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# MAY, 2019 ISSUE



#### Wildflower Hike

*Clear Creek Metro Park - Park Office* 4th May 10:00 am - 11:30 am Search for spring blooms on a 1.5-mile hike along the Cemetery Ridge Trail

#### Weekly Bird Hike

Scioto Audobon Metro Park - Grange Insurance Audobon Center

#### 4th, 11th, 18th, 25th May 10:00 am - 11:30 am

Hike with experienced birders to find and learn about birds (Binoculars and field guides can be provided)

#### Got Woodpeckers?

Blendon Ravines (5280 Cambria Way, Westerville) 4th May 12:00 pm - 1:00 pm

Take 1.5-mile off-trail hike in the new Blendon Ravines to search for six species of resident woodpeckers

#### Bison

Battelle Darby Creek Metro Park - Nature Center 4th May 1:00 pm - 2:00 pm Not a cow, not a buffalo, it's a bison! Join for a 1-mile hike and learn about this 2,000 lb mammal

#### **Marvelous Metabolisms**

Battelle Darby Creek Metro Park - Nature Center 4th - 10th May 9:00 am - 7:00 pm

View an interactive display about natural patterns of fasting in wildlife as well as the metabolic benefits. Live animals featured!

#### Warbler Watch

Highbanks Metro Park - Nature Center 4th May 8:00 am - 10:00 am

Take a 3-mile hike in search of colorful spring migrating birds. Limited number of binoculars available

#### **Birding Breakfast**

Three Creeks Metro Park - Confluence Area 4th May 8:00 am - 10:00 am Share a hearty breakfast then walk the trails in search of migrating feathered friends Wildflower Wander Sharon Woods Metro Park - Spring Hollow 5th May 2:00 pm - 3:00 pm Join for a 1-mile stroll on- and off-trail in search of spring wildflowers and edibles

#### Warbler Walk

Blacklick Woods Metro Park - Nature Center 5th May 8:00 am - 10:00 am Wake up with the birds to search the trails for warblers

#### Spring Birds

Blendon Woods Metro Park - Nature Center 5th May 8:00 am - 9:00 am Search for migrating birds on this 1.5-mile hike

#### **Geology Hike**

Blendon Woods Metro Park - Nature Center 5th May 1:00 pm - 2:00 pm Take a 1.5-mile hike along the ripple rock trail to explore some local geologic features

#### Sunday in the Swamp

Blacklick Woods Metro Park - Nature Center 5th May 1:00 pm - 3:00 pm Scoop up slimy critters from a buttonbush swamp

#### New Leaves Tree ID Walk

Three Creeks Metro Park - Confluence Area 5th May 2:00 pm - 3:30 pm Learn to identify trees from their flowers and new leaves on an easy 1-mile walk

#### Spring Wildflower Walk

Kleinmaier State Nature Preserve 2455 Pump Station Rd SE, Sugar Grove, OH

#### 5th May 10:00 am - 12:00 pm

Explore Kleinmaier State Nature Preserve (SNP) and enjoy a naturalist-led hike to view the ongoing spring wildflower show



Wildflower Walk Glacier Ridge Metro Park - Shelter House 11th May 3:00 pm - 4:00 pm Take a short hike to find the wildflowers of the season

#### **Migration Mania**

Blacklick Woods Metro Park - Nature Center 11th May 10:00 am - 12:00 pm Take a 2-mile hike through the forest to search the

trails for migrating songbirds

# Warbler Walk

Battelle Darby Creek Metro Park - Indian Ridge 11th May 8:00 am - 9:00 am Join on a 2 mile hike as we search for visiting warblers

#### **Bison Hollow Spring Wildflower Hike**

Bison Hollow Preserve 26100 Amerine Rd, South Bloomingville, OH 11th May 10:00 am - 12:00 pm Take a rugged hike to find the wildflowers at Bison Hollow Preserve

#### **Outdoor Adventure - Try it! 3D Archery**

Scioto Grove Metro Park - Archery Range 11th May 2:00 pm - 4:00 pm Come out and test your aim at the 3D archery course! Open to all ages and experience levels. Equipment will be provided

