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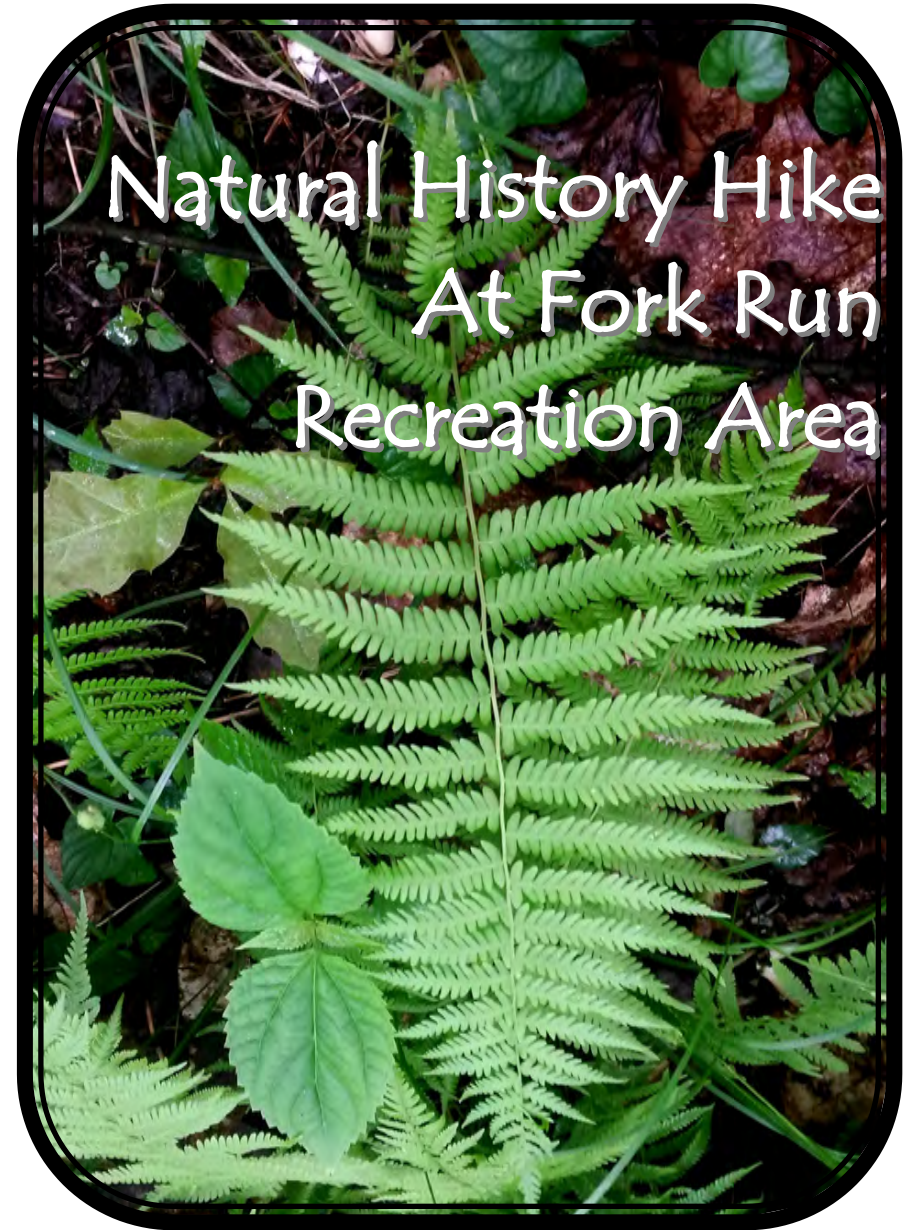
Garrett College's Natural Resources and Wildlife Technology program strives to graduate technicians who are well prepared for employment in the field of natural resources management and environmental protection, who understand and appreciate the interrelationships among all the components of the ecosystem, and who recognize the socioeconomic and political forces affecting resource management and environmental protection decisions.  
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Garrett Trails is a nonprofit, volunteer organization dedicated to the development of a well-used network of high-quality, sustainable trails that provide access to Garrett County's historic, municipal, and environmental treasures which link to trails outside the county.  
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## Introduction:

Ranging from 2100-2700' in elevation on the west side of Marsh Hill Mountain, the Fork Run Recreation Area lies in the Allegheny Mountains of Garrett County – the highest region in Maryland. The higher elevation of this region results in temperatures that are cooler than those of lower areas to the east and west. The higher mountains also intercept moisture-laden air masses moving into the region from the west, so this area is wetter as well. The consequence is a climate more similar to that of the Great Lakes or New England and a species list that includes plants and animals more commonly found several hundred miles to the north. The bedrock under the recreation area consists primarily of sandstone and shale resulting in soils that are typically rocky and acidic.

A variety of wildlife can be found along the Fork Run trail system, although many species are not readily observed. Two common larger mammals that may be encountered are white-tailed deer and black bear, and smaller mammals such as chipmunks and squirrels can often be seen. Wild turkey, ruffed grouse, a variety of birds of prey, woodpeckers, and many species of songbirds may be seen or heard. Several reptiles and amphibians, including eastern garter snake, red-backed salamander, and American toad, may also be found.

**Note to Hikers: You are in the Back Country. Cell phone contact is generally not available. Emergency medical care may be delayed or not available. DO NOT TRAVEL ALONE.**

## Point 17: N39.526885 W79.404685

Several dead trees, or snags, are visible at this point. Some woodlot owners consider snags to be a source of insect or fungal infestation that will threaten their forest, or a waste of space that could be occupied by a living tree, and quickly cut them down for firewood. Enlightened forest owners, however, recognize snags as a crucial component of an ecologically healthy forest. As trees die, they are colonized by a variety of insects which in turn attract woodpeckers and other birds which feed on the insects. Woodpeckers also excavate nesting cavities in the softer wood of snags. These cavities, in turn, are used for nesting and roosting by a wide array of birds and mammals. Snags also provide perches for hawks and other birds. Eventually snags fall to the ground, becoming what ecologists call coarse woody debris and providing critical habitat for a host of vertebrate and invertebrate animals living on the forest floor.



## Point 18: N39.524514 W79.404223

Your visit to the forest at Fork Run has likely lasted no more than a few hours. During that time, little about the forest has changed. But this forest has, of course, changed a great deal over the years. One hundred years ago, this forest didn't look anything like it does today. It, along with all the forests of the surrounding region, was completely cleared roughly a century ago. Following this initial round of logging, the forest began to grow back. The first trees to dominate the new forest were shade intolerant species – those adapted to growing rapidly in full sunlight. Other, slower growing shade tolerant species grew slowly under the canopy of their faster growing neighbors. Over time, these more tolerant species have begun to take over the canopy as the shade intolerant trees approach their maximum life span and die. This process has been interrupted and reversed when the forest was cut again, or when a storm or an insect outbreak killed or damaged trees. The result is a forest of trees of different species and ages, along with snags, downed dead trees, and openings in the canopy that allow sunlight to reach the forest floor, stimulating new growth. This forest will continue to change. Come back in a year or two. Perhaps you'll see some of these changes for yourself.



## Point 16: N39.526917 W79.403954



Some of the smaller trees at this point are sassafras (*Sassafras albidum*). Sassafras occupies a diverse array of habitats, from bottomlands to abandoned fields, open woodlands, and dry ridges. It can be found up to 4,900' in elevation. Although sassafras is typically encountered as a smaller tree (like these saplings), it is capable of growing to medium size. Sassafras leaves can be found in three different shapes. Some leaves are oval, some are shaped like a mitten, and some have three lobes. The leaves are especially attractive in the fall, turning yellow, orange, purple, pink, or red. The small dark purple fruit, borne singly on a reddish stalk, is eaten by a number of different birds and mammals. All parts of the tree, including the leaves, twigs, wood, and bark, have a pleasant citrusy odor that reminds some of root beer, Fruit Loops, or Pledge furniture polish. Although sassafras may be cut for coarse lumber or pulp, it's much better known as the source of sassafras tea, a popular rural spring tonic in the Appalachians and the South, as a flavoring for candy, and as a component of Creole and Cajun cooking.

