



## Welcome to the Spotted Salamander Trail

*Be careful not to touch or step on the plants and please don't disturb the wildlife.*

This quarter-mile paved trail runs through the habitat of the spotted salamander, one of the most common amphibians in West Virginia.

They may be widespread, but these secretive salamanders are rarely seen by trail visitors. That's because they spend most of their adult lives hidden in the forest before they return to their birthplace to lay eggs and reproduce in nearby vernal pools every spring.

The Spotted Salamander Trail was opened in 1987 to give physically and visually-challenged hikers equal access to this interpretive nature trail.

The trail was renovated in 2016 when rotted sign posts were replaced, guide ropes for the blind were re-installed and new interpretive signs for both sighted and blind guests were added, and the parking lot was paved.

This is a critical habitat for many native species, so take as many photos as you'd like, but please do not touch or pick the wildflowers or disturb the wildlife.

**Enjoy your visit!**



# Acknowledgements for the construction and renovation of the Spotted Salamander Trail

The renovation of the Spotted Salamander Trail was made possible through the efforts of the Kanawha State Forest Foundation and a variety of donors and volunteers, including:

## ***Platinum Contributors:***

- AEP
- Asphalt Pavement Association of West Virginia
- Contractors Association of West Virginia and CAWV Young Contractors Forum
- JH Tomblin Fence Company
- West Virginia Paving

## ***Gold Contributors:***

- 84 Lumber
- Beth Kerns
- Clark Allison, in memory of his father, Alvin C. Allison and former KSF Superintendent, Osbra Eye
- Roberta Larew Allison in memory of her husband and former Asst. State Forester, Alvin C. Allison

## ***Silver Contributors:***

- Patti V. Cunningham, Debbie Devine, Ford Bauman, Home Depot, Carolyn Welcker, John Fischer, and the Sheets family in memory of "Opa"

## ***Bronze Contributors:***

- Carl McLaughlin, Teresa Larew and Julie F. Maloney

Volunteers and the staff at Kanawha State Forest provided many hours of sweat equity to repair bridges, install new sign posts and complete additional trail renovations. Forest intern, Diana Aliff, naturalists Carolyn and Frank Barker, Doug Wood, and others, spent many hours identifying plants and researching content for the new interpretive signs. Kanawha Trail Club members supported the renovation and installed the new nature signs. Photos provided courtesy of Carolyn Barker, Jennifer Bauman, Chris Dorst, Jack King, Rick Steelhammer, Cody Hough and CreativeCommons.org. Staff members from the West Virginia School for the Blind and Rick Henderson of the WV Division of Rehabilitation Services provided guidance for the braille signage and placement of guide ropes for the blind.

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## Strawberry Bush

*Euonymus americanus/Celastraceae or  
bittersweet family*

A low shrub sometimes known as the "bursting-heart" or "hearts-a-busting" bush because its unique flowers look like tiny breaking hearts. The red warty fruit pods open to display orange berries which Delaware Indians call "Tehim." The fruit is a strong laxative and can be poisonous in large quantities. Some wild turkeys and songbirds eat a small amount of the berries. White-tailed deer love to eat the leaves, so the strawberry bush is also known as "deer ice cream."



## Field Horsetail

*Equisetum arvense/Equisetaceae family*

A low perennial with a shape that's similar to a horse's tail. It's sometimes confused with a fern because it reproduces with spores, not seeds. It's the sole survivor in a line of plants going back to prehistoric times. Ancient predecessors grew as tall as trees and helped produce many of West Virginia's coal deposits. Black bears like to eat field horsetail which is rich in minerals. The silicon can be extracted for use in toothpaste, abrasive cleaners and paint thickeners.



## Spotted Wintergreen

*Chimaphila maculata*/Pyrolaceae or wintergreen family

An evergreen herb with waxy aromatic, white-streaked leaves. A red stalk bears white flowers. A brown seed capsule develops after the flowers wilt and can last through winter. The spotted wintergreen has been used as a tonic and is sometimes called “rheumatism root.” Another common name is “pipsissewa” originating from an American Indian word meaning “break into pieces,” tied to a belief it could break up gall-stones.



## Dwarf Crested Iris

*Iris cristata*/Iridaceae or iris family

A small iris with clusters of narrow pointed leaves ranging in height from 4 to 6 inches. Pale blue-violet flowers have a distinct yellow, white, or purple striped band and crested ridges called “beards.” Dwarf crested iris have done well along this moist, shady trail, but are listed as an endangered species in nearby Pennsylvania. American Indians used the roots to make a medicinal salve. Hummingbirds and bees enjoy the nectar.



## Poison Ivy

*Toxicodendron radicans*/Anacardiaceae  
or cashew family.

