



woodend restoration guide

Nature Forward
Restoration Department

2022



Formerly Audubon Naturalist Society, Est. 1897

**Connecting people and nature
in the Capital Region**

Introduction

Since its founding in 1897, Nature Forward, formerly the Audubon Naturalist Society, has made important conservation impacts in the DC metro area and beyond. Our victories range from passage of the Migratory Bird Treaty Act (1918), to preservation of the C&O Canal, to saving Dyke Marsh, to protecting Ten Mile Creek.

The buildings at Woodend Nature Sanctuary date from the late 1920s and the estate of Chester and Marion Wells; Marion Wells bequeathed the 40 acres that remained in the estate to Nature Forward.

Long before the Wells family built the houses and developed the formal gardens, these rolling hills were part of the hunting grounds of Algonquian-speaking people, were included in an early colonial land grant, and were intensively farmed for tobacco in a plantation system that exploited the labor of enslaved people. In recent decades, the forces of urbanization have surrounded Woodend and impacted its ecology.

Conservation of our headquarters at Woodend Nature Sanctuary remains one of our quieter triumphs during the life of our organization. At Woodend, we have effectively conserved 40 acres inside the busy DC beltway for 50 years, holding back development, preserving trees and meadows, and providing our community with an oasis of nature.

We invite you to explore the gardens, forests, meadows, and stream at Woodend using this Guide. Simply flip through the pages to explore the wonders of Woodend and how the our restoration staff and volunteers maintain these areas for wildlife and people.



Mertensia virginica



Liriodendron tulipifera flower



East facade of the main building with *Eurybia divaricata*

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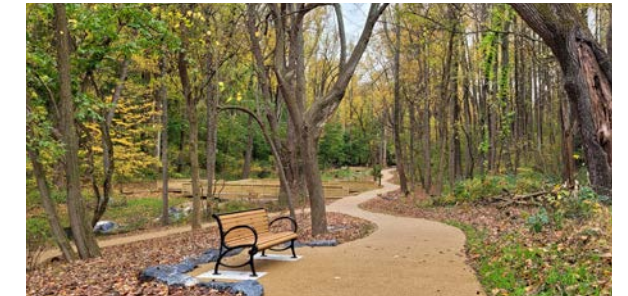
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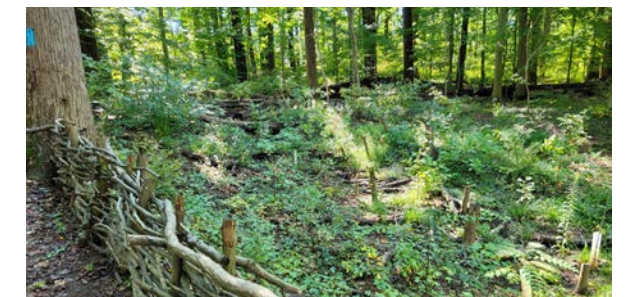
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Woodend Nature Sanctuary Trail Map



Formerly
Audubon Naturalist Society,
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Gardens

Our native plant gardens at Woodend fulfill many functions: we want them to provide **habitat value, education and aesthetic enjoyment, and stormwater management.**

Our gardens are designed and maintained to support these goals. As in our forests and meadows, our top priority is providing habitat for birds, insects, and other wildlife by sustaining a **diverse plant population** and ensuring that water, shelter, and food is available. In addition to designing with a diverse set of plant species, part of this approach is that we do not “deadhead” flowers once they are done blooming or cut back native grasses in fall, because we want to leave the seed sources for birds to eat and the stems for invertebrates to overwinter. Likewise, we match our plants to the conditions we have to avoid use of fertilizers or significant soil amendments, and we plant with a closed canopy of plants so that our established gardens do not require regular shredded bark mulch applications. In areas near paths, we prune and cut back plants to ensure they do not interfere with circulation, but our focus is on **matching plant to place** and favoring plants whose natural habit is a good match for the site in terms of visibility needs, access, etc. We leave leaf litter and dead wood wherever possible as habitat for detritivores and those who



Goldfinch (*Carduelis tristis*) eating *Eupatorium dubium* seeds



Pileated Woodpecker (*Dryocopus pileatus*) on a log

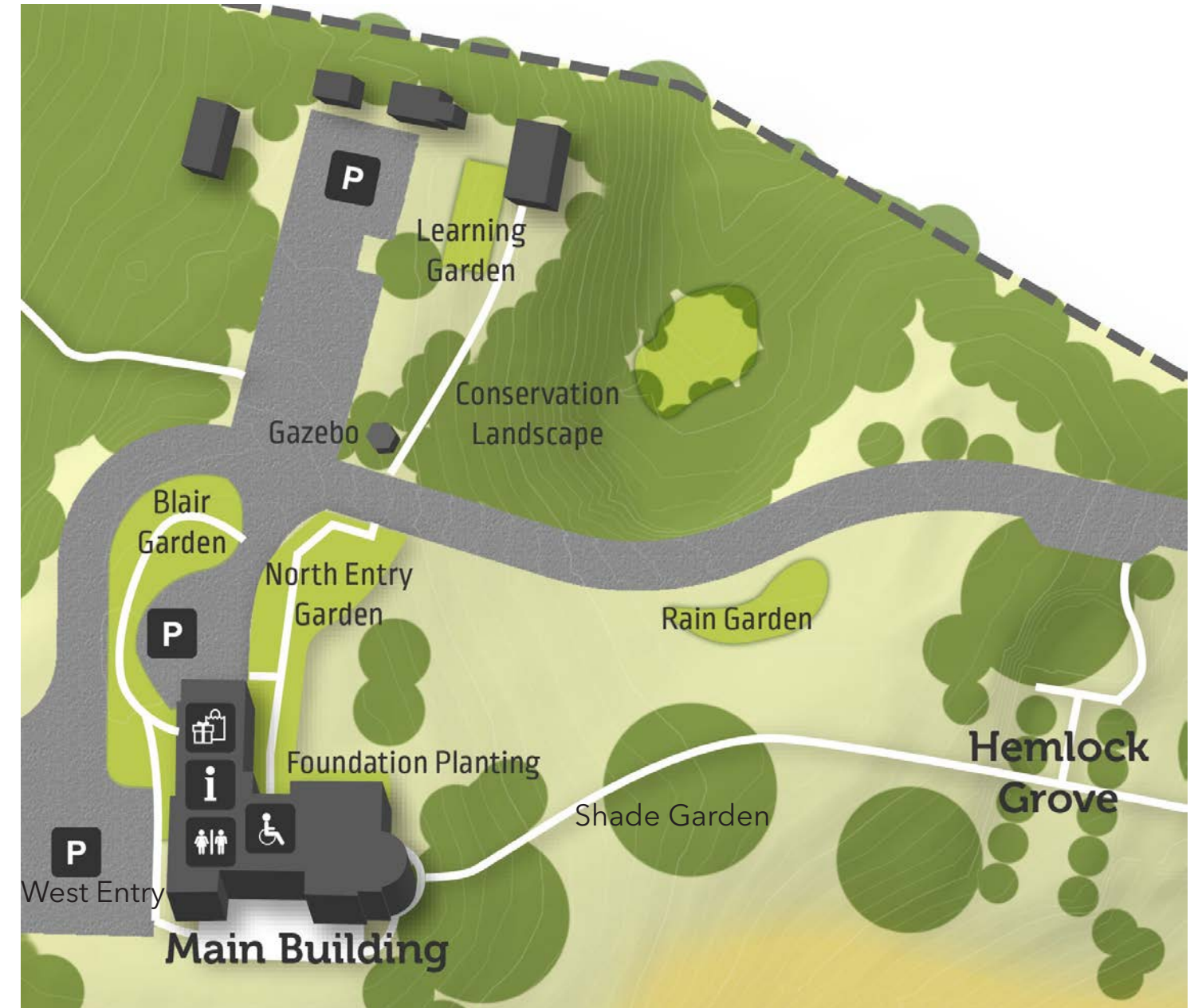
eat them- it's always fun to watch a woodpecker digging grubs out of the log in our north entry garden, for example.

