

Dora Kelley Park Nature Trail Guide

This brochure was produced by the Jerome "Buddie" Ford Nature Center in Alexandria, Virginia. To learn more about the interpretive programs and volunteer opportunities offered by the Nature Center, please call 703-746-5525 to speak with a Naturalist. Group programs and tours are available upon request.

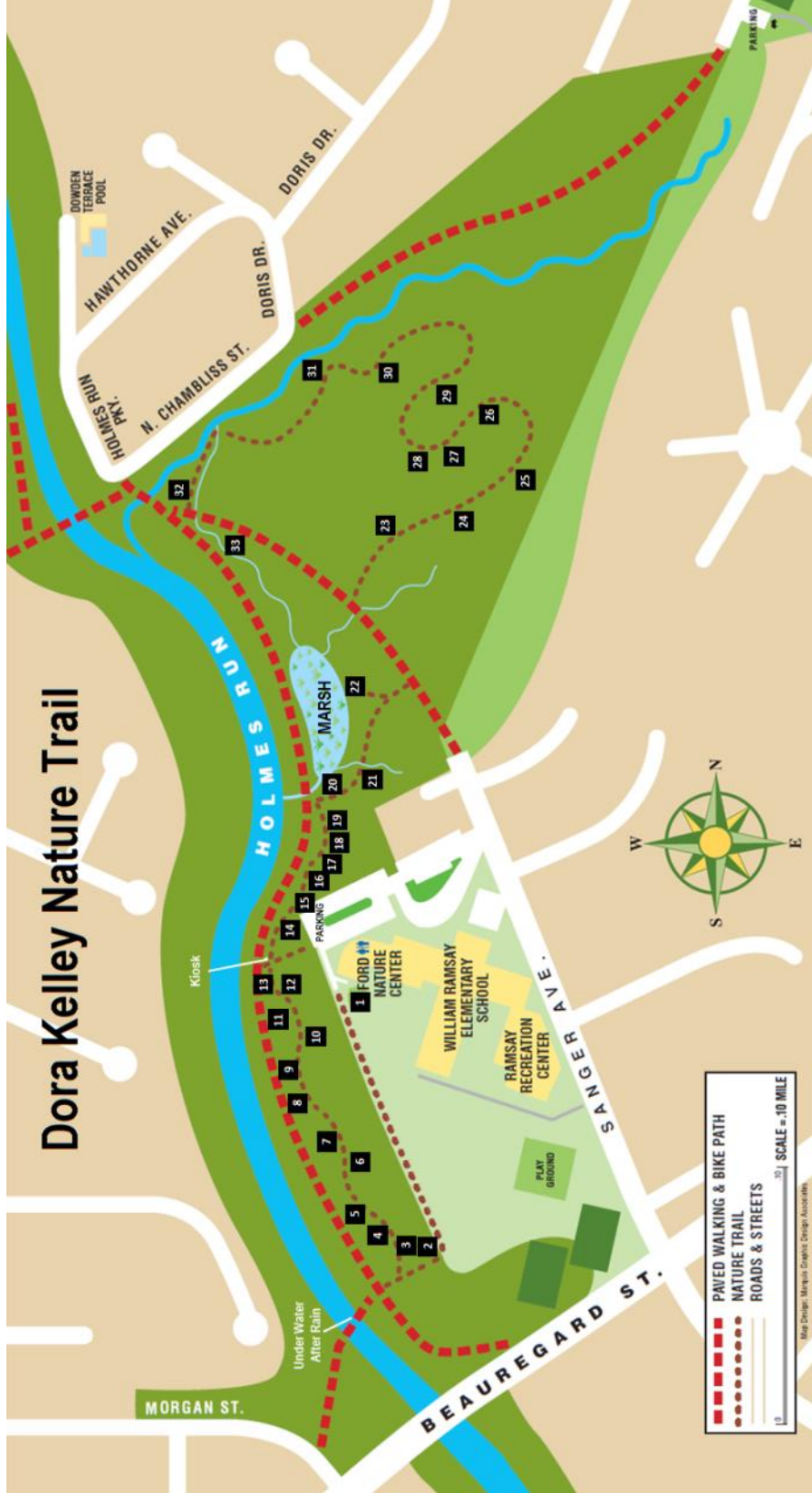
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5750 Sanger Avenue
Alexandria, VA 22311
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Dora Kelley Nature Trail