Most people are allergic to the oil in this three-leaved plant, so DO NOT TOUCH! Poison ivy is found throughout the trail, with its powerful urushiol oil capable of causing a blistering rash. Leaves turn red in the fall. Also beware of poison ivy's hairy, rust-colored roots which can climb on rocks and trees. Delaware Indians call it *Putschisktey* or "poison vine." Despite its poisonous nature, bees visit its flowers, birds eat its white berries, and deer and insects nibble on the leaves.



## Virginia Creeper

*Parthenocissus quinquefolia*/Vitaceae or  
grape family

A climbing or trailing vine, often mistaken for poison ivy. In years past, children memorized a rhyme to help tell the difference: "Leaves of three, let it be. Leaves of five, let it thrive." Virginia creeper leaves are green in the spring and summer, changing to red and purple in the fall. The plant produces small green flowers and blue-colored fruit that can be toxic, if eaten by humans. It's a major food source for caterpillars.



## Sassafras

*Sassafras albidum/Lauraceae or laurel family*

This fragrant shrub or tree can have three different leaf patterns on the same plant. Yellow-green flowers appear in early spring. In the fall, the leaves turn yellow and bluish-black berries grow on red stems. Delaware Indians called it “winakw” and rubbed the leaves into wounds to kill germs and reduce pain. Colonists drank sassafras tea and freshened their breath with twigs, adding the nickname of “nature’s toothbrush.” Birds eat the berries.



## Hollow Joe Pye Weed

*Eutrochium fistulosum/ Asteraceae or aster family*

This native wildflower can grow 2 to 7 feet tall with coarsely toothed leaves up to 10 inches long. The stem is hollow, giving the plant its common name, but it’s also known as “trumpet weed.” Joe Pye grows purplish-pink clusters of flowers in the spring which attract butterflies.



Daylilies and wild sweet William also bloom nearby in spring and summer.



## Meehan's Mint

*Meehania cordata*/ Lamiaceae or mint family

A perennial flowering plant, it is sometimes known as “creeping mint” because it spreads and creates a fragrant ground cover. Bright green leaves are heart-shaped and purple flowers look something like small bells when they bloom. This native ground cover can be found in the deepest parts of Kanawha State Forest because it grows well in the shade. It attracts butterflies and bees, but deer don't seem to care for it.



## Yellow Passion Flower

*Passiflora lutea*/Passifloraceae family

As you cross the bridge, look to the left for this climbing or trailing vine which is also known as “yellow passion vine.” It blooms with delicate greenish-yellow flowers that give way to purplish-black berries. Wide leaves, with three lobes, turn yellow in the fall. It's rare in Kanawha State Forest and considered an endangered species in Pennsylvania. This flowering vine is a major food source for several species of butterfly larvae.



## Wild Yam

*Dioscorea villosa*/Dioscoreaceae or  
yam family

This climbing vine has whorls of heart-shaped leaves which are hairy underneath and distinctly veined. White-green blooms appear in spring and leaves turn yellow in the fall. This plant was once used to treat a variety of ailments giving it nicknames like “devil’s root” and “colic root.” In the 1950’s, plant-based estrogen, found in the root, was used to make the first form of birth control pills. Flies help pollinate the wild yam and fungi in its roots help nourish the vine.



## Sharp Lobed Hepatica

*Hepatica nobilis var. acuta*/  
Ranunculaceae or buttercup family

The leaves are divided into three pointed lobes of similar size. Hepatica has white, pink, or purple flowers with yellow centers. They grow on fuzzy stems which act like the plant-version of a fur coat, allowing it to bloom earlier than many other wildflowers. In the fall, the leaves turn a burgundy color and stay on through the winter. The color and shape of the leaves give hepatica the nickname of “liverleaf.” Important ground cover. Some flies feed on the flowers’ pollen.





## Blood Root

*Sanguinaria canadensis/ Papaveraceae*  
or poppy family

It is easy to spot this plant in spring because it blooms before the leaves unfold, with a basal leaf that curls around a smooth stalk bearing radial white flowers with golden orange centers. Leaves have five or more lobes and scalloped edges. Bees might stop by for some pollen, but the flowers don't contain any nectar. American Indians use the red sap as a decorative paint and dye for baskets and clothing. Ants help spread the seeds of this fast growing ground cover.



## Wild Ginger

*Asarum canadense/Aristolochiaceae* or  
birthwort family

This perennial plant has heart-shaped leaves which have a veiny, wrinkly-looking appearance. Dark reddish-brown flowers bloom at the base in early spring and are often hidden by leaves. American Indians used wild ginger for a variety of medicinal purposes. Early settlers used the root in place of Oriental ginger, a potentially dangerous substitute because it contains an unknown concentration of a toxic acid. Ground beetles and flies pollinate this shade-loving plant.