Along with habitat, we manage our gardens for **aesthetics and legibility.** For example, we might transplant and re-arrange various plants, even if they are desirable native species, to create simpler compositions that make plant species easier to identify for visitors, from tour groups to field trippers to summer campers. This is part of our “educational” goal for the gardens.

In the Blair Garden, we showcase plant species from different ecoregions of Maryland, and we strive for a level of diversity which would be unlikely to occur in nature in such a small area; to maintain this level of diversity we work to remove certain aggressive native species so that less aggressive species remain.

On the next few pages, we've highlighted just a few of the plant species in different garden areas, as shown on the diagram. For more of the native plants that can be seen in each garden area, see the Appendix.

Garden Site Plan



Plan Enlargement of Main Garden Areas



Key Plan

Hemlock Grove

The Hemlock Grove was originally part of the formal gardens of the mansion. Today the Hemlock Grove is an enchanting space for weddings and other events, and the original hemlock trees (*Tsuga canadensis*) are being supplemented with other native evergreens and flowering shrubs, such as American hollies (*Ilex opaca*), Virginia cedars (*Juniperus virginiana*), smooth hydrangeas (*Hydrangea arborescens*), inkberry holly (*Ilex glabra*), and others.



The Hemlock Grove in fall



The Shade Garden in spring with *P. aurea* and *T. cordifolia* in bloom

Shade Garden

The Shade Garden along the path from the main building leading to the Hemlock Grove also enjoys dappled shade throughout. It is planted with a simple, low-growing plant palette. This is a favorite area for visitors to gain inspiration on what low-growing natives might do well in their yard where shade and rootzone competition from mature trees is killing their lawn. seersucker sedge (*Carex plantaginea*), golden ragwort (*Packera aurea*), and christmas fern (*Polystichum acrostichoides*) provide year-round color and texture, while foamflower (*Tiarella cordifolia*), Hairy Alumroot (*Heuchera villosa*) and white wood aster (*Eurybia divaricata*) provide seasonal interest.

North Entry Garden

The North Entry Garden and Foundation Planting was installed in 2019 and features plants from throughout the Chesapeake Bay Watershed as well as a large fallen tree, salvaged from elsewhere on the property, to showcase the benefits of including dead wood in the garden from an aesthetic and habitat perspective.

In this area, we balance our goal of creating habitat with prioritizing visibility and access, as the fully accessible entrance to our main building runs through these garden beds. This area also contains our year-round bird feeders; the seeds of black-eyed susans (*Rudbeckia fulgida*), purple coneflower (*Echinacea purpurea*)**, wild bergamot (*Monarda fistulosa*) and little bluestem (*Schizachyrium scoparium*) planted in the beds provide plenty of fall and winter food for seed-eating birds. Those who prefer insects can investigate the fallen log, and Coral Honeysuckle (*Lonicera sempervirens*) provides a long season of nectar for hummingbirds, bees, and more.

** While native to the Eastern US, this is not native in the Chesapeake Region.



North Entry as seen from Driveway in summer



Fothergilla (*F. gardenii*)** and phlox (*P. divaricata*) in spring

North Foundation

The foundation planting has the same goals, but in a lower-light setting and with less total area. Since the deer exclusion fence was installed, this area also serves as a showcase for some beautiful native garden plants that are frequently victims of deer browse elsewhere, such as woodland phlox (*Phlox divaricata*) and smooth hydrangea (*Hydrangea arborescens*). Four-season interest in a small area is provided with a combination of additional shade tolerant plants such as fothergilla (*Fothergilla gardenii*), golden alexanders (*Zizia aurea*), and solomon's seal (*Polygonatum biflorum*).

Blair Garden

This garden was our first major effort to establish a native plant community in the cultural landscape of Woodend in 2010. It consists of native plants that can be seen readily in the wild in the Chesapeake Bay Watershed, specifically in Maryland, Virginia, and the eastern West Virginia panhandle. Plants were chosen for their value to wildlife, their seasonal interest, and their ornamental features. Careful consideration was given to excluding plants known to be particularly palatable to deer. The garden design incorporates the three physiographic regions of the Chesapeake Bay watershed: Coastal Plain, Piedmont, and Mountain. Plants are located in regions where they may be found in the wild, though many of these species grow naturally in more than one zone. The Chesapeake region's only cactus, eastern prickly pear (*Opuntia humifusa*) with its yellow flowers and showy autumn fruits is the star of the Coastal Plain section of the garden, though the bayberry (*Morella pensylvanica*) and New York ironweed (*Vernonia noveboracensis*) are also favorites with visitors, especially avian ones.

The 'Piedmont' section is an especially good demonstration of spring ephemerals in a garden context, with impressive shows of bloodroot (*Sanguinaria canadensis*), Virginia bluebell (*Mertensia virginica*), and many others in spring. It's also a showcase for groundcovers such as wild ginger (*Asarum canadense*), wild stonecrop (*Sedum ternatum*), while others, such as Pennsylvania sedge (*Carex pensylvanica*), and dwarf crested iris (*Iris cristata*) are found under the Rosebay Rhododendrons (*Rhododendron maximum*) and Pinxter Azaleas (*Rhododendron periclymenoides*) in the mountain section.



Virginia Bluebells (*M. virginica*) blooming in the "Piedmont"



The "Mountains" in fall



"Coastal Plain" portion of the Blair Garden

West Entry

This garden demonstrates a simple approach to a more formal entrance planting, and how to use appropriate cultivars in order to maximize use of native plants in an institutional setting.

Species include dwarf chokeberry (*Aronia melanocarpa* 'Ground Hug'), Dwarf Fragrant Sumac (*Rhus aromatica* 'Gro Lo'), Prairie Dropseed (*Sporobolus heterolepis*), and Wild Blue Indigo (*Baptisia australis*).

The parking area at our west entrance is paved with a permeable paving installation; for more on how this assists us in our stormwater management goals, see page 12.



