythrocladum' turn coral red after leaf fall (as bark ages it becomes yellow-amber-brown). |
| <i>Aesculus pavia</i> [Gold Medal Award; native to NC, KY, TN, & other states] – can also be grown as a large shrub | Red Buckeye | Light shade to part shade best (tolerates dry sites with some shade, but in full sun needs consistently moist sites) |

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| <p><i>Cornus alternifolia</i></p> <p><i>C. florida</i> ('Cherokee Princess' & forma <i>rubra</i> are lovely at Green Spring).</p> <p>'Appalachian Spring' is anthracnose-resistant but planted in an area that is too sunny at Green Spring to look its best. 'Cherokee Princess' & forma <i>rubra</i> have been resistant to this disease in some studies as well.</p> <p>Note: native species mostly for naturalistic use – <i>C. racemosa</i> (Northern Swamp Dogwood; a small tree or large shrub). Geauga ('Geazam') is one cultivar.</p> | <p>Alternatleaf Dogwood</p> <p>Flowering Dogwood</p> | <p>Full sun (moist site) to part shade.</p> <p>Moist sites in full sun to light shade best - tolerates part shade but best at forest's edge to minimize anthracnose problems (a fungal disease).</p> |
| <p><i>Hamamelis virginiana</i></p> <p>('Champlin's Red', 'Harvest Moon', & 'Mohonk Red' have performed well. A slower growing & shorter cultivar is 'Little Suzie'. 'Harvest Moon' is a personal favorite.)</p> | <p>Common Witch Hazel</p> | <p>Full sun to part shade. Fall bloomer into early winter.</p> <p>Note: Green Spring has a national collection of <i>Hamamelis</i> as part of the Plant Collections Network (https://publicgardens.org/programs-about-plant-collections-network). However, few cultivars are available of this species.</p> |
| <p><i>Ilex decidua</i></p> <p>('Warren's Red': this cultivar & other female plants need a male pollinator in order to fruit – an <i>I. opaca</i> male can pollinate it)</p> | <p>Possumhaw Holly</p> | <p>Full sun for best fruit production. Tolerates wet & dry sites. Best for large sites due to its size & informal habit.</p> |
| <p><i>Magnolia acuminata</i> 'Koban Dori'</p> <p>This form with yellow flowers was once classified as var. <i>subcordata</i> & is found in the wild in Alabama, Ga., & NC. This variety is no longer recognized by botanists. Evaluating 'Skyland's Best'.</p> <p>Note: The species type of <i>M. acuminata</i> (Cucumbertree Magnolia) is usually a large tree with cream colored flowers – for large sites & for naturalistic use.</p> | <p>Koban Dori Magnolia</p> | <p>Full sun to light shade. Moist sites best. Available from mail order nurseries.</p> |

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| <p><i>Viburnum prunifolium</i> - Guardian ('Guazam') has performed well</p> <p><i>V. rufidulum</i> ('Royal Guard')</p> <p>Note: <i>V. lentago</i> (Nannyberry Viburnum) is a less showy species most of the year - nice in mass & good red fall color – naturalistic use</p> | <p>Blackhaw Viburnum</p> <p>Southern Blackhaw Viburnum</p> | <p>Large shrubs or small trees. Need at least 2 plants of the same species with different genetic backgrounds to produce fruit; tolerate dry sites</p> |
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Small Native Trees or Large Shrubs Primarily for Naturalistic Use: -

Aralia spinosa (Devil's Walking Stick; large shrub & spiny) - nectar plant for butterflies.

Cotinus obovatus (American Smoketree) – native to TN, KY, & several other southern states; generally more shrub-like. Unusual flowers & beautiful fall color.

Prunus angustifolia (Chickasaw Plum) - wildlife gardens (suckers)

P. maritima (Beach Plum) is a smaller plant that does not sucker & is in the Wildlife Garden – normally likes sandier soils but has done well there (can be hard to establish).

P. americana (American Plum) – wildlife gardens (suckers). All species likely are butterfly host plants & provide nectar for adult butterflies.