## Blue Cohosh

*Caulophyllum thalictroides*/  
*Berberidaceae* or *barberry* family

This flowering plant has bluish-green leaves, purplish-brown to yellow-green flowers and blueberry-like fruit that's poisonous for humans. In traditional cultures, the roots were used to help induce labor and reduce menstrual cramps, so it's sometimes called "birthwort." Roasted seeds have been used as a coffee substitute. Bees are attracted to its nectar, birds eat its berries, but deer and other mammals avoid the bitter leaves.



## Jack-in-the-Pulpit

*Arisaema triphyllum*/*Araceae* or *arum* family

The name comes from the fact the hooded flower looks something like a pastor preaching from a pulpit with a canopy. Also known as "Indian turnip" because some tribes dried the root for food and medicine. The raw root contains calcium oxalate crystals which cause a burning sensation. This wildflower has three-part leaves, brownish-purple flowers in the spring, and bright red berries in the fall. Carrion flies pollinate this stinky plant.



## Spice Bush

*Lindera benzoin/ Lauraceae family*

It stands out in the spring because small yellow flowers bloom before the leaves develop. In the fall, the leaves turn a creamy butter-yellow with bright red, egg-shaped fruit on the female plants. American Indians had multiple medical uses for the spice bush to treat fever and intestinal parasites. Early settlers used the ground berries as a substitute for allspice and the dried bark in place of cinnamon. They made a tasty tea from the bark, leaves and stems.



## Purple Trillium/ Stinking Benjamin

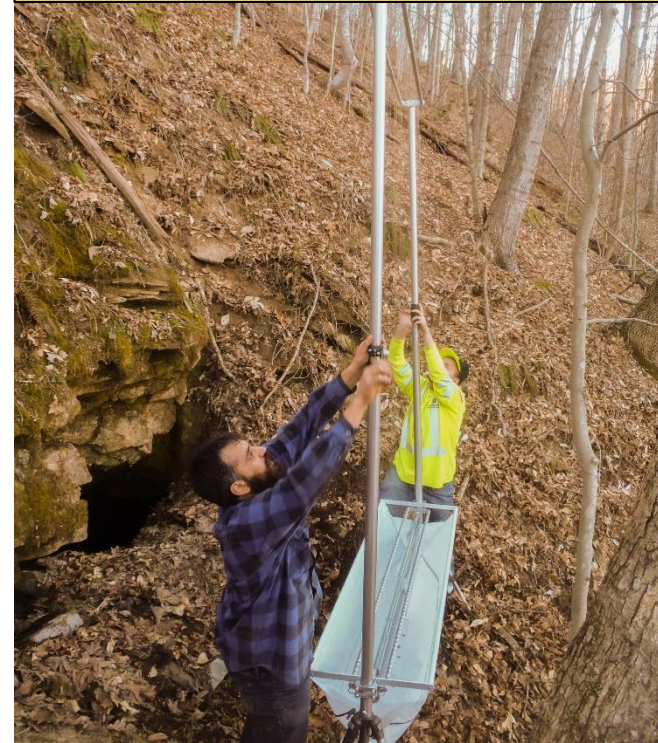
*Trillium erectum/Liliaceae or lily family*

The nickname “stinking Benjamin” is tied to the fact its three-petaled maroon flower has an unpleasant odor, often described as the smell of rotting meat. The foul odor attracts flies which help pollinate this perennial wildflower. This brightly-colored trillium is also known as a “wake-robin” because it often blooms when the first robins are spotted in the spring. It prefers moist soil, with morning sun and afternoon shade. Birds and mammals eat the berries.



Northern long-eared bat, a threatened species, found at Kanawha State Forest

Biologists use a harp trap to study bats in a forest mine shaft



## Bats of Kanawha State Forest

-**Indiana Bat**/*Myotis sodalis*

-**Northern Long-Eared Bat**/*Myotis septentrionalis*

Statewide, surface mining and a deadly fungus have caused severe declines in many of the Mountain State's bat populations, so this is an important refuge for their future survival. Nine bat species call Kanawha State Forest "home," with two of them protected by the Endangered Species Act. The endangered Indiana bat has maternity colonies in the forest and the threatened northern long-eared bat is known to hibernate in nearby abandoned mines. The stream and wetlands around the Spotted Salamander Trail provide these rare flying mammals with fresh water and abundant insects to eat. Boy Scouts, and other volunteers, have erected "bat boxes" in the forest to provide additional places for bats to roost/rest. This effort is part of a shift from an attitude of fear and ignorance to an appreciation for the ecological importance and economic benefits of bats.