#### **Spring Creekin'**

Blendon Ravines (5280 Cambria Way, Westerville) 18th May 2:00 pm - 3:30 pm Take a rugged 1.5 mile off-trail hike through the new Blendon Ravines park property to explore the creek

#### **Baby Animal Display**

Battelle Darby Creek Metro Park - Nature Center 11th - 17th May 10:00 am - 6:00 pm Learn about baby animals found inside the park and how they are cared for. Also, learn what to do if you find an baby animal without its mother

#### Eagle Walk

Highbanks Metro Park - Oak Coves Picnic Area 11th May 2:00 pm - 4:00 pm Hike 3-miles and look for Bald Eagles in their nest

#### **International Migratory Bird Day**

Blendon Woods Metro Park - Nature Center 11th May 1:00 pm - 4:00 am Join for crafts and games in celebration of the incredible journey made by birds each spring

#### **Full Moon Hike**

Battelle Darby Creek Metro Park - Cedar Ridge 18th May 8:00 pm - 9:00 pm Take a brisk moonlit, 4-mile hike through fields and forests

#### **Honeybee Display**

Battelle Darby Creek Metro Park - Nature Center 18th - 24th May 10:00 am - 6:00 pm Learn about honeybees and their important role in pollination, and how farmers care for their own hives

#### Warbler Walk

Battelle Darby Creek Metro Park - Indian Ridge 18th May 8:00 am - 9:00 am Join on a 2 mile hike to search for visiting warblers



#### **Endangered Ohioans Display**

Blacklick Woods Metro Park - Nature Center 18th - 19th May 8:00 am - 8:00 pm View the display to learn which plants and animals are endangered in Ohio and why

#### **Off-trail Migration Madness**

Highbanks Metro Park - Oak Coves Picnic Area 18th May 10:00 am - 12:00 pm Wander 3 miles off trail to look for migrating songbirds. Limited number of binoculars available (signup required)

#### Family Overnight at the Farm Slate Run Metro Park - Slate Run Farm

18th May 4:30 pm - 10:30 am

Join Metro Parks for a fun Family Overnight at Slate Run Living Historical Farm. Participate in campfire cooking, a night hike, farm chores, and parlor games

#### **Orchid Hike at Mercer Woods**

Mercer Woods Old Growth Forest9016 Buckeye Troxel Road, Sugar Grove, OH 19th May 10:00 am - 12:00 pm Take a walk through mature hardwood and hemlock forests and explore the wildflower covered slopes

#### Sunday in the Swamp Blacklick Woods Metro Park - Nature Center 19th May 1:00 pm - 3:00 pm Scoop up slimy critters from a buttonbush swamp

Evening Wildlife Wander Rocky Fork Metro Park - Bulletin Board 19h May 6:00 pm - 7:30 pm See who starts to stir in the early evening on this 1.5mile hike

#### **Centipedes and Millipedes** Blacklick Woods Metro Park - Nature Center 25th May 2:00 pm - 3:00 pm Learn how to find and identify these many-legged insect relatives

#### **Butterfly Pursuit**

Highbanks Metro Park - Nature Center 25th May 11:00 am - 12:30 pm Take a 2.5 mile hike to find some of the most beautiful butterflies of the season and learn how to identify them

#### Float the Pond

Three Creeks Metro Park - Confluence Area 25th May 1:00 pm - 3:00 pm Take a canoe out for a ride on Heron Pond

#### **Reptiles and Amphibians from Around the World**

Battelle Darby Creek Metro Park - Nature Center 25th - 27th May 10:00 am - 6:00 pm See and touch live examples of these animals, both native and exotic

#### **Outdoor Adventure - Overnight Backpacking Trip**

*Clear Creek Metro Park - Creekside Meadows* 25th May 2:00 pm - 10:00 am Guided overnight backpacking trip through moderate to strenuous terrain. Expect to hike 4-6 miles while carrying your equipment (signup required)