Your Notes and Observations

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Welcome

This trail guide traverses Dora Kelley Nature Park and was designed to assist visitors in exploring the park's varied habitats. The trail (illustrated on the facing page) is approximately one mile long and can be leisurely walked in about 45 minutes. Markers along the trail correspond to numbered paragraphs in this brochure. We hope you enjoy your walk. Please stay on the trail to preserve what you see for the next visitor and avoid poison ivy. Also, please refrain from picking any wildflowers. Removal of plants or wildlife from the park is not permitted.

Your Notes and Observations



American Beech

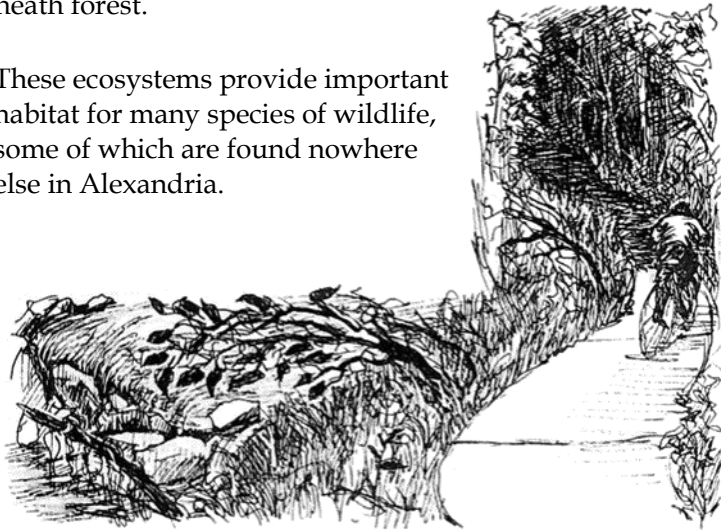
This American beech tree is estimated to be 130 years old. When it was just a seedling, the local landscape was composed of rural farmland, fruit orchards, and large tracts of woodland and meadow. Much has changed since then. Yet this tree remains, lending mute testament to nature's resiliency in the face of urban expansion.



Dora Kelley Nature Park

This park was established in 1973 as a nature preserve and wildlife sanctuary. It is named after Dora M. Kelley, a long-time City of Alexandria resident and avid nature lover. Altogether, Dora Kelley Nature Park encompasses fifty acres of stream valley floodplain, freshwater marsh, and oak-heath forest.

These ecosystems provide important habitat for many species of wildlife, some of which are found nowhere else in Alexandria.

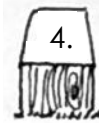
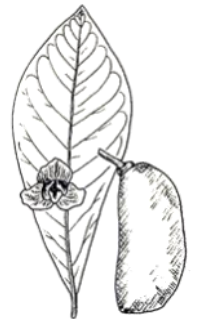


Thank you for visiting Dora Kelley Nature Park. We hope you enjoyed the time you spent here. If you wish to return to the Nature Center, you may proceed to Sanger Avenue in the direction of the arrow on the marker. Otherwise, you may continue to explore Dora Kelley Nature Park on your own. We hope you return again soon!



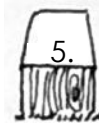
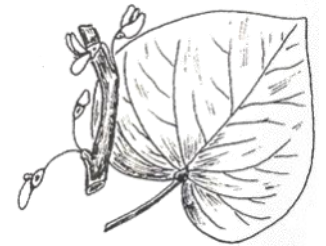
Pawpaw Tree

You are now standing in the stream valley floodplain. Trees growing in this lowland environment must be able to withstand recurrent periods of drought and deluge. One such species, growing in a row along the trail edge, is the pawpaw. This unusual tree of the forest understory produces dark purple flowers in spring and banana-like fruits in early fall. It is the northernmost member of the tropical custard-apple family.