## American Basswood/ Linn or Linden

*Tilia americana/Tiliaceae or linden family*

This tall, fast-growing hardwood tree has large leaves which are shiny dark-green on top and light green with tufts of hair on the bottom. In the spring, sweet-smelling flowers attract so many bees, basswood has also been dubbed the “honey tree” or “bee tree.” Delaware Indians called the basswood “Lennikbi” which translates as the outer bark used to cover their lodgings. American Indians also used the inner bark to weave baskets and make rope. Wildlife eat the nutlike fruit.



## Beech Tree

*Fagus grandifolia/Fagaceae or beech family*

This common forest tree has smooth, light gray bark. The leaves have a saw-toothed edge and turn yellowish-orange or brown in the fall. In the winter, beech trees stand out because some of the fall leaves stay on. The fruit is a three-edged nut, enclosed in a spiny bur. American Indians ate beechnuts and used them for medicinal purposes. The nuts are an important food source for many birds and mammals such as squirrels, raccoons and bears.



## Witch Hazel

*Hamamelis virginiana/*  
*Hamamelidaceae or witch hazel family*

The common name came from a belief this shrub possessed “witchly” powers, with its branches sometimes used as “divining rods” to locate water. This fragrant shrub often blooms after the leaves fall off, with clusters of bright yellow flowers hugging the stem. Leaves turn yellow in the fall when capsule-like fruits eject seeds up to 30-feet away. Birds eat the fruit. Deer and rabbits nibble the leaves. Witch hazel is used as an astringent and ingredient in lotions and cologne.



## Lady's Thumb

*Polygonum persicaria/Polygonaceae or*  
*buckwheat family*

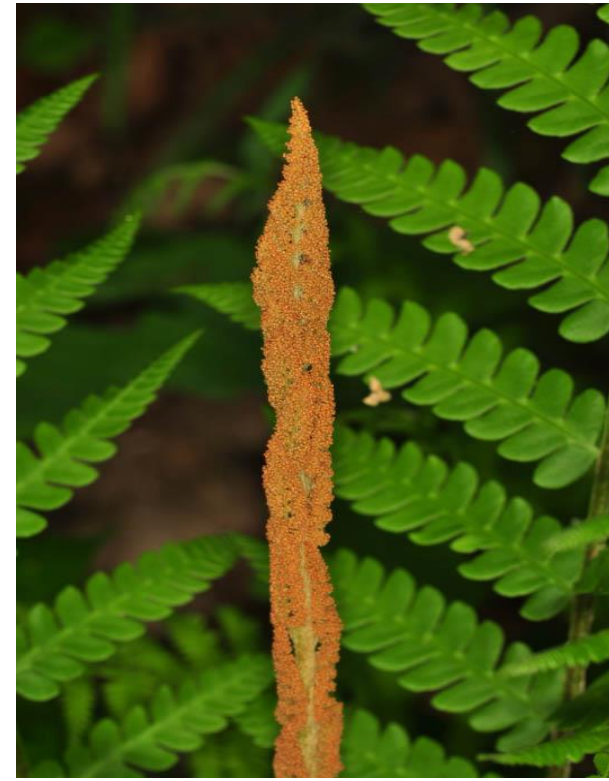
A low lying wildflower with a distinct cylindrical spike of dense pink or purple grain-like flowers. The leaves are green with a dark green or brown triangular-shaped patch in the center. Some think this patch resembles a lady's thumbprint. American Indians used the plant to treat stomach aches and poison ivy, and rubbed it on their horses as an insect repellent. Lady's thumb is an exotic species not native to West Virginia. It serves as a ground cover and food for birds and small mammals.



## Interrupted Fern

*Osmunda claytoniana*/Osmundaceae  
family

In the spring, the newly emerging “fiddleheads” are a dramatic silvery-white. By summer, the broad fronds are “interrupted” by brown fertile segments found in the middle of the blade, giving this fern its common name. The Iroquois Indians made a tonic from the roots to treat blood disorders and venereal disease. Certain caterpillars and moths will feed on this fern, but most wildlife avoid it because the fronds are bitter.



## Cinnamon Fern

*Osmunda cinnamomeum*/Osmundaceae  
family

The fronds grow in clumps with silvery, furry fiddleheads that ultimately become stiff, erect and brown like a cinnamon stick. This fern is considered a living fossil because it's been found in geologic records dating back as far as 75 million years ago. Osmunda fiber, used for potting orchids, comes from the roots of this family of ferns. Provides shelter for small animals. White-tailed deer like to eat the tender fiddleheads in the spring.