West Entry in fall; permeable pavers in foreground



"Three Sisters" Garden of corn, beans, and squash

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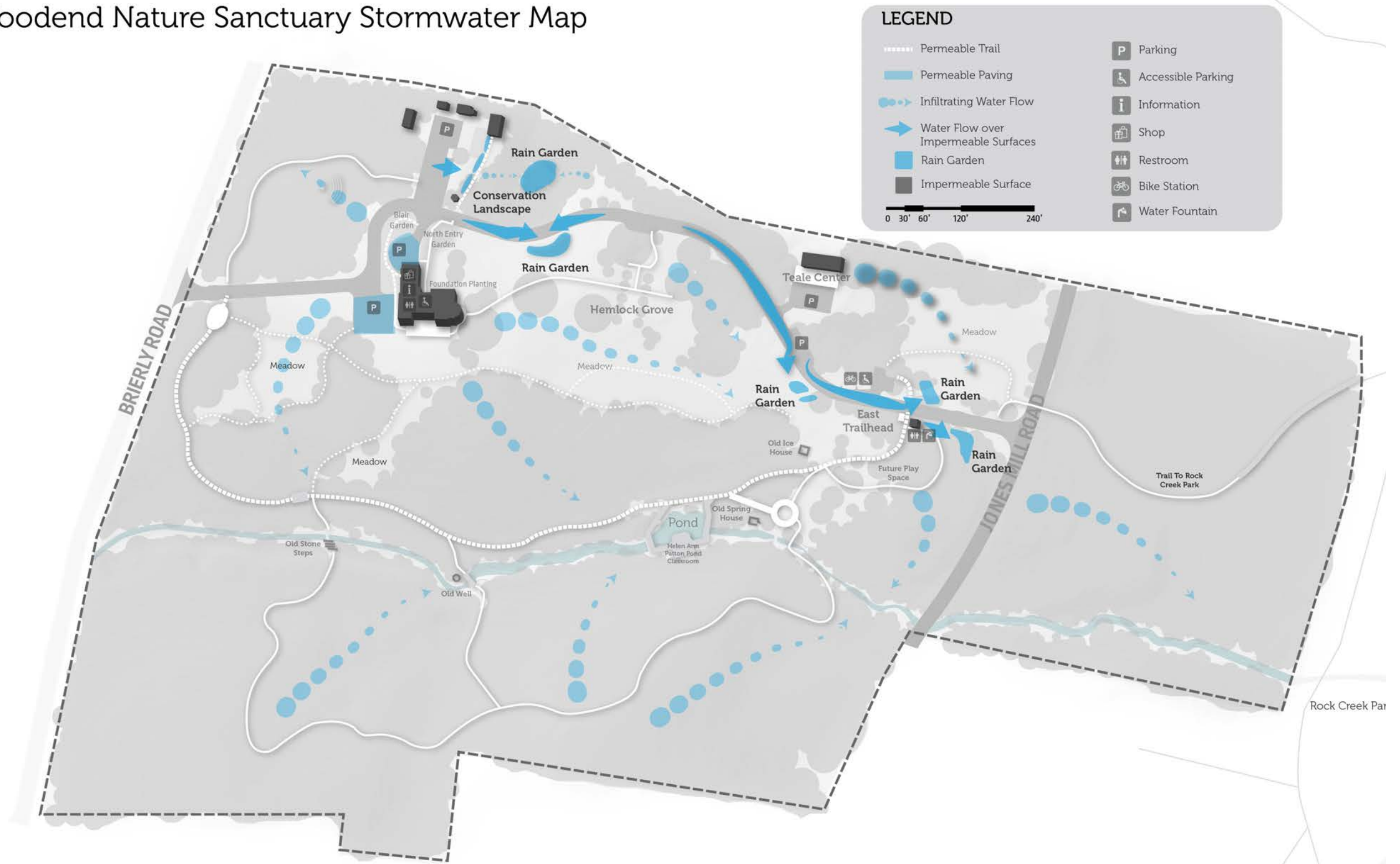
Learning Garden

This garden is used for teaching organic vegetable gardening, compost management, care of edible native fruit trees, and more. Edible native plants, including American persimmon (*Diospyros virginiana*), Paw Paw (*Asimina triloba*), and Highbush Blueberry (*Vaccinium corymbosum*) are grown in the orchard area. Common annual food crops such as corn, squash, beans, and tomatoes grown in the fenced enclosure are enthusiastically consumed by tour groups, summer campers, preschoolers, staff, volunteers, and the occasional chipmunk.

Stormwater Management

Water flows downhill whether it falls on pavement or forest, lawn, or meadow. However, forests and meadows infiltrate more water than lawn due to the roughness of the surface and the density of plants, which slow water down and increase infiltration. Lawn is permeable, but is less rough with shallower roots, so it typically does not infiltrate water to the same extent. Areas of asphalt, building roofs, and other impervious paving do not infiltrate water at all; all the water that falls on these surfaces flows to an adjacent area. In many cases, this is the road, which conducts the water to the stormdrain system, bypassing groundwater recharge and in many cases conducting pollutants. One way we approach this challenge is to limit impermeable surfaces wherever possible by using pervious materials for our trails and parking areas. For impermeable paved areas, we use a suite of green infrastructure practices from conservation landscaping to rain gardens to infiltrate the water as much as possible. Our stream restoration ensures that water that enters our site via the stream also leaves cleaner than it arrived, trapping pollutants before they can move downstream. Like our rain gardens, the stream restoration also enhances the beauty and habitat value of the sanctuary.

Woodend Nature Sanctuary Stormwater Map



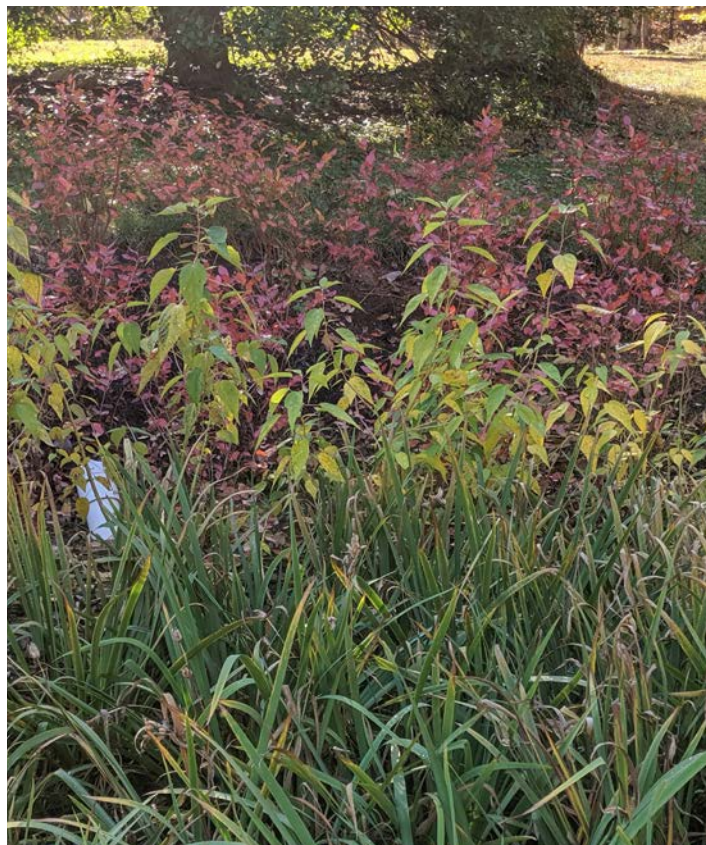
Stormwater Management

In addition to habitat, educational and aesthetic goals, stormwater management is a major driver of placement and design of our gardens. While some of the gardens are located near the mansion because of its centrality, that is also where the impermeable surfaces on the property are concentrated. Therefore, it falls to the gardens and the broader landscape to not only infiltrate the rainwater that falls directly on them, but to infiltrate the water that falls on the impermeable surfaces such as the driveway, the roof of the building, the terraces, and one of our parking lots.

This would be difficult, if not impossible, if it were not for our **permeable paved areas**, which reduce this burden significantly; the permeable paving in the west parking lot, the shop parking lot, and on the walkway to the Learning Garden reduce the total area of impermeable surfacing that is depositing water onto the gardens. The bioswale along the permeable pathway to the garden, the conservation landscape down the slope, and the rain gardens along the driveway are all examples of gardens that have been designed and engineered to help filter and infiltrate more than their fair share of storm water.



Rain Garden installation



The Driveway Rain Garden in Fall

Rain Gardens

As shown on the map, we have several rain gardens and a large conservation landscape treating the stormwater from impervious surfaces.

Along the driveway, our rain gardens receive water from the roadway via trench drain or curb cut. This water is then infiltrated with a variety of different structures; some rain gardens include subdrains and gravel subbases, some use a sandy soil to encourage infiltration, and some rely on subsoil decompaction and topography to encourage infiltration. In all cases, they also provide habitat through their plantings.

Rose mallow (*Hibiscus moscheutos*), Highbush Blueberry (*Vaccinium corymbosum*), Blue Flag Iris (*Iris virginica*), and soft rush (*Juncus effusus*) are among the species that thrive in our rain gardens.

Conservation Landscape

In this area next to the Learning Garden, a swale along the west side of the path slows down rushing stormwater giving native plants a chance to soak it up; on the slope of the tree-covered hill, long tubes of filter fabric are filled with compost make berms that are directly planted with native understory plants. These filter socks remove pollutants from stormwater before it leaves the property. Unlike most traditional rain gardens where extensive excavation would be necessary, the filter fabrics allow for the protection of the standing trees while also slowing and capturing stormwater.