Eastern Redbud

Another tree of the forest understory is the eastern redbud. In early spring, this tree produces edible pink blossoms along leafless twigs and branches. Heart-shaped leaves appear shortly thereafter. A member of the legume family, the eastern redbud also grows in drier upland environments.



Common Spicebush

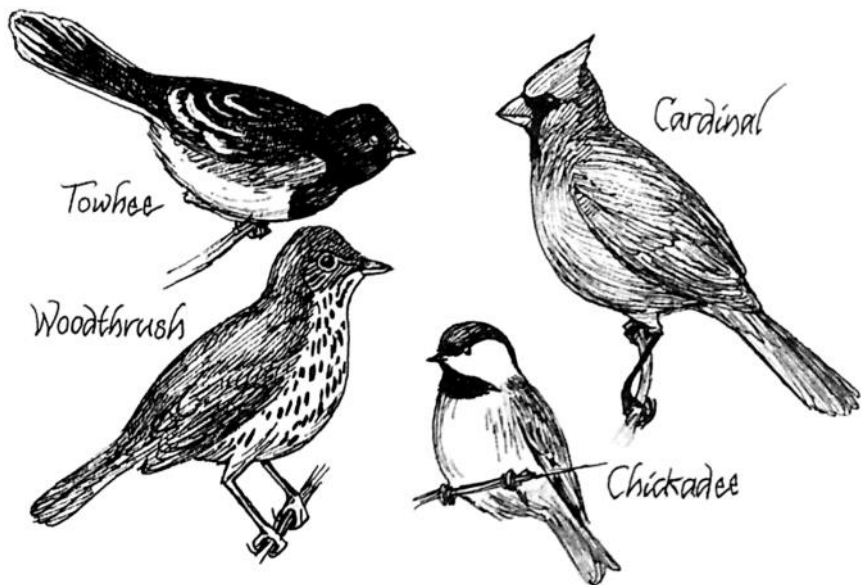
The unobtrusive shrub growing behind this marker is the common spicebush. Bright red berries produced by this shrub yield high-energy food for migrating songbirds that visit the park each fall. Virginia colonists used its aromatic leaves for tea and processed the dried berries into spice. The leaves are also eaten by the caterpillar of the spicebush swallowtail. Another tree common to the floodplain forest's canopy, the green ash, can be found growing to the left of this marker.





Sounds of the Forest

Listen carefully and you can hear a variety of sounds emanating from the park's wildlife. In springtime, the woods awaken to a symphony of bird songs, including those of the wood thrush, rufous-sided towhee, cardinal, and chickadee. Hot mid-summer days are commanded by the buzzing of cicadas and other insects. By late fall, the harsh calls of blue jays, crows, and red-tailed hawks predominate. Even winter's stillness is broken by the gentle tapping of woodpeckers in search of tree-boring insect larva. And before you leave this spot, don't be surprised if you hear a resident pair of Carolina wrens scolding you for entering their territory!