## Solomon's Seal

*Polygonatum multiflorum*/  
*Liliaceae* family

Large leaves grow on long stems which can reach 2 feet or higher. The flowers are tubular in shape and droop from the stem under the leaves mid-spring. They're followed by small berries in the fall that can be red, purple or blackish-blue. The common name comes from the flat round scars on the roots which look like the seal of King Solomon. Used as an astringent, tonic, and blood thinner. Bees sip the nectar. Deer like the leaves.



## Plumelily or False Solomon's Seal

*Maianthemum racemosum*/  
*Liliaceae* or lily family

The plumelily is sometimes confused with true Solomon's seal because the leaves look similar. The biggest difference is the location of the flowers which grow at the end of the stem, giving it the nickname of "Solomon's plume." The plant produces green berries that get red speckles as they ripen, eventually turning ruby red. The root has been used for medicinal purposes. Birds and other wildlife eat the berries.





## Christmas Fern

*Polystichum acrostichoides*/  
*Dryopteridaceae* or wood fern family

An evergreen fern given its common name because it stays green through the winter holidays. The individual leaflets even look something like a stocking or Santa's sleigh, depending on which way you turn them. Fronds are 8 to 20 inches long with spore bearing dots on the underside. New fronds grow in circular clumps in the spring. Its an important ground cover and habitat for small animals.



## New York Fern

*Thelypteris noveboracensis*/  
*Thelypteridaceae* or maiden fern family

A yellow-green fern, 1 to 2 feet high, with fronds that taper on both the top and bottom ends leading some say to that this fern is like New Yorkers who "burn the candle at both ends." Often found where beech, maple and birch trees are plentiful. Spreads easily and makes an excellent groundcover to fill gaps in the woodlands to help protect the forest from erosion.



## Umbrella Magnolia

*Magnolia tripetala/Magnoliaceae or magnolia family*

The umbrella magnolia, or “umbrella tree,” grows from 25 to 50 feet tall. Extremely large leaves, clustered toward the ends of the branches, create the appearance of umbrellas on each limb. Prefers rich soils near streams and swamps. The tree is a valuable ornamental with large white flowers in the spring and bright red fruit in the fall. Wildlife use the umbrella magnolia for food and shelter.



## Tulip Poplar or Tulip Tree

*Liriodendron tulipifera/Magnoliaceae family*

It's one of the tallest native trees, known to grow over 150 feet in height. The flowers and leaves are tulip-shaped which explains the common name. The blooms are large, greenish-yellow with splashes of orange. The leaves turn yellow in the fall when brown seed cones appear. It grows fast and makes a good shade tree. Bees sip the nectar, squirrels like the seed pods, and deer eat the young twigs.



## Blackberry

*Rubus spp./Rosaceae* or rose family

A 3 to 6-foot shrub with multiple stems and plenty of prickles, mistakenly described as thorns. Sometimes called a “bramble bush” because it tends to grow in tight thickets, making it difficult to walk through without getting scratched. Delaware Indians called this plant “Hmuwingwes,” which translates to “bloody” in English. Five-petal white flowers bloom in June. Humans and animals eat the berries, which turn black when ripe.



## Wineberry

*Rubus phoenicolasius/Rosaceae* or rose family

This Asian import is considered an invasive species because it can grow in dense thickets, displacing native plants. Sometimes called a “wine raspberry,” it spreads quickly and can grow up to 9-feet tall. Five-petal white flowers give way to fuzzy looking pods which eventually open to reveal edible fruit. Many birds and mammals use this plant for shelter and eat its bright red berries that have a flavor similar to a raspberry.



## **Sensitive Fern**

*Onoclea sensibilis*/Dryopteridaceae or wood fern family

This fern is the first to fade in the fall due to a sensitivity to frost, which explains its most common name. Light green fronds are about 12 to 36 inches long, with pale red fiddleheads which appear in the spring. The fertile fronds bear spores which look like a cluster of small beads, giving this plant the alternative name of “bead fern.” It makes a good ground cover and shelter for birds.



## **Maple-Leaved Viburnum**

*Viburnum acerifolium*/Caprifoliaceae or honeysuckle family

A low, dense shrub about 4 to 6 feet tall with leaves that look like they could have come off a maple tree. A showy bloomer with flat-topped clusters of white flowers, followed by red berries which turn a blue-black color. Leaves turn purplish-pink in autumn making this bush colorful in the fall. It can grow in moist, rocky areas. The flowers attract bees and butterflies. Birds like to eat the berries.



## Star Chickweed

*Stellaria pubera*/Caryophyllaceae or pink family

A low-growing wildflower which kind of creeps along the ground. It blooms with white flowers in early spring at the top of the stem. The flowers are star-like and the showiest of many chickweeds. The five-petal flowers are so deeply cleft it looks like there are actually ten petals. Folklore says if the chickweed flowers close up, it's going to rain soon. A good ground cover that attracts some birds, bees and flies. Butterflies are rare.