## Point 1: N39.524911 W79.403292 \*\*



This plant is commonly called mountain laurel (*Kalmia latifolia*), but is also known as calico-bush, ivy-bush, and spoonwood. It is typically found in rocky woods, on mountain slopes, and along streams, often in the shade of deciduous forests. Mountain laurel occurs up to 4,000' in elevation. It is typically a large shrub up to 10 feet tall with a multi-stemmed trunk. The evergreen leaves are dark green above, pale green below, shiny, and leathery. The leaves can be poisonous to livestock and wildlife. Mountain laurel provides cover for many birds and small mammals. The white to light pink flowers appear in clusters towards the end of the branches for about two weeks between May and July.

\*\*Located at each of the 18 Points of Interest along this Natural History Hike, hikers may find, ***if they are carefully observant***, affixed to a tree and approximately 10-feet above the ground, the Point Number for each of the 18 points.



## Point 2: N39.524491 W79.402518

The tree at this point is an eastern hemlock (*Tsuga canadensis*). Eastern hemlock is commonly found on moist slopes, in rocky areas, and in narrow stream bottoms up to 5,900' in elevation. It's an evergreen tree with needles that are dark green above with two light stripes below. The needles are very short and grow in two rows opposite from each other along the twig. When viewed from a distance, the tips of hemlock branches tend to droop, creating a distinctive silhouette. The cones of eastern hemlock are only an inch in length. Deer, red squirrels, and rabbits and hares eat the twigs, and ruffed grouse eat the needles and seeds. Eastern hemlock provides cover for a variety of different wildlife species during the winter months. Hemlock was once cut extensively as a source of tannic acid for tanning leather. It has since recovered and become a common tree in our forests, but it now faces a new threat from the non-native hemlock woolly adelgid. This aphid-like insect from Asia kills hemlocks by sucking their sap. If you revisit this point in a few years, it is possible that this tree will no longer be alive. The loss of hemlocks in our forests could have a significant impact on a host of animal species that depend on the trees for food, for shelter, and for the cool, moist conditions they create.



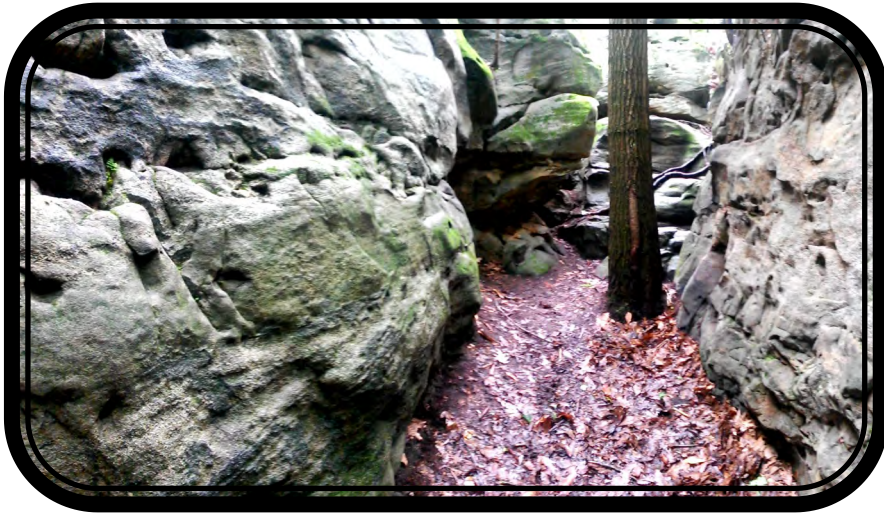
## Point 15: N39.527015 W79.403192



The large, robust fern growing here is called bracken (*Pteridium aquilinum*). Bracken commonly grows 2-3' tall, but will occasionally reach heights of up to 6'. The triangular leaf is divided into three main branches. Each of these branches is divided twice more. Bracken is especially vulnerable to frost, quickly browning after the first frost of the fall. Bracken is found in a wide variety of sites, from old pastures and burned-over areas in full sun to shaded woods and thickets. The soils in these sites are generally acidic. The presence of bracken, along with chestnut oak, at this point indicates poorer, less fertile growing conditions.