This shady area is planted with species adapted to different levels of soil moisture; plants in a swale must tolerate both wet and drought, for example.

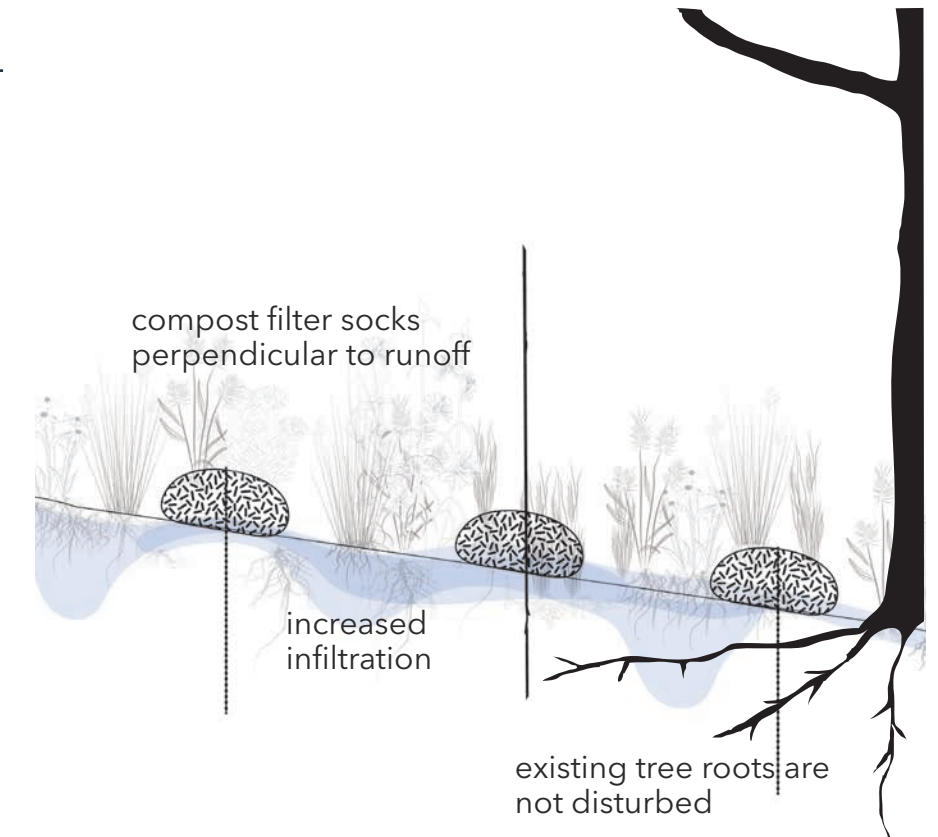
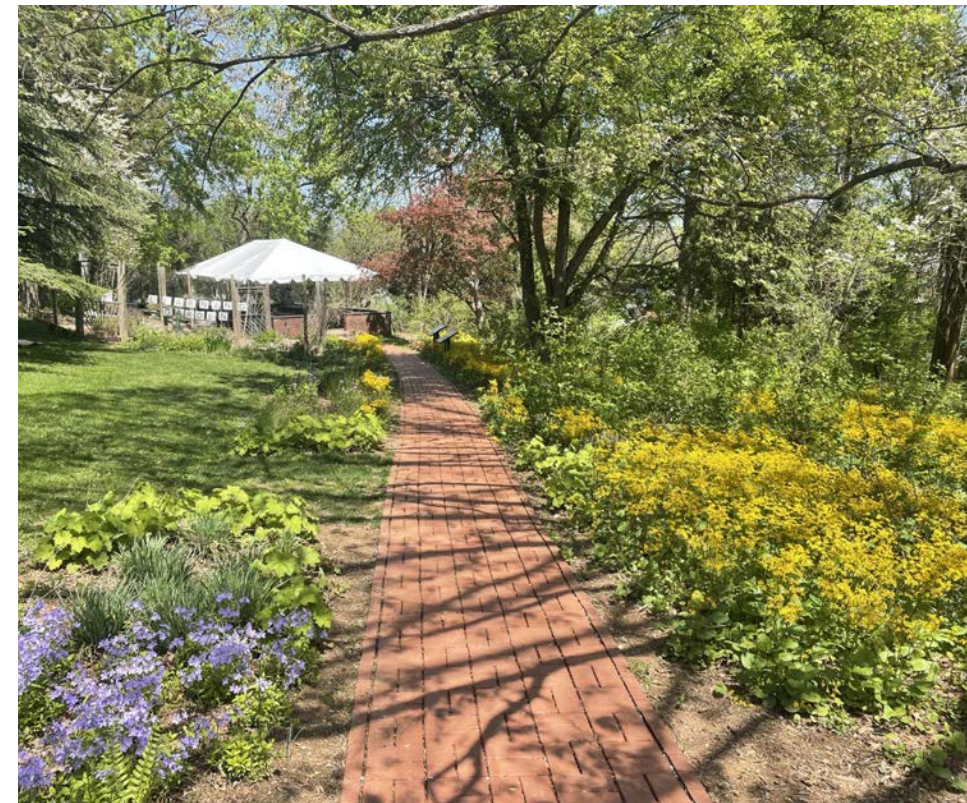
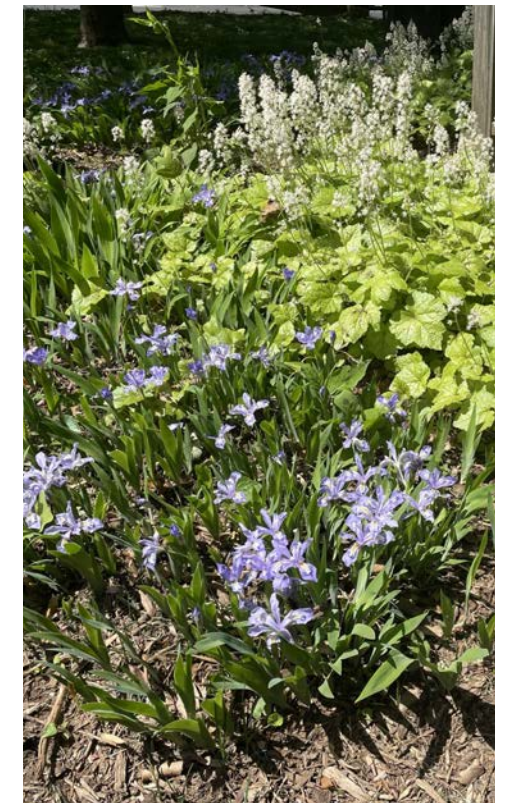


Diagram illustrating tree-safe conservation landscape design



From left: bioswale, permeable brick path, and conservation landscape



Stream Restoration

Once a free-flowing spring-fed stream, the waterway at Woodend, eloquently named Clean Drinking Stream, has undergone intense changes as the land around it changed. During the Jones family period of Woodend's history, intensive farming of tobacco with the labor of enslaved people stripped soil layers from the surrounding hills and deposited "legacy sediment" along the stream that would become a source of pollution to the Chesapeake Bay. In the middle of the 20th century, the land around Woodend was subdivided into neighborhoods. With urbanization, the stream at Woodend lost groundwater connection, becoming an ephemeral channel for stormwater runoff. With an increase in intensive storm events and water main breaks along Jones Mill Road, the banks of the stream became increasingly eroded, forming canyons and weakening the structure of surrounding trees by exposing their roots. It was obvious that intervention was necessary to halt this pattern of erosion and downstream pollution that Woodend's stream was contributing to Rock Creek and the Chesapeake Bay.