# Bird Songs

Sunday in the Swamp

26th May 1:00 pm - 3:00 pm

Blendon Woods Metro Park - Nature Center 26th May 8:00 am - 9:00 am Use your ears to identify birds on this 1.5-mile hike

Scoop up slimy critters from a buttonbush swamp

Blacklick Woods Metro Park - Nature Center

#### Nature Hike

Homestead Metro Park - Nature Center 26th May 3:00 pm - 4:00 pm Take a 1-mile walk to learn about what animals live in the park

# Wildflowers

April showers bring May flowers! Wildflowers bring fragrance to our lives and paint our world with a rainbow of colors. They are quite simply - marvels of life! Defined as naturally growing, usually herbaceous (non-woody) plants with showy flowers, these blossoms might look very delicate (some only last a few days), but they are rather hardy. Anywhere there is a smallest green plant growing, there is a wildflower. From lush green prairies to hot arid deserts, from mountain tops to river valleys, wildflowers can be found anywhere!



Spring Beauty (Claytonia virginica)

Owing to Ohio's varied geography - lake plains in the north, prairie west, Appalachian plateau in the east and Ohio river valley in the south - there's a great diversity of plants. About 1800 species of native plants are found in the state. An additional 500 species of non-native but naturalized species are also found, such as Chicory, Queen Anne's Lace, Oxeye Daisy, etc.

Some wildflowers are annual - completing their lifecycle from seed to plant to flower to seed in a single season, after which the plant itself dies. The seed remains dormant through the winter, and then germinates into a new plant the following year or when the conditions are suitable again. Biennial plants live for two years, growing the stalk and leaves the first year and flowering the next and final year of their life. Perennial plants can live for several years, with some retaining their above-ground growth during winter, while others dropping the stem and leaves and remaining dormant underground through the winter.

With the numerous species of plants blooming at different times, we have wildflowers all through Spring, Summer and Fall. Usually people tend to associate wildflowers with the spring flowers. These are *spring ephemerals* (short-lived). Spring ephemerals, also referred to as vernal wildflowers, are showy and come in a variety of bright colors and shapes. Also, their emergence after a long cold winter season attracts more attention. But wildflowers include much more than just spring ephemerals.

# Difference Between Wildflower and Garden/Ornamental Flower

Every plant is the offspring of a wild flower at some point in history. Garden plants, as we label them, have been bred with the gardener in mind, which does not always suit wildlife. Many butterflies and moths have developed to eat very specific plants over the millennia and may not be able to change their allegiance easily. The term wildflower is somewhat generic. The literal meaning of the term wildflower is a flower of a plant that grows in the wild without deliberate cultivation, yet one could still buy packets of wildflower seeds from the market and plant them in their yards. Hence, the more appropriate term is *native plants/flowers* - those that have not been intentionally bred or hybridized.

# Weed or Wildflower?



Yellow Trout Lily (Erythronium americanum)

The difference lies in human perception! While dandelions are a lawn-lover's nightmare, the bees count on it for the earliest pollen and nectar source of the season, and hence a bee-lover's delight!

Only in the twentieth century did humans decide that the dandelion was a weed. Before the invention of lawns, the golden blossoms and liontoothed leaves were more likely to be praised as a bounty of food, medicine and magic. When we regard something as a weed, often we fail to realize that the "weed" is providing life support to the crucial pollinators responsible for most of the foods we eat, and ultimately supporting our own lives!



Pipevine Swallowtail nectaring on Butterffly Weed (Asclepias tuberosa)

# Purpose of the Flower

The flower is the reproductive organ of the plant, ensuring the continuation of the species through future generations. Most flowers contain both sexual organs - *stamen* (male) and *pistil* (female) - which are supported as well as advertised by the petals. The *pollen* is produced or stored in the

organ called *anther* on the stamen. The stigma on the pistil receives the pollen, which travels down the style reaching the ovary where ovules or unfertilized seeds are produced. Once the pollen fertilizes the ovules, the ovary develops into a seed container - commonly known as fruit. The fruit could be in the form of a pod, nut, berry, grain or a fleshy fruit. Many flowers contain both the male and female organs, but since

# **Common Flower Parts**



Parts of a Flower (Designed by brgfx / Freepik)

self-pollination results in weaker offspring due to inbreeding, nature has evolved an ingenious solution for it such that stamen and pistil mature at different times in most cases. Hence, two or more plants are needed to produce fertile seeds. The process of transferring the pollen from the male anther to the female stigma is called *pollination*. Depending on the plant species, there are various forms of pollination that include water, wind, insect, and in some cases, bird pollination.