### Point 14: N39.527718 W79.401779



This is probably the most frequently visited and heavily viewed part of the recreation area. It is often easy to recognize outcrops that are used by people for bouldering or climbing, because the rock surfaces are largely devoid of the lichens, mosses, and other vegetation that grow on less disturbed outcrops.

Rock outcrops provide valuable habitat for wildlife. Common ravens and turkey vultures nest on ledges protected by overhanging rocks, and larger recesses in rock outcrops may be used for dens by black bears and other animals. Pregnant female timber rattlesnakes may spend an entire summer on a single small sunny ledge of a rock outcrop, absorbing heat to accelerate the growth of their young. In the winter, timber rattlesnakes and other snake species congregate beyond the influence of freezing temperatures in deep recesses in south-facing rock outcrops. Elsewhere in the Youghiogheny valley, in some rock outcrops shaded by the forest canopy, small horizontal cracks in the rock provide crucial habitat for the state-endangered green salamander.

### Point 3: N39.524228 W79.402025



The small tree growing at this point is an American chestnut (*Castanea dentata*). The leaves of the American chestnut are large, narrow, and coarsely toothed. This species is found in rich mixed deciduous forests up to 3,900' in elevation. It was once one of the largest and most common broad-leaved trees in the eastern United States, but large trees are now difficult to find. In 1904, the chestnut blight -- a fungus that enters through openings in the bark and kills the tree by destroying the surrounding cambium (inner bark) -- was accidentally introduced to America from Asia. In one generation, this fungus killed nearly every mature chestnut in the country. The lumber was formerly valuable in construction and for furniture, fences, and musical instruments, and the nuts provided food for people, livestock, and many wildlife species, including deer, wild turkey, and squirrels. The American chestnut now survives as a small tree that sprout from the root systems of trees killed by the blight. The trees die before reaching sufficient size and age to reproduce. The American Chestnut Foundation is exploring every option to save and reestablish this species as an important component of our forests.



#### Point 4: N39.525605 W79.400553

The ferns on either side of the path mainly consist of New York fern (scientific name: *Thelypteris noveboracensis*). The leafy-green part of the fern is known as the blade. On this fern, the blade is broadest in the middle and tapers at the top and bottom. New York fern grows up to 2 feet tall. This fern is found in woods and thickets, commonly in damp locations with more of an acidic soil.



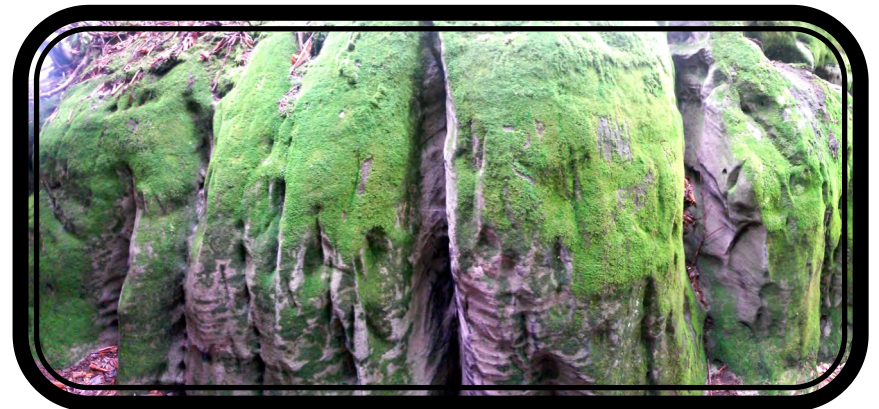
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#### Point 13: N39.52771 W79.400748



The breakdown of rocks is called weathering. There are two types of weathering: chemical and physical. Chemical weathering occurs when rocks are broken down by chemical reactions. The breakdown of rocks by heat, water, ice, or pressure is known as physical or mechanical weathering. The rocks at this location, and throughout the recreation area, have primarily been influenced by physical weathering, especially by water and ice. Although the rocks of the Pottsville Formation are especially resistant to erosion, they were no match for the endless cycle of freezing and

thawing of water. Over and over, water entered cracks in the rock. When the temperature dropped below freezing, the water expanded, forcing the rock to split and break. As time passed, the cracks grew larger and larger, leading to the irregular shapes seen here.