Dora Kelley: Living Legacy

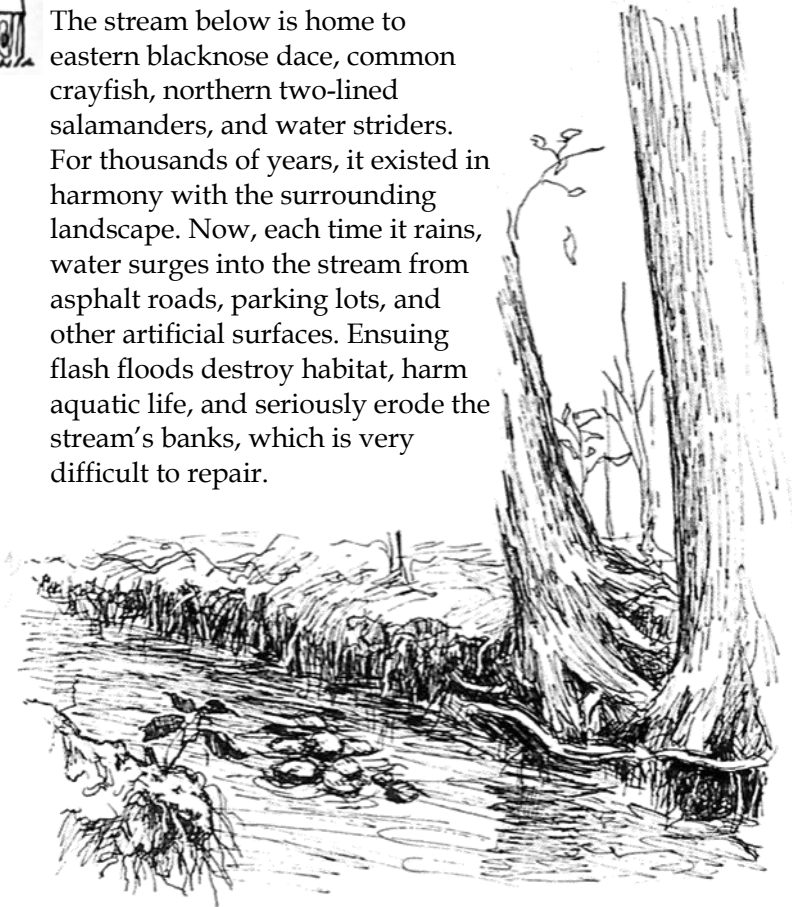
The final stop on our walk brings us back to another American beech. This tree is likely a century old. Unlike the beech tree at the beginning of our walk, this specimen has suffered numerous carvings in its bark. Such careless acts leave ugly scars upon the land for generations to come. What legacy shall we leave for future generations?





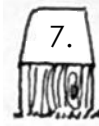
The Stream

The stream below is home to eastern blacknose dace, common crayfish, northern two-lined salamanders, and water striders. For thousands of years, it existed in harmony with the surrounding landscape. Now, each time it rains, water surges into the stream from asphalt roads, parking lots, and other artificial surfaces. Ensuing flash floods destroy habitat, harm aquatic life, and seriously erode the stream's banks, which is very difficult to repair.



Edible Nuts

You have now left the upland oak-hickory forest and entered into a transitional zone between the floodplain forest and upland deciduous forest. The small tree to the left of the marker is an American hazelnut. A black walnut tree grows beside it. Nuts produced by these trees greatly enrich the food resources available to local wildlife. They were also harvested by Native Americans, European colonists, and local farmers who once lived upon this land.



American Hornbeam

To many, the fluted trunk of the American hornbeam, or ironwood tree, looks like rippled muscles. This understory tree produces a very tough wood that is excellent for making levers and tool handles. Unusual, tri-pointed leafy bracts can be found attached to the tree from August through October. These contain tiny nuts that are a choice food for the park's gray squirrels and Carolina chickadees.



Tulip tree

The tulip tree dominates much of the floodplain forest's canopy in Dora Kelley Nature Park. Looking at the towering tree behind this marker, it is easy to see why. These fast growing trees often reach a height of more than 100 feet. Native Americans once carved the columnar trunks of these mighty giants into a form of watercraft known as a "dugout." In springtime, the tulip tree produces large yellow-orange flowers that resemble tulips.





Listen Once Again

Listen closely and you will hear the flowing waters of Holmes Run. This stream's rough, gravelly streambed provides prime habitat for a variety of native fish species, including satinfish shiners, blacknose daces, tessellated darters, and northern hog suckers. Eastern snapping turtles, common crayfish, hellgrammites, water striders, and brown water snakes also make their home here. These aquatic creatures are vulnerable to improperly discarded motor oil, lawn pesticides, and other pollutants that commonly enter the stream via storm drains.



Quartz Rock

Quartz is one of the most common rocks found in Dora Kelley Nature Park, occurring in many forms. In its purest state, quartz forms clear, six-sided crystals. The variety lying next to this marker is known as "milky" quartz. This variety is found as either angular blocks outcropping from the local bedrock or as water-worn pebbles deposited along streams. Quartz was especially valuable to the prehistoric Native Americans of this region, who flaked it into a variety of sharp-edged tools and weapons.