After much work with designers, engineers and permit authorities, the stream and trail restoration project at Woodend was completed in September of 2021. The stream restoration



Severe erosion prior to restoration



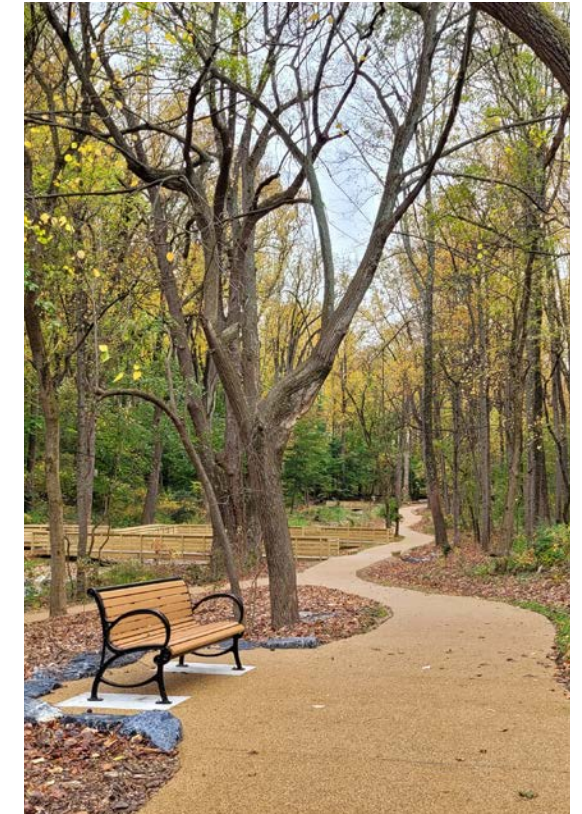
Step pools along the restored Clean Drinking stream

consists of a series of over 40 "step pools" that slow water during storm events. These are created with stone and log dams, also known as weirs, that hold back water in pools. In between each pool is a stone "riffle", or miniature waterfall. In addition to these structures, large root balls from trees that were necessary to remove were added to provide habitat for amphibians and macroinvertebrates, such as dragonflies. Additionally, we created a permeable, bonded gravel and wheelchair accessible nature trail so that individuals who use mobility assistance devices can better enjoy the sanctuary while also filtering stormwater.

The first summer following our major stream and trail restoration project was full of bountiful blooms, delicious fruits, and numerous wildlife sightings! Butterfly milkweed (*Asclepias tuberosa*), tickseed (*Coreopsis spp.*),

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mountain mint (*Pycnanthemum spp.*), obedient plant (*Physostegia virginiana*), black-eyed Susan (*Rudbeckia hirta*), American water lily (*Nymphaea odorata*), monkey flower (*Mimulus ringens*), woodland sunflower (*Helianthus divaricatus*), partridge pea (*Chamaecrista fasciculata*), and Maryland senna (*Senna marilandica*) are just some of wildflowers enjoyed by visitors this summer. Blueberries and serviceberry fruits fed wildlife and were enjoyed by staff and campers with paw paws on the menu for fall. A plethora of young salamanders were spotted in the pond, as well as in many of the other pools created by the stream restoration. Dragonflies whizzed by all summer and some summer campers even experienced a mass larval emergence at the pond. During explorations of the step pools with campers, aquatic macroinvertebrates and amphibians were found in every single water-holding pool. If there was water, there were critters! After the long months of the restoration project, it was a joy to witness the flowers blooming, insects buzzing, and frogs singing, while knowing that our efforts are also helping support the life of the Chesapeake Bay downstream. We look forward to the many more sightings of flora and fauna along the restored Clean Drinking Stream.



Accessible permeable path



N. odorata in the pond
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Spotted Salamander (*Ambystoma maculatum*) found by the pond

Meadows

Meadows are open fields in sunny areas which are great habitat for pollinators, birds and organisms living beneath the soil surface. Plants typically found in meadows include grasses, flowers, and non-woody perennials. Meadows flourish in large open spaces, which can be found throughout Woodend. Once agricultural fields and livestock grazing areas, 5 acres of Woodend are now maintained as permanent meadows. These areas act as storm water filters, soaking up any excess nutrients from runoff before reaching our major waterways. Meadows increase biodiversity, reduce storm water runoff, recharge groundwater and provide habitat and shelter for wildlife. Throughout urban areas, open and vacant areas are usually left to return to a forested state, ultimately reducing the amount of meadow area available for wildlife that need them to survive. Monarchs, bluebirds, indigo buntings, white-throated sparrows, and many others need these habitats. By maintaining a portion of Woodend as permanent meadow, we can help to support these specialist species.



The "Big Meadow" with false sunflower (*Heliopsis helianthoides*) in bloom.



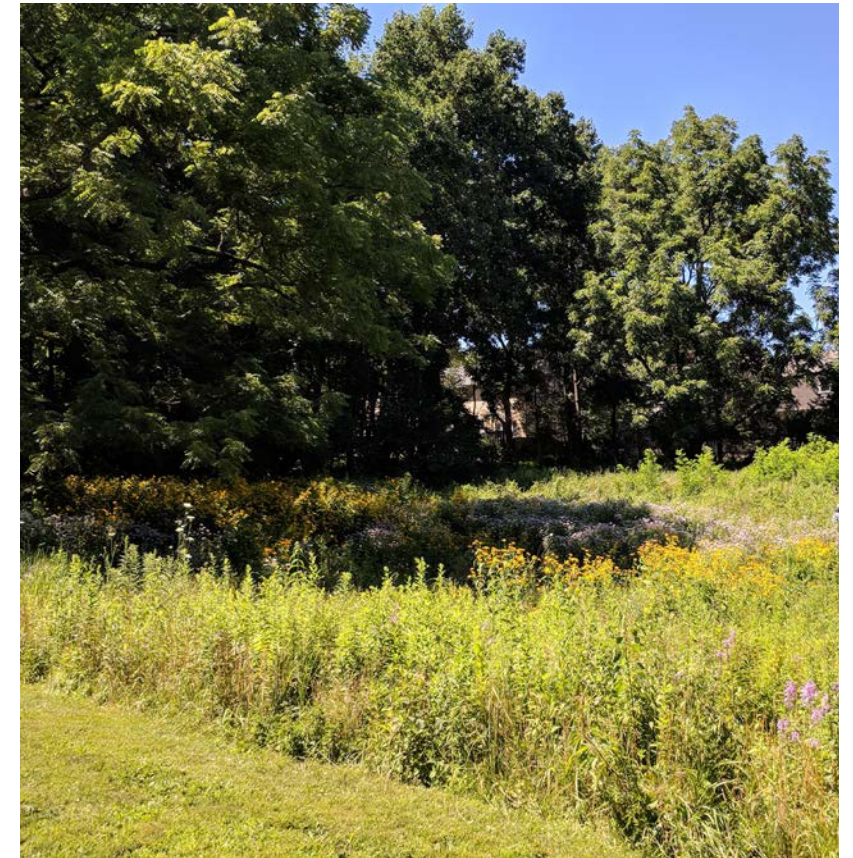
Meadows provide year-round habitat and food resources

Ongoing Management

Today you will be able to see native plants in bloom such as black-eyed Susan (*Rudbeckia hirta*), New York ironweed (*Vernonia noveboracensis*), wreath goldenrod (*Solidago caesia*), Joe-pye weed (*Eutrochium fistulosum*), as well as grasses including purple lovegrass (*Eragrostis spectabilis*), little bluestem (*Schizachyrium scoparium*) and Indian grass (*Sorghastrum nutans*). Meadow management in urban areas requires ongoing efforts to control invasive species with strategic mowing, mechanical removal and targeted herbicide applications in order to maintain and increase native biodiversity.