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## Point 12: N39.527271 W79.399771



All of the larger rocks at Fork Run, including the rock wall at this point, are composed of sandstone. Sandstone is a sedimentary rock primarily composed of the minerals quartz and feldspar. There are two main stages in the formation of sandstone. In the first stage, sand is moved to the site (in the case of the sandstone here) by water, and eventually settles to the bottom, creating a layer of sand. In the second stage, the sand is compacted by pressure. The sand is cemented together when minerals fill in the extra space between the sand grains. The larger sandstone rocks and outcrops at Fork Run belong to the Pottsville Formation. In many cases, where some of the particles cemented together are larger white quartz pebbles rather than smaller sand grains, the rock may be more properly termed a conglomerate.



## Point 5: N39.526314 W79.398754



Two different kinds of maple trees may be observed at this point: striped maple (*Acer pensylvanicum*) and red maple (*Acer rubrum*). Maples produce a unique type of fruit called a samara, which is basically a seed with a wing. When maple samaras fall from the tree or are thrown into the air, they spin slowly to the ground and resemble a helicopter.

Striped maple typically occurs as a smaller understory tree in cool, moist hardwood forests up to 5,500' in elevation. The bark of young trees is bright green, but as trees grow older the trunk becomes reddish-brown with distinctive whitish to gray vertical stripes. The leaves, which can grow up to 10" in length and width, are dull green above and lighter green beneath, and have three larger points, or lobes, with jagged teeth all around the edge.

Red maple -- also known as swamp maple, scarlet maple, and soft maple -- grows in a wide variety of habitats, from swamps to moist forests to dry ridges, and from sea level to 6,000' in the highest Appalachians. One of the most common trees in our local forests, red maple can be found both as a smaller understory tree and as a large tree topping the forest canopy. In the summer, the leaves are darker green above and whitish beneath, with three or five lobes and a jagged edge. The leaves turn a brilliant red in the fall (hence red or scarlet maple). One of the first trees to bloom in the spring, the tiny red flowers of red maple create a reddish haze in the otherwise drab leafless forest. As a result, red maple is a popular landscape tree. The wood is sometimes used for making furniture.

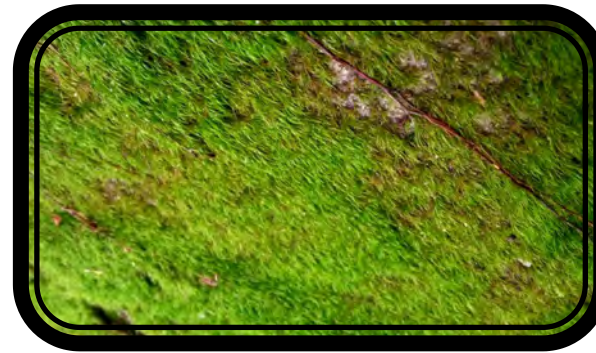


## Point 6: N39.526906 W79.398664



The large clumping ferns on either side of the trail are cinnamon fern (*Osmunda cinnamomea*). Cinnamon fern can grow up to 5' tall and is found in moist habitats such as shaded woods and wetlands at elevations up to 4,000'. The plant gets its name from the bright brown woolly hairs that cover the young stalks. This fern first appears in the spring as large, woolly fiddleheads emerging in a clump from the forest floor. As the fiddleheads unfurl, a separate, spore-producing stalk rises up in the middle of the clump of leaves. By early summer, this stalk turns a cinnamon color, withers, and dies. The leaves turn yellow in the fall before dying.