Ptelea trifoliata (Hoptree) - butterfly host plant

Staphylea trifolia (American Bladdernut) – suckers

Styrax americanus (American Snowbell) – suckers

NATIVE LARGE EVERGREEN TREES (60+ FEET TALL)

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| <p><i>Magnolia grandiflora</i> (native of NC & further south - naturalized in Virginia)</p> <p>Average sized cultivars include 'Bracken's Brown Beauty' [Gold Medal Award; personal favorite] & other good cultivars such as 'D.D. Blanchard'.</p> <p>Cultivars with smaller leaves & stature include 'Kay Parris', 'Little Gem', & Teddy Bear ('Southern Charm' – have not grown).</p> | <p>Southern Magnolia</p> | <p>Full sun to light shade.</p> |
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| <p><i>Pinus strobus</i> - 'Fastigiata' [Gold Medal Award – narrower habit than the species type]</p> <p><i>P. taeda</i></p> <p><i>P. virginiana</i></p> <p>Note: other native species in the Green Spring collection are <i>P. echinata</i> (Shortleaf Pine; nice plant but limited availability in nursery trade) & <i>P. palustris</i> (Longleaf Pine – native to the outer Coastal Plain in Virginia)</p> | Eastern White Pine | Full sun. The easiest species to find in the nursery trade. |
| | Loblolly Pine | The most tolerant of poor drainage of the listed pines |
| | Virginia Pine | Virginia pine is less showy than the above native species. |
| | | Longleaf pine likes sandy soils best – fussier about where it is planted in our area. |

Best for Naturalistic Use - *Tsuga canadensis* (Eastern Hemlock) – a beautiful tree found in moist areas in nature but hemlock woolly adelgid (an aphid-like insect from Japan) is an invasive pest. Non-native beetles have been introduced into hemlock groves in Virginia, Maryland, West Virginia, & other states as biological control agents, so hopefully over time control of the pest will improve (some plants survive & perform well if they have good growing conditions).

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

| Scientific Name | Common Name | Comments |
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| <i>Chamaecyparis thyoides</i> (‘Andelyensis’ is a dwarf cultivar – 10 ft tall; formal looking compared to the species) | Atlantic White Cedar, Falsecypress (Cypress) | Must have moist or wet sites - species is found in Coastal Plain wetlands in nature. |
| <i>Ilex opaca</i> [Gold Medal Award] & cultivars. A male pollinator is needed for fruit production. | American Holly | Full sun to part shade |
| <i>Juniperus virginiana</i> Cultivars that are slower growing so more shrub-like: Emerald Sentinel (‘Corcorcor’; female) [Gold Medal Award] & ‘Hillspire’ (‘Cupressifolia’; male) | Eastern Red Cedar, Juniper | Full sun; usually separate female & male plants but sometimes both sexes on the same plant |

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

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| <i>Ilex attenuata</i> (<i>I. × attenuata</i>) Male <i>I. opaca</i> plants pollinate this hybrid. One parent of this hybrid is a VA native (<i>I. opaca</i>) & the other parent is a native of NC & other southeastern states (<i>I. cassine</i>). | Foster’s Holly | Full sun to part shade. Crosses naturally in the wild in Florida, where it is called Topal Holly. |
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| <p><i>Magnolia virginiana</i> (deciduous to evergreen; our native forms are usually semi-evergreen)</p> <p>Moonglow ('Jim Wilson') is a very hardy cultivar that can be grown further north than most forms [Gold Medal Award].</p> <p>Evergreen Types: 'Henry Hicks' & the variety from the Deep South (sold as var. <i>australis</i> but no longer considered botanically valid) remain evergreen but leaves turn brown under very cold conditions. 'Henry Hicks' is shorter than var. <i>australis</i> (the southern forms are more tree-like in general). The var. <i>australis</i> plant at Green Spring looks worse at the end of very cold winters than 'Henry Hicks'.</p> | <p>Sweet Bay Magnolia</p> | <p>Moist to wet soils; full sun to part shade. Susceptible to frost cracking in certain exposed sites by pavement in the winter (south & west facing sites).</p> <p>Note: Semi-evergreen foliage is green only part of the winter or only part of the foliage is fully evergreen</p> |
| <p><i>Thuja occidentalis</i> & cultivars: Green foliage: 'Emerald' ('Smaragd'; 15 ft tall), 'Nigra' (30ft), & 'Wintergreen' (35 ft)</p> <p>Golden foliage: 'Lutea' (30 ft); 'Sunkist', & Techny Gold ('Walter Brown') – both 10-15 ft</p> | <p>Eastern Arborvitae</p> | <p>Full sun</p> |

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.

Landscaping With Native Plants. Maryland Native Plant Society.

(<http://www.mdflora.org/resources/Publications/GardenersGuidelines/Landscaping-Natives.pdf>).

This booklet is also available in print form.

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/>).

Native Plants for Northern Virginia (<http://www.plantnovanatives.org/>). This booklet is also available in print form. It is a publication of the Plant NoVA Natives initiative, which includes the Virginia Native Plant Society.

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.

*Developed by Brenda Skarphol, Curatorial Horticulturist
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