Restored Meadow

The meadows at Woodend were originally forested areas that were then used for agricultural pastures; however, there are now four thriving meadows due to extensive restoration work. The largest meadow restoration effort targeted a quarter acre of the eastmost meadow by the Jones Mill Road. In 2013, the topsoil of the previously heavily invaded meadow area was stripped to remove as much invasive seed as possible. Then, volunteers worked tirelessly to remove the remaining invasive species such as, porcelain berry (*Ampelopsis glandulosa*), multiflora rose (*Rosa multiflora*), and Japanese honeysuckle (*Lonicera japonica*), from the area. Following the intensive removal of invasives, 75 native grasses, and 3,000 plugs were planted and many pounds of native wildflower seeds were spread.



The Restored Meadow



An newly planted ecotone with tree tubes
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Ecotone Restoration

An ecotone is the transitional area between two different plant communities. At Woodend, the primary transition is from meadow to forest where sun-loving wildflowers, shrubs, and trees co-exist to form a flourishing habitat for wildlife that take advantage of these ecotones. Like meadows, these areas are often heavily invaded by invasive plants due to a higher availability of light. These areas provide ample opportunity for restoration due to high density of invasives. At Woodend, 3 successful ecotone projects can be seen where tall sumacs (*Rhus spp.*) and elderberries (*Sambucus canadensis*) flourish in the sun alongside mountain mint (*Pycnanthemum spp.*) and goldenrods (*Solidago spp.*) with shrubs and trees like viburnums (*Viburnum spp.*) and serviceberries (*Amelanchier spp.*) thriving in the shady areas. Each year we undertake a new ecotone restoration area at Woodend, while maintaining previously restored areas

Forest

Hundreds of years ago, the forest of Woodend Sanctuary was dominated by mature oaks (*Quercus spp.*) and hickories (*Carya spp.*) with a diverse understory of shrubs, vines, and wildflowers. A spring-fed stream flourished beneath the dense shade of tall hardwoods. The forest provided resources to the Algonquian people – including the Nacotchtank – remembered in the name of nearby Anacostia River. With European colonization, new land-use practices led to long-lasting changes in the composition and health of the ecosystem. After being cleared for agricultural use to supply the nearby mill constructed by the Jones family, most of the now protected land of Woodend has returned to forest through the process of succession. Beginning with grasses and sun-loving herbaceous perennials, the area slowly transitioned into a tree-filled landscape. Currently, our forest is in the ‘tulip-tree’ (*Liriodendron tulipifera*) successional stage. These tall, straight-trunked native trees tower above us and will soon fall to make way for the next stage of the Woodend forest, oaks and hickories. Tulip trees are a beautiful, sun-loving species that shade themselves out from the understory, allowing for shade-tolerant trees, like the oaks and hickories, to slowly grow under them. Once these tulip trees fall, the oaks and hickories shoot up into the canopy marking the transition into an oak-



Tulip trees at Woodend (*L. tulipifera*)

hickory dominant forest. Unfortunately, with the increase in deer populations and the presence of invasive plant species, young trees growing under the tulip tree canopy were largely removed from Woodend’s understory. Without intervention, there would be few native trees to re-establish the forest canopy following the inevitable demise of the tulip trees. The goal of our forest restoration efforts is to influence the successional trajectory of Woodend’s forests towards an oak-hickory mixed deciduous forest.

Deer Exclusion

The first major restoration project at Woodend was the exclusion of deer. Prior to this exclusion, 33 deer browsed heavily at Woodend. To sustain a healthy forest, this deer population should theoretically be 1.5 individuals. Our deer population was 22 times higher than the ‘ecological carrying capacity’ of Woodend. To exclude the deer, we installed a tall fence around 33 acres of the property as well as 21-foot-long cattle grates at each end of the driveway to accommodate vehicular travel. Once completed, the forest understory was monitored for changes. In just one year, a significant difference was noticed throughout the Woodend understory. The browse line (the absence of vegetation below 5 feet, the maximum reach of a deer) had completely disappeared. American strawberry bush (*Euonymus americanus*), also referred to as deer candy by forest managers, began to pop up

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everywhere. White oak (*Q. alba*), northern red oak (*Q. rubra*), pin oak (*Q. palustris*), and shingle oak (*Q. imbricaria*) seedlings also thrived. Bitternut hickory (*C. cordiformis*) seedlings are abundant. Young individuals of native shrubs such as spicebush (*Lindera benzoin*), arrowwood viburnum (*Viburnum dentatum*), blackhaw viburnum (*V. prunifolium*), and serviceberries (*Amelanchier spp.*) were also found. Native wildflowers including trout lilies (*Erythronium americanum*), mayapple (*Podophyllum peltatum*), wild geranium (*Geranium maculatum*), and bloodroot (*Sanguinaria canadensis*) also flourished. All of these plant species came back naturally following the removal of intensive deer pressure. Our understory is now teeming with plants, native and non-native.



Strawberry Bush (*E. americanus*)



Bloodroot (*S. canadensis*)



Southern red oak (*Q. falcata*)



White Oak (*Q. alba*) seedling



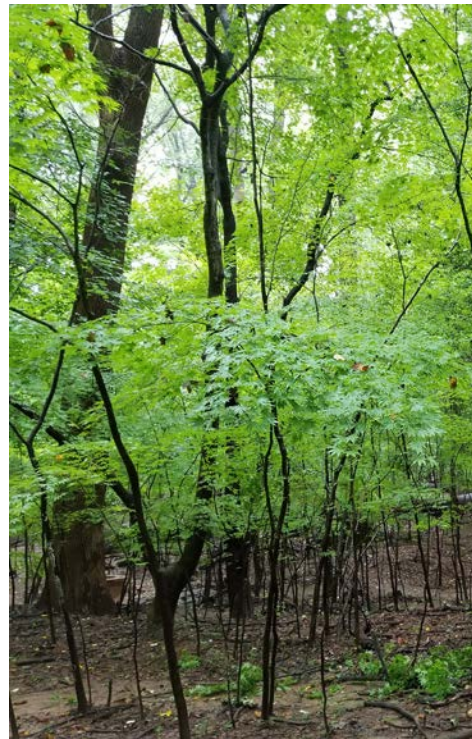
E. americanus
www.natureforward.org



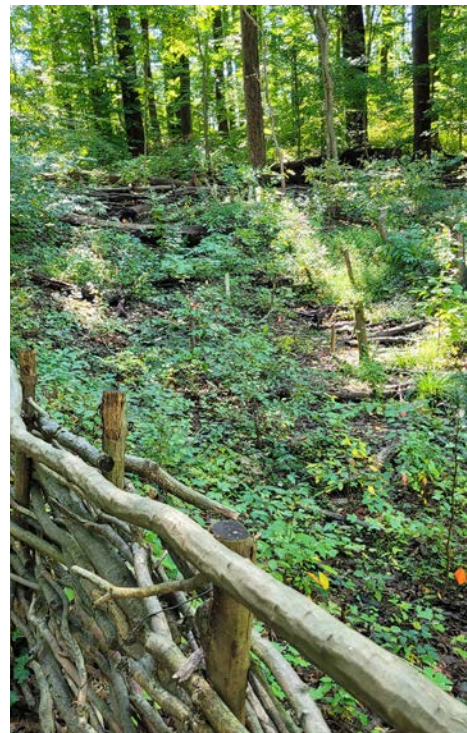
restored and regrowing understory in the forest