Forest Fire

Fire raged up this hill in 1979, leaving behind charred remains of trees. These charred remains have all but disappeared, having been replaced by a regrowth of saplings and shrubs. Fire can be an important ally of the forest, by clearing away dead or diseased woods and fostering the emergence of new habitat. However, fires started by human carelessness can instead lead to widespread devastation. In minutes, the forest's complex soil structure and tree canopy can be destroyed, resulting in a barren landscape that may take decades to rebuild.



Mountain Laurel

The mountain laurel is found in acid-rich soils throughout eastern North America. Its leaves contain andromedotoxin, a poisonous compound that is toxic to wildlife. In late May and June, these broad-leaved evergreens are covered with clusters of delicate pink-white blossoms. Unwary bees who visit the blossoms risk being sprayed with sticky strings of pollen.





Fallen Giants

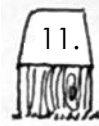
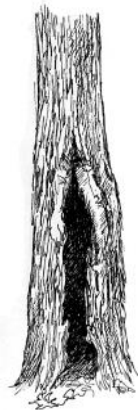
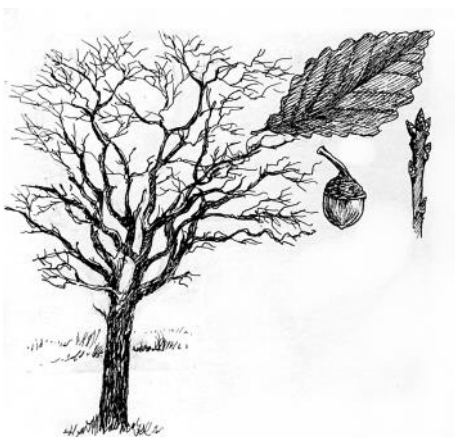
Returning nutrients to the forest floor as they decay, fallen trees often become home to more living organisms than when they were alive. Note the tree trunk rotting to the left of this sign. Decay's snakes and blue-tailed skinks lay their eggs in the decomposing wood, and spotted salamanders over-winter here. The wood itself is broken down by the complex interactions of fungi, weathering, and the feeding activities of termites, carpenter ants, and beetle larva.

Note: You have reached the highest elevation within the park and are now standing atop ancient gravel deposits dating from the Tertiary Period.



Chestnut Oak

The large tree growing behind this marker has chestnut-like foliage and black, checkered bark. Its tannin-rich bark was once used for preserving animal hides. A den for wildlife is also visible nearby at the base of the white oak tree growing on the right. Hollow trees such as this provide wildlife with nesting sites, shelter from storms, and refuge from predators. Bits of fur, tracks, and scat from around the den can help identify the wildlife that frequent it.



Forest Undergrowth

This thicket of blackberry and greenbrier appears inhospitable. However, cottontail rabbits find cover from predators in the dense tangle of undergrowth, and song sparrows build their nests here. Flies are drawn to the greenbrier's diminutive green flowers. In winter, the berries provide an important food source for the park's small mammals and non-migratory birds. Blackberries and wild grape, which ripen in mid and late summer, respectively, furnish additional sustenance.



