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# Rich Cove / Mesic Slope Forest at Harpers Ferry

## Overview Page

Code: CEGL008412

**Scientific Name:** *Acer (nigrum, saccharum) - Tilia americana / Asimina triloba / Jeffersonia diphylla - Caulophyllum thalictroides* Forest

**Translated Name:** (Black Maple, Sugar Maple) - American Basswood / Pawpaw / Twinleaf - Blue Cohosh Forest

**Common Name:** Central Appalachian / Piedmont Rich Cove / Mesic Slope Forest (Twinleaf - Blue Cohosh Type)

### At a Glance

Most of Harpers Ferry National Park is either too rocky and exposed (south-facing), or flooded too frequently, to provide habitat for the **Rich Cove / Mesic Slope Forest**. Examples are restricted to toeslopes and lower slopes bordering the Potomac River floodplain. Sites usually face north to northeast, and while most sites lack surface rocks and have a nearly continuous cover of leaf litter, rock outcrops and/or boulders may occasionally cover up to 25% of a 400-square-meter plot. The soils are dark brown, often stony, silt loams with moderately high calcium, magnesium, and manganese levels. The sites are very productive, and may have large, tall trees and abundant Spring wildflowers. It is one of the most species-rich communities at Harpers Ferry. If you see lots of Appalachian basswood and sugar maple or black maple, with white ash, bitterenut hickory, red hickory, as well as hackberry, then you have found a stand of the Rich Cove / Mesic Slope Forest. At the right time of year, you may see twinleaf, blue cohosh, Virginia bluebells, Dutchman’s breeches, squirrel-corn, and other wildflowers and ferns. Unfortunately, there are not any places at Harpers Ferry where the public is likely to encounter this community.

### Images of this Natural Community

Community image:

U:\Images\NCR\_photos\Field Guides\

[many more in this folder]

### What to Look For:

Can you find this combination of characteristic features?

* A canopy with Appalachian basswood, sugar maple or black maple, with white ash, bitternut hickory, red hickory, and hackberry
* large, tall trees
* abundant Spring wildflowers, including twinleaf, blue cohosh, Virginia bluebells, Dutchman’s breeches, squirrel-corn, and many others
* toeslopes and lower slopes bordering the Potomac River floodplain, but not subject to flooding

If so, welcome to HAFE’s **Rich Cove / Mesic Slope Forest** Community.

### Tips to Distinguish this community from other similar communities:

1. Rich Cove / Mesic Slope Forest vs. Cove Forest (CEGL007710)

Similarities: They are both rich forests of lower slopes, with a diverse canopy, and large tall trees (in better examples); shrub layer species include pawpaw and spicebush, either or both of which may be abundant. Both may contain Appalachian basswood. white ash, and sugar or black maple.

Tips to Distinguish:

The canopy of the Cove Forest is more likely to contain northern red oak as a canopy member, and sugar maple is usually of lesser importance; and its suite of wildflowers is not as rich as the Rich Cove / Mesic Slope Forest, containing Clayton's sweetroot, black bugbane, Canadian wood-nettle, maidenhair fern, and lacking richer indicators such as twinleaf and blue cohosh

### Notable Variations at Harpers Ferry

This **Rich Cove / Mesic Slope** Forest community is of limited extent at Harpers Ferry, and there is not significant variation among its examples.

### Conservation Status

To be autopopulated.

### Classification

To be autopopulated

Abbreviated Common Name: Rich Cove / Mesic Slope Forest

Common Name: Central Appalachian / Piedmont Rich Cove / Mesic Slope Forest (Twinleaf - Blue Cohosh Type)

Scientific Name: *Acer (nigrum, saccharum) - Tilia americana / Asimina triloba / Jeffersonia diphylla - Caulophyllum thalictroides* Forest

Scientific Name Translated: (Black Maple, Sugar Maple) - American Basswood / Pawpaw / Twinleaf - Blue Cohosh Forest

Natural Community Code: CEGL008412

Associated Ecological System:

## Where to See It Page

This natural community is most extensively developed on the lower slopes of Short Hill Mountain near the Potomac River Floodplain, but this area is not open to the public.

## Seasonal Plant Highlights Page

#### Spring Highlights

abundant Spring wildflowers, including including twinleaf, blue cohosh, Virginia bluebells, Dutchman’s breeches, squirrel-corn, and many others

#### Summer Highlights

Full green of summer leaves; deep shade of the tall deciduous trees; diverse canopy

#### Autumn Highlights

Change in leaf colors, purple leaves of white ash, yellow leaves of basswood, sugar/black maple, hickories

#### Winter Highlights

Winter tree structure; basswood frequently with multiple trunks from base (naturally coppiced); opposite twigs of white ash, paired fruits of sugar/black maple

## Seasonal Animal Highlights Page

#### Spring Highlights

?

#### Summer Highlights

#### Autumn Highlights

**?**

#### Winter Highlights

## Characteristic Species Page

### Canopy Trees

Tall trees, including Appalachian basswood, sugar maple or black maple, and white ash tower over other trees in the **Rich Cove / Mesic Slope Forest**. Bitternut hickory, red hickory, and hackberry, which can also grow very tall, are also present, but rarely abundant. Together they form a closed, shady canopy. This combination of trees indicates that the soils may be enriched with calcium, potassium, and other nutrient minerals.

### Understory Trees

Among understory trees, you may see white ash, tuliptree, sugar maple, flowering dogwood, and pawpaw. In fall, sugar maple’s foliage contributes orange hues to the understory of this mesic [natural community](http://www.explorenaturalcommunities.org/glossary/term/23).