## Cutleaf Coneflower

*Rudbeckia laciniata*/Asteraceae or aster family

Leafy stalk grows from 3 to 12 feet tall with yellow daisy-like flowers that bloom in late summer to early fall at the top of the stalk. The name comes from the fact the leaves have serrated edges and the flowers have a greenish-yellow cone-shaped center. Some American Indians and Appalachian locals boil and eat the early spring leaves. This wildflower is a late season source of nectar and a favorite with bumble bees and wasps.



## Weeping Rock

Groundwater that's not absorbed by the steep slope above the Spotted Salamander Trail seeps from the hillside giving the impression this rock is "weeping." This sedimentary rock was created through a long process of compaction and is part of the history of this trail, with water dripping over its surface for many years. This consistent source of moisture encourages growth of water-loving plants, providing an alternate water source for birds, butterflies and small wildlife.



## Woodland Stonecrop

*Sedum ternatum*/Crassulaceae family

Stonecrop gets its name because it grows well in thin soil on rocky surfaces like the "weeping rock." It's a type of succulent herb that sprouts roots from its stems to grow new plants, so it can spread quickly and create a good ground cover. The leaves grow in whorls of three with tiny four-pointed blossoms appearing on a three-branched cluster in spring. Bees and butterflies like the star-like flowers.



## Golden Ragwort

*Packera aurea/Asteraceae or aster family*

A perennial ground cover with yellow, daisy-like flower heads in flat-topped clusters that bloom in spring or summer. Leaves are heart-shaped, dark green on top, and purple underneath with rounded toothed edges. Ragwort has also been called “squaw weed” because it was used by American Indians as a tonic for the ovaries and uterus. Self-seeding so it spreads quickly and produces long-blooming flowers which attract bees.



## Jewelweed or Spotted Touch-Me-Not

*Impatiens capensis/Balsaminaceae or touch-me-not family*

A tall, leafy plant with translucent stems and orange flowers which bloom in late summer or early fall. The trumpet-shaped flowers hang something like a jewel on a necklace, giving the plant its common name. The seed pods “pop” when touched, adding the nickname of “touch-me-not.” The juicy sap relieves itching from poison ivy and has been used to treat athlete’s foot. Hummingbirds sip the nectar. Bees and butterflies are major pollinators.



**Wood Frog**



**Scarlet Tanager**

## **Stream**

This small stream is called Davis Creek. It runs through the forest into the Kanawha River, then on to the Ohio and Mississippi Rivers, and eventually down to the Gulf of Mexico.

It's a haven for a variety of plants and animals, so stop here a few minutes and make use of all your senses. Feel the dampness of the air on your skin. Take a deep breath and smell nearby wildflowers or the odor of decaying leaves carried in the flow of the current.

You'll often hear local song birds, like the scarlet tanager, which sings a song which sounds like a series of "cheer-y cheery-up" phrases.

Wood frogs make a duck-like quacking sound during the spring mating season. Bull frogs also share nearby vernal pools and make a loud croaking sound.

Davis Creek is a food source for many different birds. Insects and fish hide from predators here and feed from the benthic, or bottom zone, of this stream. The water provides moisture for streamside vegetation.





## Wild Geranium

*Geranium maculatum/*  
*Geraniaceae or geranium family*

A perennial plant that's 1 to 2 feet high with spring flowers which range in color from white to purple. Flowers are saucer-shaped with five petals. The five-lobed leaves have jagged edges. The wild geranium seed pods look like little cranes, so some call this wildflower "cranesbill." The seed pod pops open and spits seed up to 20-feet away. A food source for mourning doves and bobwhite quail.



## Wild Hydrangea

*Hydrangea arborescens/*  
*Hydrangeaceae or hydrangea*

This 3 to 6 foot multi-stemmed shrub grows flat-topped clusters of delicate, greenish-white flowers in the spring. The stem has a tendency to peel in successive layers of different colors, giving it the nickname of "sevenbark." The hydrangea root was used by American Indians and early settlers to treat kidney stones. This fragrant plant serves as a host for insect and butterfly larvae.



## Wood Vetch or Milkvetch

*Vicia caroliniana*/Fabaceae or pea family

Mid-spring flowering plant which grows up to 2 ½ feet tall, but tends to sprawl along the ground or climb on other plants. Flowers are white or pale purple. American Indians used it for medicinal purposes tied to muscle pain or weakness. Wood vetch creates its own nitrogen so it helps restore critical nutrients to overused soil. Small tubular flowers provide a good nectar source for bees, while deer like to eat the tender leaves.