Christmas Fern

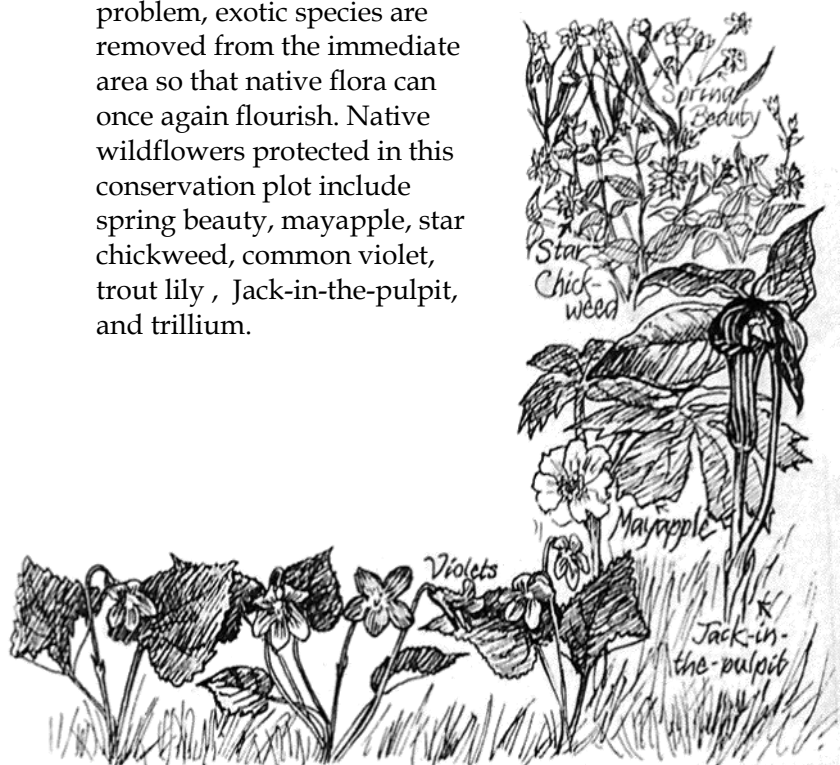
The Christmas fern is the park's largest evergreen fern. This hardy pteridophyte, or spore-producing plant, prefers sandy floodplain soils and can be found growing along the shady slopes of streams and gullies. In the past, its leaves were used for winter holiday decorations. Wild ginger, a native herb, also grows amid the ferns behind this marker.



Wildflower Conservation

The moist, fertile soils of the stream valley floodplain are host to a variety of native wildflowers. In some areas of the park, however, English ivy, multiflora rose, Japanese honeysuckle, and other exotic invasive plants are crowding out native flora. Left unmanaged, this process will result in the lowering of the park's biodiversity. To address this

problem, exotic species are removed from the immediate area so that native flora can once again flourish. Native wildflowers protected in this conservation plot include spring beauty, mayapple, star chickweed, common violet, trout lily, Jack-in-the-pulpit, and trillium.

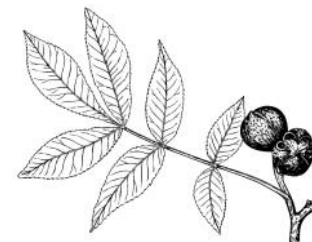


You have walked one third of the trail. To continue, follow the arrows. The steps just ahead to the right lead back to the Nature Center.



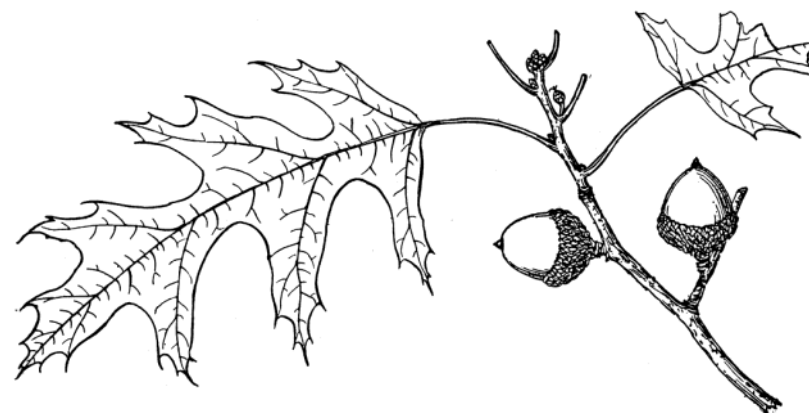
Pignut Hickory

Shaggy bark and compound leaves identify the tree to the left of this marker as a pignut hickory. Its name derives from colonial times when hickory nuts were fed to hogs. The pignut hickory's leaves are strongly aromatic, as are the husks that enclose the nuts. Other species of hickory found in the park include the mockernut and shellbark.