### Shrubs, Saplings, & Vines

The most common shrubs here are northern spicebush (smell its spicy citrus-scented crushed leaves) and pawpaw (whose long leaves emit the smell of kerosene when crushed); both can be abundant and may be found in dense patches. Northern spicebush can be showy in the early spring with many tiny yellow flowers clustered along the stems before the leaves come out. Pawpaw can occur in large patches or colonies, and can get to be quite tall.

### Low Plants (Field Layer)

A very diverse suite of Spring wildflowers, including twinleaf, blue cohosh, Virginia bluebells, Dutchman’s breeches, squirrel-corn, and many others, carpet the forest floor. Another common wildflower is mayapple, whose leaves resemble little pale-green umbrellas scattered across the forest floor. Mature plants with twin umbrella-leaves bloom white in April or May. In summer, a green lime-like fruit may hang from the plant. Jack-in-the-pulpit is another easily identified plant, with its three leaflets and unique three-inch green-and-white (and sometimes purple or brown) striped hooded flower that blooms in late spring. Bright scarlet berries persist atop the Jack-in-the-pulpit stems through the fall.

### Characteristic Species Table

(Tag by season, common/occasional/invasive & non-native, and canopy/understory/ shrubs,saplings&vines/ herbs & ground layer)

|  |  |
| --- | --- |
| Layer | Common Species |
| Trees – Canopy  | sugar maple/black maple, Appalachian basswood, white ash,  |
| Trees – Understory  | white ash, tuliptree, sugar maple/black maple, flowering dogwood, pawpaw  |
| Shrubs, Saplings & Vines | pawpaw, spicebush |
| Low Plants (Field Layer) | Virginia bluebells, blue cohosh, Dutchman’s breeches, squirrel-corn, harbinger-of-spring, spring-beauty,  |

|  |  |
| --- | --- |
| Layer | Occasional Species |
| Trees – Canopy  | bitternut hickory, red hickory, hackberry |
| Trees – Understory  | n/a |
| Shrubs, Saplings & Vines | n/a |
| Low Plants (Field Layer) | twinleaf, Canadian wood-nettle, black bugbane, ramps, cutleaf toothwort, Christmas fern |

|  |  |
| --- | --- |
| Layer | Invasive & Non-native Species |
| Trees – Canopy  | Tree-of-heaven |
| Trees – Understory  | Tree-of-heaven |
| Shrubs, Saplings & Vines | Black jetbead |
| Herbs/Ground layer | Stiltgrass, garlic mustard, ivyleaf speedwell |

### Non-native invasive plants:

Location, location, location! Several non-native invasives are liable to move into this desirable natural community where the soils and water supply are favorable to them. Read more about them under [Stewardship and Ecological Threats](http://www.explorenaturalcommunities.org/natural-communities/cegl006055/rock-creek-park/stewardship-and-ecological-threats).

One tidbit: Both sugar maple and black maple have been observed in the park and are assumed to be native there. [Ecobit: Maple Tree Mystery](http://www.explorenaturalcommunities.org/content/maple-tree-mystery-rock-creek-park) Several communities at Harpers Ferry, including the Rich Cove / Mesic Slope Forest, may contain [Norway maple\*](http://www.explorenaturalcommunities.org/species/ELEMENT_GLOBAL.2.140646), which looks similar to sugar maple and black maple but is a non-native, aggressively invasive species (\* indicates non-native). Norway maple leaves are wider than long, and have milky sap visible in their broken leaf-stems. In fall, its leaf undersides reveal dark brown veins against the yellow leaf color.

(see [**http://www.fs.fed.us/invasivespecies/speciesprofiles/documents/garlic\_mustard.pdf**](http://www.fs.fed.us/invasivespecies/speciesprofiles/documents/garlic_mustard.pdf) for more info).

<http://www.invasivespeciesinfo.gov/plants/stiltgrass.shtml>

<http://www.na.fs.fed.us/fhp/invasive_plants/weeds/black-jetbead.pdf>

### In brief:

The beautiful **Rich Cove / Mesic Slope Forest** has a lush look, especially in the shrub layer and field layer. Here one can see plants, particularly some ferns and wildflowers, found nowhere else at Rock Creek Park, growing alongside more commonly encountered plants. Thanks to relatively fertile, well-drained soils—somewhat rare at the park—the **Rich Cove / Mesic Slope Forest** boasts a greater diversity of native plants than any other upland community at Rock Creek Park.

### Plant Life

### Animal Life

## Physical Setting: Rich Cove / Mesic Slope Forest at Harpers Ferry

### Indicator Plants

Appalachian basswood, sugar maple or black maple, with white ash, bitternut hickory, red hickory, and hackberry; Spring wildflowers, twinleaf, blue cohosh, Virginia bluebells, Dutchman’s breeches, squirrel-corn, and many others.

### Stand Size

Stands of Rich Cove / Mesic Slope Forest at Harpers Ferry vary from 0.7 to 3.5 hectares in size.

### Landscape Position

toeslopes and lower slopes bordering the Potomac River floodplain, but not subject to flooding

### Soils

The soils are dark brown, often stony, silt loams with moderately high calcium, magnesium, and manganese levels.

### Geology

### Physical Setting Full Description

### Natural Processes

### Large-Scale Natural Processes and Ecological Systems

Leave this section for Mary or someone else.

### Explore this Ecological System

Leave this section for Mary or someone else.

### List of Threats

Generated list?

### List of Non-native invasive plant species

Generated list?

### Stewardship