# Use of Wildflower in Our Everyday Lives

There are several wildflowers with medicinal values. Every human culture across the world has had traditional natural medicines made out of native plants. *Ayurveda* is a traditional Indian medicinal science - one of the oldest in the world dating back over 5000 years. Most of Ayurvedic



Yellow Bumblebee (Bombus fervidus) on Red Clover(Trifolium pratense) (population of Bombus fervidus has declined sharply in recent years)

medicines are made from native plants. Several traditional Chinese medicines (often referred to as TCM) are made out of natural herbs. Native Americans had discovered certain roots, leaves and flowers as effective healing agents, laxatives and even remedies for snakebite.

Some early research suggests that taking red clover daily for 6 months increased bone mineral density. The flower is also used for indigestion, cough, asthma, high cholesterol, however, more research is needed to prove its effectiveness for these conditions. Foxglove, a plant native to western and southwestern Europe and introduced in Ohio, contains cardiac glycosides and is used for making heart medicine called Digitalis (using the same name as the genus of the flower). The Purple Coneflower (genus *Echinacea*) is another wildflower that is used for making medicines for common cold and other respiratory infections. The roots and above-ground parts of the plant are used fresh or dried to make teas, squeezed juice, extracts, capsules and tablets, and preparations for external use. It is known to have been traditionally used by native Americans. It is worth noting here that several native plant species are at risk because they are being over-harvested for medicinal purposes.

Wildflowers are also used in preparation of certain foods. Dandelion wine, crystallized violet candies, violet jellies, thistle salad, and chicory coffee are a few examples.

Several wildflowers and plants are even used - either directly or as extracts - for skin and hair beauty products.

# Spring Ephemerals

As soon as the snow starts to thaw towards the end of winter, the earliest wildflowers of the season start blooming. During March and much of April, the trees in the forest are still in the process of leafing out, and hence over 50% of sunlight is able to reach the forest floor. By May, the forest canopy is fully developed and the available sunlight is reduced to 10-15%. It is in this short time window that these spring wildflowers flourish. Hence the name - spring



Virginia Bluebells (Mertensia virginica)

Toad-Shade (Trillium sessile)

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ephemerals (short-lived). They thrive on the high levels of resources such as water, sunlight and nutrients and lesser competition from other plants at this time of year. An entire ecosystem revolves around these spring ephemerals. Several species of insects such as bees, wasps, flies, and



Dutchman's-Breeches (Dicentra cucullaria)

Squirrel Corn (Dicentra canadensis)

beetles time their emergence such that it coincides with the blooming of these flowers. Additionally, the queen bumblebees that have recently become active after their winter hibernation. are hunting for their nesting sites in early spring. They choose locations for their nests in regions with good densities and populations of spring ephemerals. A spring wildflower like the Dutchman's Breeches is pollinated solely by bumblebees. The Trout-lily mining bee feeds almost exclusively on Trout Lily, though it does feed on other plants too. Similarly, the

Virginia Spring Beauty hosts the Spring Beauty mining bee. The pretty and colorful spring flowers provide the season's first pollen source to these pollinators, and in turn, these early insect pollinators are crucial for the life-cycle of the spring ephemerals. Spring ephemerals play the role of soaking up and conserving these nutrients, acting as a "vernal dam" and thus conserving these vital nutrients in the system.