Scarlet Oaks

Scarlet oaks are the giants of this upland deciduous forest, reaching heights of between 80 and 100 feet. Their dark, furrowed bark and bristle-tipped, lobed leaves distinguish them from neighboring white oaks. Careful examination of the fallen leaves at the base of the scarlet oak to the left of this marker will often reveal pebble-like deformities. These are galls, caused by tiny wasp larvae that live within the leaves. Acorns produced by scarlet oaks take about two years to mature.





White Oak Tree

Scaly, gray bark and round-lobed leaves identify the tree behind this marker as a white oak. Acorns produced by this tree take one year to mature and are a favorite food of blue jays and gray squirrels. Oak and hickory trees are characteristic of the park's upland deciduous forest, where soils are dry, slightly acidic, poor in nutrients, and covered by a "litter" of decomposing leaves and wood. Careful observation will reveal distinct layers of vegetation growing above the forest floor. From the ground up, these include a layer of low-growing herbaceous plants, a layer of small shrubs, an understory of small trees, and a canopy of mature oak and hickory trees. As you walk through this multilayered habitat, notice the many places where wildlife might find a home.



Earthworks

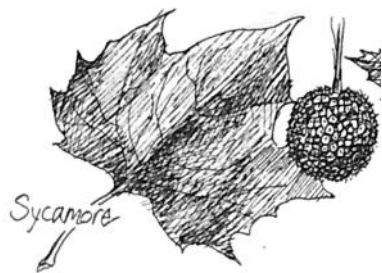
The large tree to the right of this marker grows atop part of a 19th century earthen dam. At that time, Holmes Run was utilized as a power source for mills along the stream valley. Further downstream, similar earthworks redirected the waters of Holmes Run into mill races, powering the grinding stones of Cloud's Grist Mill. Remnants of cabins and weathered artifacts from the soil lend mute testament to the presence of farmers who cleared nearby tracts of land for raising pigs.





Sycamore Tree

The sycamore tree to the right of this marker is identified by its mottled patchwork of bark. As the tree grows, its brown, outer bark peels off and falls to the ground in large pieces, exposing a green and white inner surface. In winter, spherical aggregates of seed remain attached by delicate stalks to the tree's leafless branches. The sycamore is another giant of the floodplain forest's canopy, reaching a height of around 120 feet.



You have walked two-thirds of the trail. To continue, follow the arrows. The path to the right at the second arrow leads back to the Nature Center.



