

# Spring Wildflowers

At Cope Environmental Center



## Note:

The goal of this project was to create a guide that people could use to identify some of the early spring wildflowers around the Center. Having knowledge of the environment around us is something that is important to me, and knowing something about what's going on in it is something I find rewarding. I hope that more people will want to learn about the world they live in, and through learning about the trees and flowers and birds and animals they will find their own sense of place in all that.

All the pictures in this guide are of flowers that are on the property of Cope Environmental Center. Therefore, they should be plants that people have the ability to find relatively easily. This shouldn't be regarded as a complete list of species, however: there are many species that aren't on the CEC property. But I wanted to make this guide local and specific, so I stuck with what was here. All the pictures are ones I took myself, either on the CEC grounds, Wildman Woods, or on the campus of Earlham College. They are arranged from white, to white with bits of variable color, to pink or purple or blue, to green, to yellow flowers, for ease of finding. Also, I left out cultivated flowers, only including the ones that grow wild.

I learned about identifying plants while taking Field Botany as a student at Earlham College, but I wanted that kind of information and education to be accessible to more people – so you wouldn't have to be a biology major at a university in order to have access to this skill. I tried to write the descriptions for the flowers in plain English, so that people wouldn't have to pull out a really specific, scientific glossary of terms in order to understand what I was saying (I definitely had to do that, and it was a pain). So obviously, the majority of the credit for this project has to go to Brent Smith, my Field Botany professor who taught me literally almost everything in this guide. And the rest goes to the Bonner Foundation for giving me the opportunity to do this.

Enjoy the wildflowers, and I hope you learn something!

-Amy Boxell

## White Flowers Twinleaf *Jeffersonia diphylla*

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Family Berberidaceae – Barberry family



As its name suggests, Twinleaf has very characteristic, recognizable leaves. The two “twin” leaflets are joined together at the tip of the stalk, forming a single leaf that looks like a green butterfly. The leaves, as well as the flowers, are arranged at the top of their own stalks, with all the stalks coming together out of the base of the plant. The flower is white with eight long petals, and is short lived: dying within a few days of blooming.

Twinleaf can be found at the base of the White Oak next to the bridge.

## Mayapple *Podophyllum peltatum*

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Family Berberidaceae – Barberry Family



May Apple has big, flat leaves positioned with their centers over the stalk – like a lily pad or an umbrella. The leaves are deeply indented and toothed. The flower is white, positioned at the fork of the two leaf -stems of fertile plants, and blooms relatively late. May Apple plants usually grow in clusters, and have the ability to shade out smaller plants growing beneath the clusters.

May Apple can be found in several places, but especially along the beginning of the Red, Blue, and Green trails that start together off the driveway

# Cutleaf Toothwort

## *Dentaria lacinata*

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Family Brassicaceae – Mustard family



Cutleaf Toothwort has deeply toothed leaves that consist of 3-5 long, thin, blade-like lobes. The flowers have four white petals that are arranged directly across from each other, looking a little like a cross – this arrangement is characteristic of the mustard family. Cutleaf Toothwort is a smallish plant that usually flowers around early April.

Cutleaf Toothwort can be found in several places as well, but especially along the beginning of the Red, Blue, and Green trails that start just off the driveway.

# Garlic Mustard

## *Alliaria petiolata*

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Family Brassicaceae – Mustard family



Garlic mustard is an extremely invasive biennial plant. It spends its first year as a rosette (left), overwinters like that, and then grows into a bolt (right) in its second year. The bolts can grow several feet high and have the ability to shade out native wildflowers. The rosettes do not flower, and exist as a clump of rounded green leaves with slightly bumpy edges that all grow from the root. The bolt has leaves that are longer and pointier and small white flowers with the four cross-like petals characteristic of mustards.

Garlic mustard can (unfortunately) be found in many places on the grounds. If you see it, pull it up. The other flowers will thank you.

# Bedstraw

## *Galium aparine*

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Family Rubiaceae – Madder family



Bedstraw, also called Goosegrass, consists of a long, thin stem with slender, almost paddle-shaped leaves in whorls along the stalk. The flowers (not pictured) are tiny and white, positioned at the nodes along the stem where the leaf whorls are. The entire plant is covered in tiny little hairs that cause the plant to stick to fabric – try throwing some on a friend’s sleeve. Bedstraw is usually somewhat trailing and low to the ground, but it can grow tall as well, depending on soil quality.