## Point 11: N39.5271 W79.399955



The different stages of succession on a rock surface – lichen, moss, and larger plants -- can once again be viewed on the rocks at this point. In this case, one of the larger plants to have colonized the rock is rhododendron. Also known as rosebay rhododendron, great rhododendron, and big laurel, this species occurs on moist, shady mountain slopes, along streams, and in bogs at elevations up to 6,000'. It is one of the most characteristic plants of the moister portions of the Appalachian.



The showy white to pink flowers of rhododendron usually open by the start of July. Related species are popular ornamentals.

Because they both possess relatively long, slender, evergreen leaves, rhododendron and mountain laurel are sometimes confused with one another. The leaves of rhododendron are larger, longer, and thicker than those of mountain laurel, and rhododendron grows to a much larger size. Both species, along with Blue Ridge blueberry, are members of the heath family, and their presence indicates more acidic soils.





## Point 10: N39.526668 W79.399594



The smaller shrubs growing on both sides of the trail are Blue Ridge blueberry (*Vaccinium pallidum*). Blue Ridge blueberry is also known as late low blueberry and lowbush blueberry and, locally, as huckleberry. This low-growing shrub has numerous reddish and greenish branches and is commonly found growing in clumps. The leaves are oval to elliptic in shape with very finely jagged edges. Blue Ridge blueberry blooms in May. The small, white, narrowly bell-shaped flowers give way to blue fruits that typically ripen in July and August. The fruits are eaten by many different animals, including black bears and ruffed grouse – and, of course, people!

## Point 7: N39.526597 W79.397094



Two species of oak are visible at this point: a northern red oak (*Quercus rubra*) on the left and a chestnut oak (*Quercus montana*) on the right. Oaks in our region can be divided into two main groups. Members of the red oak group have leaves with bristles at the tips of the pointed lobes, while members of the white oak group have more rounded lobes without bristles at the tips. Red oaks and white oaks both produce acorns, which provide food for a wide range of wildlife species, including white-tailed deer, black bear, raccoons, squirrels, and wild turkey.

Northern red oak is a member of the red oak group. It is primarily found in moist woods at elevations up to 5,900'. The leaves have several pointed lobes on each side with shallow indentations between the lobes. The bark is characterized by smooth vertical strips.

Chestnut oak, a member of the white oak group, is more commonly found in drier, rockier sites up to 4,600' in elevation. The leaves have numerous teeth that are pointed but lack bristles. The bark is dark in color with flattened ridges and deep furrows.



## Point 8: N39.526627 W79.395888



As you walk along the trail you'll notice many rocks, ranging from small stones to large boulders to massive rock outcrops. Some of these rocks are bare, while others, such as the one at this point, are covered with vegetation. The process whereby plants colonize a previously unvegetated site is called succession. Succession is defined as a change in plant species that takes place in an area over time that generally leads from a less complex to a more complex plant community.

In the case of a bare rock surface, the first colonizing organism is typically a lichen. Lichens are unique organisms that are actually composed of two different species, one a fungus and the other some sort of algae which can create food via photosynthesis. Because lichens obtain their nutrients from the atmosphere rather than from the soil, they are able to grow directly on rocks. Over time, the lichens growing on the rock accumulate a thin layer of soil that can support one or more species of moss – small, nonflowering plants that lack true roots and grow in carpet-like mats. Eventually the layer of soil and moss on the rock is deep enough that larger plants, including shrubs and trees, can grow on the rock. In this case, several black birches (*Betula lenta*) have colonized the moss mat on top of the rock. Black birch is easily recognized by the prominent horizontal markings on its bark. The twigs and bark of black birch have a strong wintergreen aroma and taste.

## Point 9: N39.526476 W79.394584



If you continue on this trail to the bottom of the mountain you'll walk across Fork Run – the small stream for which the recreation area is named. The water in Fork Run flows into Hoyer Run and then into the Youghiogheny River at the bottom of the mountain. Unlike all other Maryland rivers, the Youghiogheny (or Yough, for short), along with the smaller Casselman River just to the east, is part of the Mississippi River watershed. The Youghiogheny River supports trout, bass, and a several species of pan fish. River otters, minks, ospreys, and bald eagles may be seen hunting for fish on the Youghiogheny.