## American Sycamore

*Platanus occidentalis*

One of the oldest species of trees, the sycamore stands out because its bark flakes off in irregular pieces, giving the trunk a mottled appearance. It can grow over 100 feet tall and 6-feet in diameter with large trunks which are often hollow. The leaves look something like a hand, with three to five lobes and wavy “teeth” around the edges. Squirrels often make their homes in the warped, twisted branches.



## Gall-of-the-Earth

*Prenanthes serpentina*/  
*Asteraceae* or *aster family*/

It can grow 1 to 4 feet high with a waxy reddish stem and drooping flower heads which look like bells. The name comes from the fact this plant is extremely bitter. American Indians and early settlers made a tonic from the root to treat dysentery and rheumatism. Folk medicine lists the milky extraction of this plant as an antidote for snakebites, so it's sometimes known as "rattlesnake root." It provides nectar and pollen for insects.



## Downy Rattlesnake Plantain

*Goodyere pubescens*/*Orchidaceae* or  
*orchid family*

A species of native orchid which is covered with soft, down-like hairs. The leaves stay green all year long. They have silvery veins and a white strip down the middle which makes them look something like the skin of a rattlesnake. When it blooms, small white flowers are densely packed on a 6 to 8-inch spike. The dried seed pods can make a rattling sound when fall winds blow. American Indians used it to treat snakebites and burns.



**Spring Peeper**



**Wood Frog Eggs**



**Spotted Salamander**

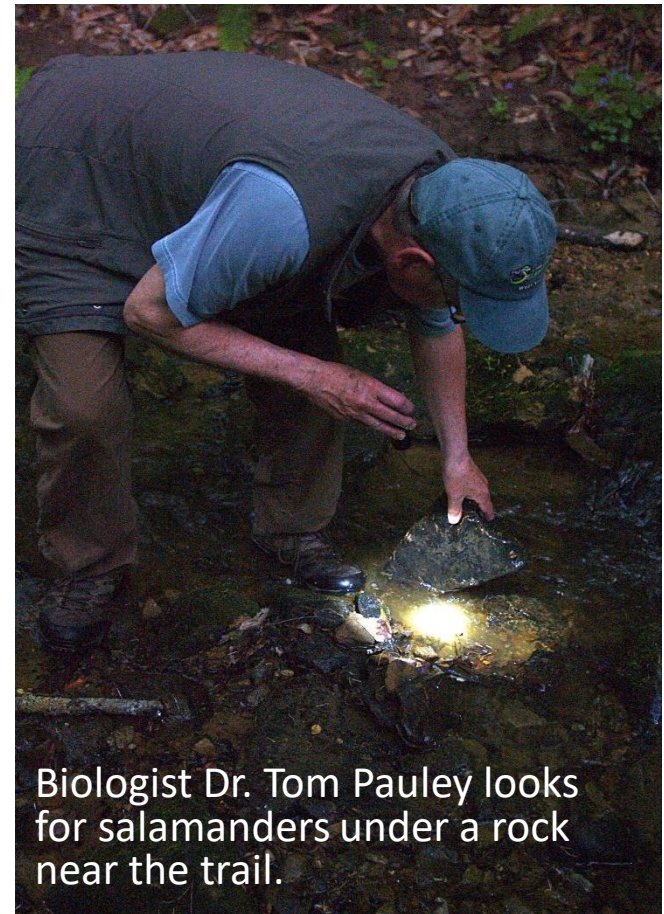
## **Vernal Pools**

Sometimes called “ephemeral ponds,” these temporary wetlands are formed by snow melt, runoff and rainwater, with “vernal” tied to the Latin word for “spring.”

They may look like glorified mud puddles, but many invertebrates and amphibians are dependent on vernal pools for their survival because they provide a place to lay eggs where they won’t be eaten by fish.

In the spring, eggs of aquatic insects and crustaceans hatch to form the bottom of the food chain for the amphibians who awake from hibernation and return to their birth ponds to reproduce.

Vernal pool breeders include spotted, marbled and tiger salamanders. These temporary wetlands are also the preferred breeding habitat for wood frogs, spring peepers and bullfrogs.



Biologist Dr. Tom Pauley looks for salamanders under a rock near the trail.

## Spotted Salamander

*Ambystoma maculatum/Ambystomatidae or mole salamander family*

Even though this trail is named in their honor, spotted salamanders are rarely seen except when they come out at night to eat, or when they migrate to their favorite breeding ponds in the spring.

Male and female salamanders rendezvous at the vernal pools where they were born and lay clusters of eggs. In the larval stage, salamanders have gills and broad tails to help guide them through water. As they mature, they develop lungs and strong legs, then crawl into the forest where they hibernate during winter.