Bedstraw is found many places – check along the green trail and red trails in particular

# Fragrant Bedstraw

## *Galium triflorum*

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Family Rubiaceae – Madder family



Fragrant Bedstraw is very similar to normal Bedstraw in that it also has white flowers with four petals and leaves in whorls along the stem. However, Fragrant Bedstraw has its flowers positioned at the tip of the stem instead of along it. In addition, its leaves are broader and more pointy than paddle-shaped. And this plant does not stick to clothes the way normal Bedstraw does.

Fragrant Bedstraw can be found on the orange service trail that splits off at the White Oak on the Red, Blue and Green trail; or on the Red and Blue trail after the Green splits off.

# Large-Flowered Trillium

## *Trillium grandiflorum*

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Family Liliaceae – Lily family



All trilliums have three leaves that sit at the same level (like a single whorl) and flowers with three petals. Large-Flowered Trillium is distinctive in part because of its large size, white flowers, large broad green leaves with deep veins; but mostly because the flowers are on their own little stalks that stick up above the leaves. This differs from other trilliums that are smaller, have red flowers, mottled leaves, or no flower-stems. The leaves don't have leaf-stems, but are positioned directly on the stalk.

Large-Flowered Trillium is found on the Red, Blue and Green trails, just before the Orange service trail splits off by the big White Oak.

# Nodding Trillium

## *Trillium flexipes*

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Family Liliaceae – Lily family



Nodding Trillium looks a lot like Large-Flowered Trillium in that it is a large trillium with white flowers, plain green leaves with deep veins but no leaf-stems, and flowers with flower-stems. However, the leaves are broader than those of Large-Flowered Trillium. The most obvious difference is that while the flowers of Large-Flowered Trillium stick up above the leaves on their flower-stems, the flowers of Nodding Trillium bend down below the leaves – hence its name. This is thought to be to target an insect pollinator that would be flying up from below. Nodding Trillium also flowers a bit later than Large-Flowered Trillium.

Nodding Trillium is also found by the White Oak on the Red, Blue and Green Trails.

# False Solomon's Seal

## *Smilacina racemosa*

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Family Liliaceae – Lily family



False Solomon's Seal has a long, thin, bending stalk with leaves arranged alternately up it. It differs from the true Solomon's Seal in several ways (true Solomon's Seal is with the green-flowered plants a little later on). False Solomon's Seal has leaves with deeper veins and pointier tips than true Solomon's Seal. Also, its flowers are white and grow in a cluster at the tip of the stalk, while true Solomon's Seal has green flowers that grow all along the underside of the bending stalk (not shown in the picture).

False Solomon's Seal is found along the Red, Blue and Green trails that start together off the driveway – particularly in the area between the small bridges.

# Star of Bethlehem

## *Ornithogalum umbellatum*

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Family Liliaceae – Lily family



Star of Bethlehem is a small white lily that can grow on lawns or in wooded areas. It has 6 white petals and long, thin, blade-like leaves. There are usually 2 or 3 flowers on a branching stalk. The leaves usually have a white stripe running down the middle. This is an introduced species from eastern Europe.

Star of Bethlehem can be found on the lawn in places, or on the Orange service trail that splits off of the Red, Blue and Green trails near the White Oak.

# Star Chickweed

## *Stellaria pubera*

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Family Caryophyllaceae – Pink family



There are several species of chickweed that grow in this area that look similar. Star Chickweed can be distinguished because it is bigger than other species, and grows in the forest. It is still a small, white flower with 5 petals that are so deeply notched they look like 10. This notching is characteristic of the Pink family, and gives it its name (think of pinking shears). The flowers also have dark anthers that are usually visible above the petals. The leaves are arranged across from each other, and attached directly to the reddish stem.

Star Chickweed can be found on the Orange service trail off the Red, Blue and Green trails, near the White Oak.

# Dutchman's Breeches

## *Dicentra cucullaria*

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Family Fumariaceae – Bleeding Heart Family



Dutchman's Breeches has a very characteristic flower, looking like an upside-down pair of pants. The flowers are white with yellow "waistbands" and flaring lobes (pant legs). They are arranged along a slender, bending stalk. The leaves are feathery and somewhat divided. This is a bumblebee pollinated plant – the bumblebees are the only ones strong enough to get into the tiny little opening in the pants' waistband to get to the nectar at the cuff of the pant leg.