A very fascinating example of the intricate (and deceitful) web of this early spring ecosystem is the wildflower, Jack-in-the-Pulpit. Fungus gnats lay their eggs on fungi where they hatch into larvae and eat the fungi. Jack-in-the-Pulpit emits an odor similar to that of the fungi and lures the gnats into its flowers, where the gnats find themselves trapped. The male flower leaves a small opening for the gnat to escape but not before the flower has attached its pollens on the gnat. When the pollen-covered gnat lands into a female flower and



Jack -in-the-Pulpit (Arisaema triphyllum)

Wood Anemone (Anemone quinquefolia)

gets trapped, there is no escape. The gnat dies inside the female flower but pollinates the plant so it could reproduce. Each spring ephemeral species has its own unique connection to the ecosystem. It is very likely that we have yet to understand many of such relationships.

# Wildflowers of Different Habitats

## Field Wildflowers

In North America, natural open prairies exist in the central part (Great Plains) of the continent that used to spread for miles before the European settlement. While most of it was converted into agricultural fields, some of the original character of the natural grasslands still remain dominated by grassy plants. In these regions, winters are cold and summers are hot and dry, and so the plants have adapted accordingly. Most plants in these open fields are wind pollinated, which



Monarch on Canada Goldenrod (Solidago canadensis)

explains why grasses have such not-so-attractive flowers. Even the wildflowers that are insectpollinated, take advantage of wind-pollination.

# Woodland Wildflowers

Trees in the forest create rich soil layers with their decaying leaves and fruit, create moisture by breathing out water and controlling rainfall, prevent temperature extremes by enabling the air to warm up and cool down at much slower rates than in open treeless fields. The types of trees in a forest determine the forest habitat. There are three major types of forests - coniferous (mostly in



Black Swallowtail on Field Thistle (Cirsium discolor)

the northern parts of the planet), deciduous (in the temperate zone) and rainforest (in the tropics). Since trees are tall and shade the forest floor, most wildflowers in deciduous forests are spring ephemerals that can complete their lifecycle in the early spring before the trees develop their foliage. Wildflowers in forests otherwise tend to favor patches of open area where they can receive sunlight. Additionally, they also tend to have larger leaves in order to increase their surface area to capture as much sunlight as possible.

# Wetland Wildflowers

Wetlands are areas where water covers the soil all year or for varying periods in the year, resulting in hydric soil – soil saturated by water. Different kinds of wetlands have different types of plants, depending on whether the wetland has fresh water, salty or brackish (slightly salty) water, or whether the wetlands are wet year-round or are semi-permanent such as vernal pools, and whether wetland has standing water or slow- or fast-moving water courses. Plants in each kind of wetland have adapted to the specific conditions of the wetland.

## Alpine Wildflowers

Mountains can have varying habitat but all offer extremely difficult conditions for many reasons due to higher elevations. But there are still hardy enough plants that can survive such conditions. They tend to be slowgrowing perennials, grow low and close to the ground,

<image>

Great Spangled Fritillary on Swamp Milkweed (Asclepias incarnata)

and have roots that enable them to cling to the wind-swept rocks and hold nutrients for the long winter.

## **Desert Wildflowers**

Even the most inhospitable places on earth has resilient wildflowers. Since the deserts are dry for much of the year, the plants have adapted to those conditions. The desert annuals - which need to complete their life cycle from seed to plant to seed in a single season - escape the drought by laying dormant in the soil, for years if need be, and germinate when the conditions are right. When it does rain in the desert, these dormant seeds swing into action, growing from seed to flower within a matter of weeks, blooming prolifically all over the area, though the blossoms do not last very long. The perennial plants in the desert have made special adaptations to cope with the arid conditions like storing water in their leaves and stems and minimizing water loss by transforming leaves into spines (or needles) such as in cacti.

# **Roadside Wildflowers**

These are the hardiest of all the wildflowers that manage to survive in the midst of human civilization. They even manage to grow out of cracks in sidewalks and can withstand all the pollution from automobiles driving by. Most, but not all, of the roadside wildflowers are non-native species and some are considered invasive.