Invasive Species Management

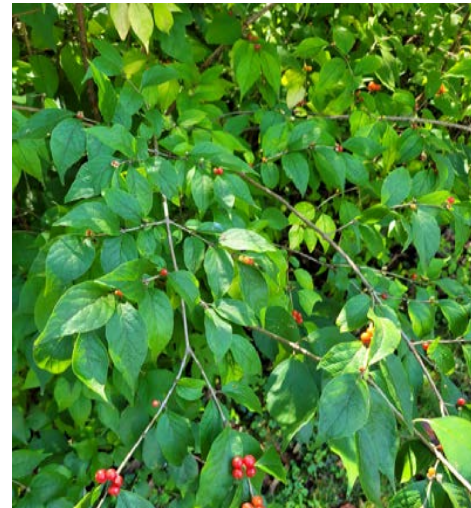
The process of succession begins with a disturbance, which can range from small events such as a tree falling to larger events such as clearing for agriculture. These disturbances create opportunities for new plants to establish. Non-native, invasive plants are especially adept at colonizing these disturbed areas and Woodend is no exception. Throughout the history of the land of Woodend, many disturbances have occurred to make room for tobacco, cattle, and a beautiful mansion. Following these events, non-native plants began to establish in the areas that returned to natural land. Sometimes, the introduction of these invasive plants to Woodend was purposeful. In the 1970s, ANS planted bush honeysuckle (*Lonicera spp.*) and autumn olive (*Elaeagnus umbellata*) to increase wild bird habitat. Little did we know that one day we would be removing thousands of individuals of these species throughout Woodend. Currently, the restoration department manages a long list of non-native plants nearing 100 different species. Through mechanical and chemical means, these invasive plants are removed and replaced with native trees, shrubs, and herbaceous wildflowers. The most abundant invasive tree species at Woodend is the Japanese maple (*Acer palmatum*). The trees found throughout Woodend are offspring of individuals planted by the previous owner of our mansion, Ms. Marion Wells, who was an avid gardener with an interest in Japanese horticulture. At its height, Japanese maples made up 25% of all trees within Woodend's forest with over 700 individuals. This percentage has been reduced to 17% with 508 individuals remaining. The management of these trees is carefully planned so that native trees can be added



Before: Japanese Maples



After: Restored ground plain



Lonicera maackii



Bitternut Hickory ready to plant

immediately following their removal. Specifically, we prioritize planting oaks and hickories since they represent the historical state of the forest prior to human disturbance. Currently, there are only 13 mature oaks and 54 mature hickories throughout Woodend. These species comprise only 2% of the total number of trees at Woodend. Since the restoration department was established, hundreds of oaks and hickories have been planted at Woodend. This will help us to influence the successional trajectory of Woodend's forests towards an oak-hickory mixed deciduous forest.

Appendix: Plant Lists

On the following pages are some selected plants from the various garden areas described earlier in the document. While these are not exhaustive or complete lists, we hope they provide a richer sense of the plants in our "cultural landscape" and stormwater management systems.

Hemlock Grove



Hemlock
Tsuga canadensis
A native of dry woods. Those in our garden were kept pollarded for many years, which can be seen in their form.



American Holly
Ilex opaca
Our native holly, growing up to 30 feet tall at maturity.



Smooth Hydrangea
Hydrangea arborescens
A lovely hydrangea with a regular habit.



Inkberry Holly
Ilex glabra
Everygreen. With a male and female pair you will get fruit for birds. Tolerates road salt runoff.

Shade Garden



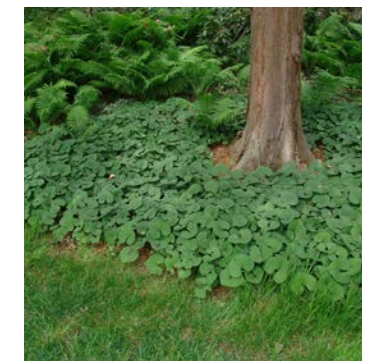
White Wood Aster
Eurybia divaricata
A native of dry woods with dappled shade-profuse white blooms late summer into fall.



Hairy Alum Root
Heuchera villosa
An evergreen shade loving perennial with lovely white blooms that lighten a dark corner.

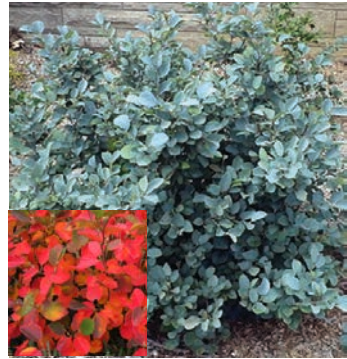


Broadleaf Sedge
Carex plantaginea
A lovely texture in the shady garden. Trim brown foliage if desired in spring.



Wild Ginger
Asarum canadense
An attractive deciduous groundcover that does well in moist shade.

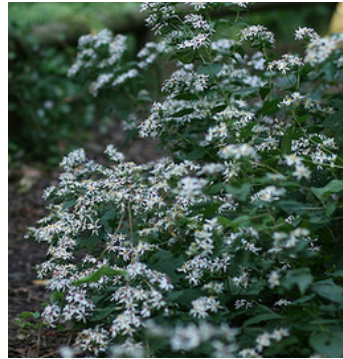
North Foundation



Fothergilla
Fothergilla gardenii
Nice white flowers in spring- fuzzy blue leaves provide nice contrast with yellow flowers.
Native to coastal plain.



Garden Phlox
Phlox paniculata
An up to two foot garden staple. Tolerates sun to part shade, and moist to well-draining soil. Popular with pollinators and birds. Blooms from summer into fall.



White Wood Aster
Eurybia divaricata
A native of dry woods with dappled shade- profuse white blooms late summer into fall- beloved by pollinators, if left standing in winter a good seed source for birds. Up to 3' tall.



Dwarf Crested Iris
Iris cristata
A shade loving ground cover that can handle moist to dry soil- deer-resistant foliage is 4-6" tall spring through fall, with beautiful small blooms from April to May.



Smooth Hydrangea
Hydrangea arborescens
A lovely hydrangea with a regular habit that does well in filtered shade or morning sun.



Arrowwood
Viburnum dentatum
Deciduous shrub with vibrant fall color. Flowers are a favorite with pollinators and birds, but not with deer. Prune after blooms fade.



Golden Alexanders
Zizia aurea
Profuse yellow blooms in May and June. A woodland native that tolerates a range of conditions.



Moss Phlox
Phlox subulata
A diminutive groundcover that emerges early with blooms from April to May. Plant toward the front of the bed so it does not get overwhelmed.

North Entry Planting



Little Bluestem
Schizachyrium scoparium
A beautiful native grass with lovely blue tones in summer, and orange/red hues in fall.



Purple Coneflower
Echinacea purpurea
A beautiful, disturbance-loving flower (good near a downspout, or path edge) that attracts hummingbirds and pollinators.
** While native to the Eastern US, this is not native in Maryland



Buttonbush
Cephalanthus occidentalis
Medium-large shrub with fun blooms. Important food source for mature sphinx moths, and nectar source for bees.



Wild Bergamot
Monarda fistulosa
A spreader with beautiful blooms in mid-summer. Very deer resistant.



Trumpet Honeysuckle
Lonicera sempervirens
A semi-evergreen vine with profuse red blooms that attract pollinators and hummingbirds.



Blue Flag Iris
Iris versicolor
A sun to part shade loving perennial that tolerates clay and wet. A favorite with hummingbirds, pollinators, and butterflies.



Fox Sedge
Carex vulpinoidea
This adaptable plant tolerates sun to part shade, and moisture fluctuations as well. Trim in spring if desired. Host plant of some skipper butterflies.



American Beautyberry
Callicarpa americana
Medium deciduous shrub with very showy berries in late summer and fall.

North Entry, Continued



Blue Mistflower
Conoclinium coelestinum
Blue flowers from late summer into mid to late fall. A bird and pollinator favorite. Full sun to part shade, requires moisture and tolerates wet feet. Grows rapidly.



Black-eyed Susan
Rudbeckia fulgida
Hardy, thrives in full sun and tolerates drought. Yellow blooms in fall.



Bluestar
Amsonia tabernaemontana
Blue flowers in spring and yellow fall foliage in this native of open woodlands. Deer resistant.



Oxeye Sunflower
Heliopsis helianthoides
Attractive pollinator plant. Long summer bloom. Cut stems back by 1/3 in May to reduce overall height of plant, if desired. Cut back in early spring as desired.