Adult spotted salamanders can grow up to 8-inches long and have two irregular rows of round yellow spots on their backs. They can live up to 20 years with the help of poison glands in their skin which release a sticky white liquid when they're threatened by predators. Spotted salamanders eat insects, and other invertebrates such as worms, slugs and spiders.



## American Hornbeam

*Carpinus caroliniana*/Betulaceae or birch family

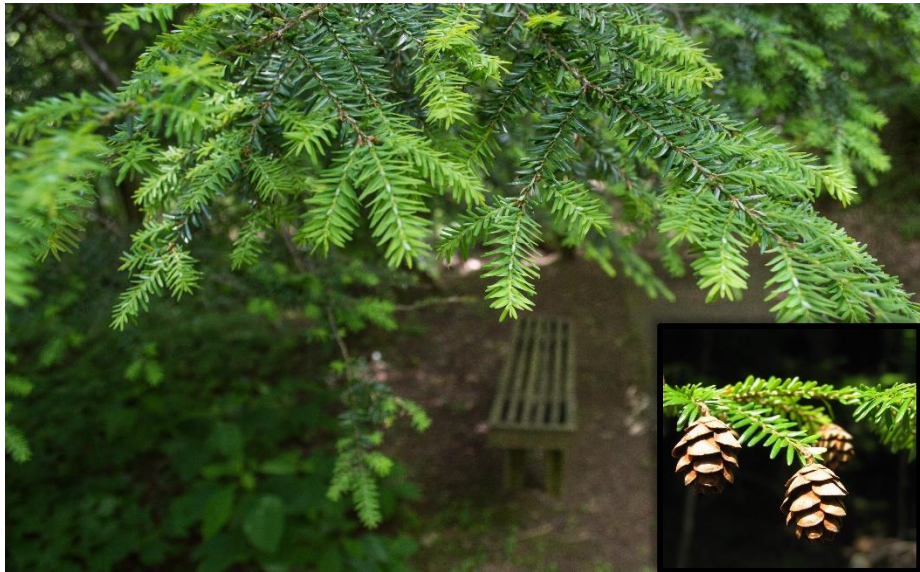
A tree with one or more short trunks, spreading branches and a broad, rounded crown. People often call it “musclewood” due to the appearance of its bark, or “ironwood” due to the strength of its wood. Tiny green flowers bloom in the spring with hairy green nutlets that mature in late summer. New leaves are reddish-purple, changing to dark green in summer and yellow to orange-red in the fall. Deer eat the twigs and leaves. Grouse, pheasants and quail feed on the nutlets.



## Foam Flower

*Tiarella cordifolia*/ Saxifragaceae or saxifrage family

The leaves look something like those on a maple tree, are usually hairy, and often have a burgundy tint along the veins. Small, feathery flowers extend outward in clusters in the spring and look a bit like foam on a stick. It spreads with the help of underground runners and makes an excellent ground cover in shady, wooded areas to help prevent erosion. Attracts small bees, flies and butterflies.



## Eastern Hemlock

*Tsuga canadensis/Pinaceae or pine family*

An evergreen tree that can reach heights of over 80 feet and live as long as a 1,000 years when not attacked by an invasive insect called the *woolly adelgid*. The needles are green on the top with two white stripes on the bottom. In the fall, the hemlock produces numerous small brown cones which contain seeds birds and squirrels like to eat. Deer and rabbits like the lacy needles, which are high in Vitamin C. The timber is used for wood pulp and the bark to cure leather.



## Indian Cucumber Root

*Medeola virginiana/Liliaceae or lily family*

This plant grows five or more leaves at its base, then adds a second tier of three leaves when it blooms in the spring. The flowers are greenish-yellow and dangle under the leaves. The fruit is dark blue or purple, and ripens above the leaf, but is not edible. The crisp edible root tastes something like a cucumber and was eaten by American Indians as an anti-convulsive medication. Birds are often attracted to this plant.



## Rattlesnake Fern

*Botrychium virginianum*/  
*Ophioglossaceae* or *adder's tongue*  
*family*

This fern produces a triangular-shaped sterile leaf that grows parallel to the ground. A fertile frond grows on a long vertical stalk. The spore structure looks something like the rattles of a snake giving it the common name of “rattlesnake fern.” It prefers rich, moist soil and makes a good ground cover which attracts insects. White-tailed deer, ruffed grouse and wild turkey might nibble on this fern.



## Canada Lily

*Lilium canadense*/*Lily family*

## Showy Orchid

*Galearis spectabilis*/*orchidaceae family*

There are too many wildflowers on the trail to name them all but the Canada lily stands out with its yellow-orange flowers, sprinkled with dark spots. Multiple flowers can grow from one stem.

The showy orchid is also known as a “showy orchis” or “purple-hooded orchis” due to the shape of its flowers.

Both of these wildflowers attract bees and butterflies.