Dutchman's Breeches can be found just before the White Oak on the Red, Blue and Green trails.

# Wild Strawberry

## *Fragaria vesca*

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Family Rosaceae – Rose Family



Wild Strawberries have leaves with three, toothed lobes that are a little bit fuzzy. The stems are fuzzy, as well. The flowers are white with yellow centers and 5 broad, almost round petals. In the summer it produces short, red berries (not pictured). Wild Strawberry plants look very similar to cultivated ones, though the fruit is different.

Wild Strawberry can be found in several places – especially along the green trail (the other side, where it runs along Abies Lane) and in other open, meadow-like habitats.

# Bloodroot

## *Sanguinaria canadensis*

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Family Papaveraceae – Poppy family



Bloodroot's flower looks a lot like that of Twinleaf, however, both Twinleaf and Bloodroot have their own very distinctive leaves. Bloodroot has a deeply indented leaf with bumpy edges. There is usually one leaf per flower, which remains somewhat curled around the flower stalk while the flower persists and grows once the flower dies. The flower is white with 8 long white petals and large, yellow anthers. The stalk of the leaf will "bleed" red juice when cut – more so when the plant is young. The root of the plant is dark red inside, as well – giving the Bloodroot its name.

Bloodroot can be found on the Red, Blue and Green trails, especially on the hill between the two small footbridges.



## White Flowers with Color Tinges

### Rue Anemone

### *Thalictrum thalictroides*

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Family Ranunculaceae – Buttercup family



Rue Anemone is usually pinkish when it's young, but gets paler and fades to white as the plant matures. It is a pale flower with a variable number of petals on a reddish stem. A key characteristic of Rue Anemone is that it always has two auxiliary flowers just below the main flower, above the leaves. The leaves have three leaflets, and are positioned across from each other at the same node of the stem.

Rue Anemone can be found at the base of the White Oak.

## Hepatica

### *Anemone acutiloba*

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Family Ranunculaceae – Buttercup family



Hepatica is another pale flower that may be colored when it's young, but fades as it matures. It can have tinges of pink, red, blue, or purple, or just be white. The flowers usually have 6 or 7 petals, and are arranged singly at the tip of a long, hairy stalk. The spring, shade-intolerant leaves (not pictured) have a jagged edge and are pale green with a splotch of dark red just before the stem. The shade-tolerant summer leaves (left) have three lobes and are mottled green and brown – they are said to look like a liver. Hepatica prefers to grow on steep hillsides.

Hepatica is also found at the base of the White Oak.

# Spring Beauty

## *Claytonia virginica*

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Family Portulacaceae – Purslane family



My personal favorite wildflower. Spring Beauty has a white flower with pink stripes on the 5 petals – these are nectar guides to direct pollinators to the nectar and pollen. The anthers are also pink, and may either stand erect or lie flat, depending on the age of the flower. The leaves are long, thin and blade-like. The flowers last only a couple of days, but each plant has several buds that can flower at different times

Spring Beauty can be found almost anywhere in the forest – it's a very common, ubiquitous flower.

# Speedwell

## *Veronica sp.*

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Family Plantaginaceae – Plantain family



Speedwell is a small, weedy plant that grows on lawns. There are many different species of Speedwell, all with their own characteristics. This species has small white flowers with bluish or purple nectar guides. The flowers are arranged along the stalk of the plant, along with the triangular leaves that attach directly to the stalk.

Speedwell can be found on the lawn and on other mowed areas on the grounds.

## **Pink, Purple and Blue Flowers**

### **Wild Geranium**

### *Geranium maculatum*

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Family Geraniaceae – Geranium family



Wild Geranium is a pink or pale purple flower with 5 petals and thick, dark stripes down the petals. The leaves have 5 lobes arranged around a center point, and are strongly toothed. Wild Geranium flowers later and grows mainly in wooded areas.

Wild Geranium can be found on the Orange service trail off the Red, Blue and Green trails, that splits off by the White Oak.