Blair Garden| Coastal Plain



Chokeberry
Aronia arbutifolia
Edible berries are considered a "superfood" by some and certainly by birds! Blooms in spring-prune (if needed) after blooms fade in early summer.



Tall Meadow Rue
Thalictrum pubescens
Sun to shade, a tall meadow or swamp plant with delicate foliage and spring flowers. Up to 7' tall, medium to wet soil. Deer do not prefer.



NY Ironweed
Vernonia noveboracensis
A flexible, rapid spreading native up to 8' tall. Beautiful purple flowers in late summer. Full sun to part shade, average to wet.



Bayberry
Morella pensylvanica
Large evergreen with silvery foliage and berries for the birds. Full sun to part shade; broadly tolerant of water conditions. Avoided by deer. Fixes its own nitrogen!



Winterberry
Ilex verticillata
Berries in winter and fall- green the rest of the time. Adds nice color. Tolerates drought and wet. Get at least one male to ensure berry production.



Inkberry Holly
Ilex glabra
Everygreen. With a male and female pair you will get fruit for birds. Tolerates road salt runoff.



Sweet Pepperbush
Clethra alnifolia
Can tolerate shade or sun; spire shaped white flowers in summer are a hit with bees. Prefers medium to wet soil, can tolerate wet feet. Road salt tolerant.



Fothergilla
Fothergilla gardenii
Nice white flowers in spring- fuzzy blue leaves provide nice contrast with yellow flowers. Native to coastal plain.



Great Blue Lobelia
Lobelia siphilitica
Amazing blooms in late summer- tolerates sun to part shade, wet to medium, and not preferred by deer. Hummingbirds and pollinators love it.



Blue-eyed Grass
Syrinchium angustifolium
Semi-evergreen, low growing (6-12") groundcover with grassy foliage and small blue flowers in May and June. Tolerates sun and part shade. Lovely in the front of a bed.



Joe Pye Weed
Eutrochium dubium
Towering maroon flowers summer into fall, that persist in winter as seeds. Can be cut down in early spring if desired. Look for cultivar "Little Joe" if you want a shorter height.



Purple Love Grass
Eragrostis spectabilis
Self-seeds and spreads rhizomatically. Tolerates drought and full sun, so it would work well along the edge of your driveway. Purple blooms in summer, can provide structure throughout the winter.

Blair Garden| Mountains



Rosebay Rhododendron
Rhododendron maximum
Large evergreen that requires shade and good drainage. Makes a statement. Deer can damage this.



Columbine
Aquilegia canadensis
Brightens the springtime with flowers that last up to a month. A shady native that tolerates sun when there's enough moisture. Pollinators love it, deer don't!



Pinxter Azalea
Rhododendron periclymenoides
Beautiful blooms in spring, but a gauzy, translucent shrub overall. Attractive to deer. Prune lightly for shape after bloom in summer.



Pennsylvania Sedge
Carex pennsylvanica
Woodland understory native. Fine texture and very hardy.



White Wood Aster
Eurybia divaricata
A native of dry woods with dappled shade- profuse white blooms late summer into fall- beloved by pollinators, if left standing in winter a good seed source for birds. Up to 3' tall.



Shrubby St. Johnswort
Hypericum prolificum
Long bloomings flowers and interesting seed pods. Can form a hedge or a looser ground cover. Prune in early spring if needed.



Serviceberry
Amelanchier canadensis
The berries that follow the spring blooms are delicious for birds and people alike! Typically multi-stem.



Foxglove
Penstemon digitalis
Lovely flowers. Semi-evergreen foliage in milder microclimates. Attractive to pollinators and hummingbirds. Divide as needed in spring.

Blair Garden| Piedmont



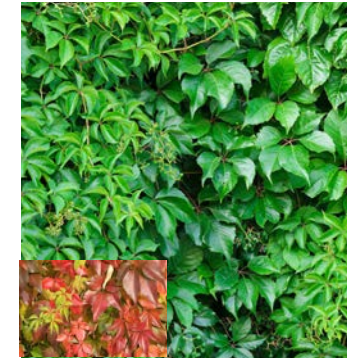
Fringed Bleedingheart
Dicentra eximia
The native version of this famous heirloom garden plant. Brightens the springtime. No maintenance needed, but make sure not to dig it up accidentally while its dormant.



Virginia Bluebell
Mertensia virginica
Spring ephemeral bloom- native to forest understory. No maintenance needed, but remember where they are to avoid digging them up. Can be planted among a groundcover under trees.



Wild Ginger
Asarum canadense
An attractive deciduous groundcover that does well in moist shade.



Virginia Creeper
Parthenocissus quinquefolia
This is a pretty aggressive vine, which makes it great for covering a bunch of space! Nice red fall cover, and barrier for birds. Road salt tolerant.



Christmas Fern
Polystichum acrostichoides
Native to dry and moist shady woods. Evergreen fronds of up to 2 feet in length.



Spice Bush
Lindera benzoin
With small, subtle yellow flowers in early spring, this is not the showiest shrub. But it has great wildlife value and thrives in part sun to shady conditions.



Smooth Hydrangea
Hydrangea arborescens
A lovely hydrangea with a regular habit that does well in filtered shade or morning sun.



Wild Stonecrop
Sedum ternatum
Evergreen groundcover that tolerates sun to shade, medium to dry soils. Blooms in spring. Tough, but not to foot traffic.

West Entry Garden



Chokeberry
Aronia melanocarpa
Edible berries are considered a “superfood” by some- and certainly by birds! Dwarf cultivar “Ground Hug” stays under two feet tall.



Wild Blue Indigo
Baptisia australis
A legume and great pollinator plant. Can grow quite tall with striking blooms. Cut back in early spring.



Fragrant Sumac
Rhus aromatica
Provides small berries for birds and is very tough and low maintenance. It is not evergreen, but maintains shape and erosion control in winter. Nice reddish fall color.



Prairie Dropseed
Sporobolus heterolepis
A low-growing, well behaved native grass with tall seed heads enjoyed by birds in fall. Late to emerge in spring.

Learning Garden



Heritage Raspberry
Rubus occidentalis
'Heritage'
'Heritage' will give you fruit in summer and fall- prune in early spring for size.



Elderberry
Sambucus canadensis
This sprawling native likes shade and moist soil. Edible drupes in late summer are favorites with birds, and people. Leaves are mildly toxic.



American Persimmon
Diospyros virginiana
A mid-size native hardwood that tolerates urban and peri-urban conditions; a host of the Luna Moth caterpillar.



Paw Paw
Asimina triloba
A native understory tree with a custardy fruit in early fall. Needs a colony to fruit.

Conservation Landscape



Golden Ragwort
Packera aurea
A powerhouse native shade loving groundcover to replace ivy, vinca, and Japanese Pachysandra. Spreads rhizomatically- can be divided in spring and shared with friends.



Witchhazel
Hamamelis virginiana
Known for its early spring blooms, this woodland understory native also has nice fall color.



Cinnamon Fern
Osmunda cinnamomea
Reddish brown fronds emerge in April and May, followed by green leaves. Used by birds. Ephemeral, plant among evergreens. Rarely damaged by deer.



Jumpseed
Persicaria virginiana
Arching slender stems of tiny white flowers brighten woodlands in summer- spreads readily from seed.

Rain Gardens



Soft Rush
Juncus effusus
Tolerates wet and occasional drought- does best in a large colony, or it can be short-lived.



Obedient Plant
Physostegia virginiana
Tolerates sun to part shade. Blooms from June to September. Not preferred by deer. Deciduous.



Rose Mallow
Hibiscus moscheutos
This native relative of the Rose-of-Sharon is a hardy, woody stemmed perennial with showy tropical blooms in summer.



Highbush Blueberry
Vaccinium corymbosum
Flowers in spring, berries in early summer, and lovely fall color, a true multi-purpose shrub.

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