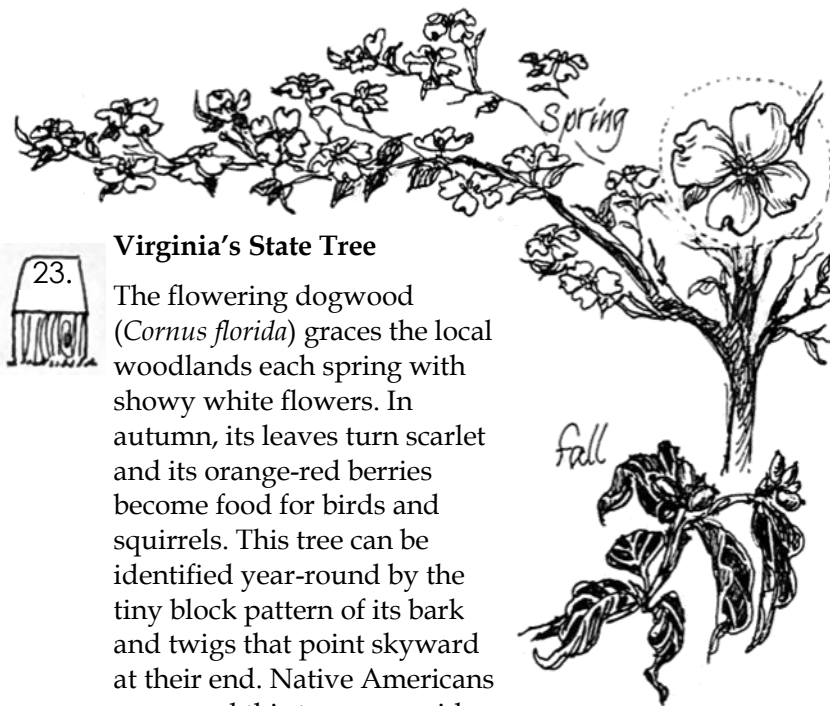
Rock Outcrop

This outcrop of metagraywacke and micaceous schist is representative of the region's bedrock, estimated to be between 400 and 570 million years old. The circular blotches on these rocks are living colonies of crustose lichen. This ancient life form is actually two organisms, alga and fungus, growing together in a symbiotic relationship. The alga provides the fungus with food produced through photosynthesis. In return, the tough outer covering of the fungus protects the alga from drying out. Moss has also colonized this rocky outcrop. Over time, acids produced by the moss will break the rock down into soil. Until then, Red-backed salamanders, ringneck snakes, and centipedes will find a home here.



Virginia's State Tree

The flowering dogwood (*Cornus florida*) graces the local woodlands each spring with showy white flowers. In autumn, its leaves turn scarlet and its orange-red berries become food for birds and squirrels. This tree can be identified year-round by the tiny block pattern of its bark and twigs that point skyward at their end. Native Americans once used this tree as a guide for spring planting. When the dogwood bloomed, they knew it was time to sow their corn.





Freshwater Spring

The waters of this small stream arise from a perennial spring. This is one of three sources of water that supply the park's freshwater marsh. Unfortunately, the spring was bulldozed under by urban development, and it now flows out of a storm drain. Freshwater springs merit protection. They are the lifeblood of our streams and rivers. Groundwater pollution and careless urban development can cause irrevocable damage to these natural resources, lowering the quality of water they provide for both humans and wildlife.



Ancient Plants

The moist, delicate soils surrounding the marsh provide optimum growing conditions for ferns. The species found here is the New York fern, identified by its fronds, which taper at both ends. The name derives from New Yorkers who reputedly "burn the candle at both ends."



A colony of tree clubmoss can also be found growing alongside the ferns. Both of these spore-bearing plants belong to an ancient lineage that predates the time of the dinosaurs.



River Birch

The river birch to the left of this marker is easily identified by its papery, shredded bark. This tree prefers the banks of streams, ponds, and marshes where the soil is fertile and is prone to flooding. Several river birches along this trail have succumbed to recent summer droughts. Now, they are the feeding and nesting sites of the park's many woodpeckers, who occasionally drill holes in these trees to hide acorns for winter storage.



Raccoon Ridge

The cliff above this marker is known as Raccoon Ridge, a name derived from the wildlife path that skirts along its edge. Several thousand years ago, Native Americans established campsites along this ridge. Although these hunter-gatherers have long since disappeared, their stone artifacts can still be seen at the Nature Center.



Chipmunk Hollow

This area, known as Chipmunk Hollow, was carved out decades ago when a sewer line was run through the park. The jumbled pile of rocks provides nesting sites for eastern chipmunks that frequent this location. Listen closely and you may hear their warning chirps before they dart into a nearby burrow. Slightly higher in elevation than the floodplain, this area is a transition zone between the low-lying floodplain forest, characterized by green ash, sycamore, and river birch, and an upland patch of deciduous forest dominated by American beech.



Freshwater Marsh

The waters of this marsh are still and relatively shallow, encouraging a variety of water-loving plants to take root. The resultant lush growth of cattail, sedges, jewelweed, false nettle, and pondweed provides habitat for mallard ducks, muskrat, and painted turtles. Raccoons also visit the marsh at night to hunt its muddy banks for crayfish. Trees associated with this ecosystem include river birch, cottonwood, and alder along with more water-tolerant species such as black willow, green ash, and red maple, which emerge from the marsh itself.

Freezing solid in winter; drying up in late summer; the ephemeral nature of the marsh makes it unsuitable habitat for fish. However, these very same attributes make it an excellent nursery for amphibians and aquatic invertebrates. During spring and summer, the marsh is alive with microscopic plants and animals that are eaten by tadpoles, amphipods, pond snails, and aquatic insects. In turn, larger invertebrates, including predacious diving beetles, damselfly nymphs, and dragonflies hunt these creatures. Five species of frog, one species of toad, and one species of salamander also regularly breed in the marsh.