# Value of Native Plants

Native plants are the life and blood of the local ecology. They are the building blocks of the biodiversity of the region. Almost all the native animals are closely tied to the native plants and depend on them either for food or some part of their reproductive cycle. For example, the



caterpillars of the native butterflies and moths depend on the native flora as host plants. These are the species of plants with which the caterpillar has coevolved and developed an intricate relationship. For example the leaves of Milkweed carry a toxin, but the Monarch caterpillar that feeds on it has grown tolerant to the toxin. The caterpillar absorbs the toxin, which then deters predators from eating it. Such relationships are built over Monarch caterpillar feeding on Milkweed leaves thousands of years of evolution and

hence these animals are unable to utilize the non-native plants with which they do not share an evolutionary history! All our song birds eat insects that have spawned from plants. Additionally, the birds as well as all the native mammals feed on the seeds and fruits of the plants. Plants also provide nesting material for birds and shelters for other animals. Flowers provide nectar and

pollen sources for a myriad of pollinating insects. The pyramid of life stands upon the native plants - shake the base and the entire system crumbles!

When the non-native or introduced plant species "escape" into the wild and if they quickly and aggressively adapt to the local conditions, they can choke out the native species. Since the local ecosystem quite literally stands upon these native plants, if the plants perish, the rest of the wildlife is impacted!



Birds-foot Trefoil (Lotus corniculatus) Large-flowered Trillium (Trillium grandiflorum)

Native plants serve an important and crucial role in our ecosystem. Unfortunately, we have forsaken them and regarded them as "weeds" over the years. Plants sequester carbon and provide oxygen in the air. Their roots hold stream banks and prevent erosion, thus protecting water quality in the streams and rivers. After the plants die, not only do they continue to sequester carbon in their biomass, the decomposing plant enriches the soil. Above all, native plants provide a pleasant overall experience for people's enjoyment of the outdoors and nature. The world would look rather dull and unappealing without these plants, especially the showy wildflowers and all the pretty critters they attract!



Monarch on Canada Goldenrod

# What Can We Do To Help!

Plant native plants in your yards. Avoid using lawn grass as it does not serve any purpose whatsoever. Neither does it provide any food or shelter to the native wildlife, nor does it hold the rainwater which causes the surface runoff into the streams, carrying with it all the contaminants and different synthetic chemicals, polluting our streams. Instead of lawn grass, grow a native prairie bed. Native plants should be purchased from ethically sourced locations. One could be smart about planting the natives that bloom at different times of the year so that there is always something blooming in the garden. Planting perennials would save on work and cost in subsequent years. Additionally, if one chooses the right native plants, there wouldn't be any need for watering them in the summer as they are already adapted to the local conditions as regards the amount of average rainfall that the region receives annually. When planting natives, avoid using pesticides or any other synthetic chemicals as those would not only kill the plants but along with it many other lives (such as caterpillars) it is supporting. This would further save cost.

In addition to having the pretty sight and the pleasing fragrance of the colorful wildflowers in our gardens, they will be attracting butterflies and hummingbirds and other gorgeous critters that would further adorn the gardens!

There are several trustworthy resources in the city from where native plants could be purchased. These vendors usually help with more information as well as technical advice on what to plant and how to plant.

Scioto Gardens (http://sciotogardens.com/) Natives in Harmony (https://www.nativesinharmony.com/) Franklin Soil and Water Conservation District (https://www.franklinswcd.org/) Chadwick Arboretum, OSU (https://chadwickarboretum.osu.edu/)

Additionally, Columbus GreenSpot (https://www.columbus.gov/greenspot/) is a great resource to learn about the basics of native planting and water quality, and creating a "cleaner, healthier, more sustainable Columbus". Founded in 2008 by former Columbus Mayor Michael B. Coleman, it is a

city of Columbus initiative to educate citizens about "living and working greener, and commit to doing it—in their homes, businesses, and communities."



Eastern Tailed-Blue on Butterfly Weed



Zebra Swallowtail on Common Dogbane

Cover photo flower: Common Chickweed (Stellaria media)

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