## **Wild Phlox**

### *Phlox divaricata*

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Family Polemoniaceae – Phlox family



Wild Phlox is a distinctive, purple flower that can be pale or almost white. It has 5 petals that have a shallow dip at the top. The petals are at the mouth of a long, thin tube that reaches to the base of the flower. There are multiple flowers per stem. The leaves are positioned directly on the stem, across from each other/

Phlox can be found in many places, particularly on the Red, Blue and Green trails, as well as the Orange service trail that splits off.

# Purple Cress

## *Lamium purpureum*

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Family Lamiaceae – Mint family



Purple Cress is a weedy plant found on lawns or by roadsides. It grows as a sort of spike, with leaves and flowers arranged up the stalk. The stem is square – a characteristic of the mint family. The leaves are almost heart-shaped and pointy, with teeth running along the edges. The flowers are pale purple and small, positioned within the leaves.

Purple cress can be found near the Sustainable Living Demo House, where the Purple trail meets the driveway.

# Ground Ivy

## *Glechoma hederacea*

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Family Lamiaceae – Mint Family



Ground Ivy is another lawn weed from the Mint Family. Its leaves are less pointy than those of Purple Cress – they are rounder and smoother, with a bumpy edge rather than teeth. The flowers are larger and darker purple, with spots inside the mouth of the flower. The stems are darker and tougher than Purple Cress with a lower growth form.

Ground Ivy can be found on the lawn, and in mowed areas.

# Common Blue Violet

## *Viola sororia*

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Family *Violaceae* – Violet and pansy family



The Common Blue Violet is a typical violet with dark purple, almost blue flowers. The mouth of the flower is pale, with a few dark stripes on the bottom-most petal. The insides of the two side petals are fuzzy. The flowers are arranged singly on a thin dark stalk, rising out of a set of basal, heart-shaped, finely toothed leaves. It is primarily a woodland species, but it grows in other habitats, including lawns and other more open areas.

Common Blue Violets are found in many places – particularly along the Green trail after it splits from the Blue and Red, before the river.

# Virginia Bluebells

## *Mertensia virginica*

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Family *Boraginaceae* – Forget-me-not family



Virginia Bluebells grow on a relatively large plant with large, smooth, oval-shaped leaves. The leaves grow along the long stalk of the plant, which ends in a cluster of flowers. The flowers are pale blue and trumpet shaped, though the unopened buds may be pink and turn blue after opening. The plants usually grow together in groups.

Virginia Bluebells can be found along the Red, Blue and Green trail, after the Orange service trail splits off by the White Oak.

## Green Flowers

### Solomon's Seal

#### *Polygonatum biflorum*

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Family Liliaceae – Lily family



True Solomon's Seal differs from False Solomon's Seal (grouped with the white flowers) in several ways. Its leaves are not so pointy, or so deeply veined. It has a similar growth form, with leaves arranged alternately up a bending stalk. However, instead of a group of white flowers at the end of the stalk as False Solomon's Seal does, true Solomon's seal has small, cylindrical green flowers usually arranged in pairs all along the underside of the stalk.

Solomon's Seal can be found along the Red, Blue and Green trails.

## Jack-in-the-Pulpit

### *Arisaema triphyllum*

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Family Araceae – Arum family



Jack-in-the-Pulpit is a very distinctive-looking green flower. The flower consists of a cylindrical base out of which the "Jack" grows (called the spadix), covered by a pointed hood (the spathe). The leaves have three leaflets, and are large, shiny and green – resembling Poison Ivy, but without the red sheen. The spathe and spadix are characteristic of the Arum family – a tropical family including Skunk Cabbage.

Jack-in-the-Pulpit can be found along the Red, Blue and Green trails next to the White Oak, before the Orange service trail splits off.

# Prairie Trillium

## *Trillium recurvatum*

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Family Liliaceae – Lily family



Prairie Trillium, like all trilliums, has three leaves and a flower with three petals. However, Prairie Trillium is distinct in that it has a red flower with thin, erect petals, no flower stem, and green-and-white mottled leaves with their own short little leaf stems. The most distinctive characteristic is the three, green, petal-like sepals that bend down below the leaves. Prairie Trillium is a relatively large trillium, as well.

Prairie Trillium is found on the Red, Blue and Green trails before the Orange service trail splits off.

# Wild Ginger

## *Asarum canadense*

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Family Aristolochiaceae – Birthwort family



Wild Ginger has two, large, spade-shaped leaves with thick, hairy stems. At the base of the two leaves is the dark red, hairy flower. The flower has three “petals” that are triangular with long tips. Inside the mouth is white with a red center. Wild Ginger usually grows in huge, dense clumps. It is pollinated by beetles, which can reach the flower as it is positioned on the ground. The flower is tough and long-lasting, usually persisting well into the summer.

Wild Ginger can be found in several places, but most notably on the Red and Blue trails after the Green splits off, approaching Kite Pond.

## Yellow Flowers

### Dandelion

#### *Taraxacum officinale*

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Family Asteraceae – Sunflower family



Everybody's favorite lawn weed. Round yellow flower arranged singly on top of a hollow, milky, pale green stem. Leaves are deeply toothed and originate out of the root along with the other flowers. Dandelions reproduce by cloning themselves – when you blow the seeded dandelion (after it's turned white), all those little seeds that fly off are genetically identical. And just as able to take over your lawn.

Dandelions can be found on the lawn, and in other mowed areas.

## Ragwort

### *Senecio obovatus*

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Family Asteraceae – Sunflower family



Ragwort is bright yellow flower that looks like a miniature sun. There are several flowers on each branching stalk. The stalk of the flower is thin, in contrast to other species of Ragwort that have thick stems and grow in fields. The leaves are deeply divided and mostly located close to the ground. This species of ragwort grows in the forest.

Ragwort can be found in several places – a good place to find it is on the Red, Blue and Green trails after the White Oak, but before the Green trail splits off.



# Trout Lily

## *Erythronium americanum*

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Family Liliaceae – Lily family



Trout Lily is a small yellow lily with 6 petals. Flowering individuals have two long, smooth, somewhat pointed leaves that are mottled green and brown. Sterile individuals consist of a single mottled leaf. Each plant has only one flower, which sits at the tip of a long, thick stalk growing out of the middle of the two leaves. The anthers can be yellow (left) or red (right). The petals usually curve back somewhat, and have dark freckles near the mouth of the flower.

Trout Lily can be found along the Red, Blue and Green trails just before the white oak.

# Marsh Marigold

## *Caltha palustris*

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Family Ranunculaceae – Buttercup family



Marsh Marigold is a bright, shiny yellow flower usually found in swampy or wet soil. There are many, but variable numbers of petals on a relatively large flower. The leaves are somewhat heart-shaped and tough, with the whole plant in a compact growth form.

Marsh Marigold can be found on the lawn near the admin building, as well as by the side of Kite Pond.

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# Golden Rocket

## *Barbarea vulgaris*

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Family Brassicaceae – Mustard family



Golden Rocket is an open field plant consisting of clusters of small, yellow flowers on a thin, green, branching stalk. The flowers have four petals and form something like a head. The leaves are small and much less conspicuous than the flower heads, and the whole plant grows in clumps in sunny, open areas.

Golden Rocket can be found in the field by the saphouse, and at the intersection of Larix and Abies, and along the rest of the Green trail.

# Downy Yellow Violet

## *Viola pubescens*

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Family Violaceae – Violet and pansy family



Downy Yellow Violet is very similar to Common Blue Violet in shape and size. It has a yellow flower with stripes on the lower petal and fuzz inside the side petals. Its leaves are toothed and spade-shaped, like all violets.

Downy Yellow Violet can be found along the Green trail.

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# Wood Poppy

## *Stylophorum diphyllum*

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Family Papaveraceae – Poppy family



Wood Poppy is a large, yellow flower with four broad, almost square petals. The flower is shiny and arranged singly. The leaves are divided and indented along the edges, usually with visible white midveins. The plant's growth form is low to the ground and compact, and usually grows in wooded areas.

Wood Poppy can be found along the Red, Blue and Green trails, after the Orange service trail splits off past the White Oak.

# Wood Betony

## *Podicularis Canadensis*

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Family Scrophulariaceae – Figwort family



Wood Betony grows as a spike, with a conical head out of which small yellow flowers bloom. The flowers are brownish on the little hoods, with a platform-like petal below. The leaves resemble feathers, with fringed edges, deep midveins, and a rough texture. The leaves and stalk are all arranged basally, with the stalk growing out of the center of the leaves.

Wood Betony can be found along the Green trail after it splits from the Red and Blue.