



SPRING WILDFLOWERS OF OHIO **field guide**

DIVISION OF WILDLIFE



INTRODUCTION

By Jim McCormac

The Ohio Department of Natural Resources (ODNR) has a long history of promoting wildflower conservation and appreciation. ODNR's landholdings include 21 state forests, 136 state nature preserves, 74 state parks, and 117 wildlife areas. Collectively, these sites total nearly 600,000 acres and harbor some of the richest wildflower communities in Ohio. In August of 1990, ODNR Division of Natural Areas and Preserves (DNAP), published a wonderful publication entitled Ohio Wildflowers, with the tagline "Let Them Live in Your Eye Not Die in Your Hand." This booklet was authored by the first chief of DNAP, Richard E. Moseley, and was illustrated with photos courtesy of Guy L. Denny, Moseley, and Alvin E. Staffan. Ten thousand copies were printed, and even though the publication is long out of print, some people remember it fondly and occasional requests for "Ohio Wildflowers" are still received. This booklet is a robust update to the original "Ohio Wildflowers" publication. Thanks to Rick Gardner, DNAP's chief botanist, for review and edits.

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HOW TO USE THIS GUIDE

The image shows a digital interface for a plant guide. On the left, a vertical green bar contains the text "WHITE TO GREEN WILDFLOWERS". The main content area is titled "BLOODROOT" and includes a "BLOOM:" calendar showing the months from February to June. Below the title, there is a "DESCRIPTION:" section, a "DISTRIBUTION:" section, and a "HABIT:" section. A photograph of a white flower with a yellow center is shown on the right. At the bottom right, there is a page number "39". Red arrows point from labels on the left to these various elements: "Scientific Name Definition" points to the scientific name; "Common Name" points to the large title "BLOODROOT"; "Family Name" points to the text "POPPY FAMILY (Papaveraceae)"; "Color Group" points to the vertical bar; "Inset Photo" points to the flower image; and "Page Number" points to the number "39".

Scientific Name Definition

Common Name

Family Name

Color Group

Inset Photo

Page Number

Bloom Calendar

Scientific Name (Scientific Name Pronunciation)

WHITE TO GREEN WILDFLOWERS

BLOOM: FEB MAR APR MAY JUN

BLOODROOT

POPPY FAMILY (Papaveraceae). 2 native Ohio species.

DESCRIPTION: Large showy flower with numerous white petals, ephemeral, petals often falling within a day. Single leaf emerges when all flowering time, eventually expands into a large rounded leaf with lobed margins and deep basal sinus.

DISTRIBUTION: Locally common statewide in appropriate habitat.

HABIT: Rich woods, sometimes persists in cut-over sites.

NOTES: The common name is derived from the acid orange-red juice within the root. This compound has been used as a dye. Many medicinal properties have been attributed to Bloodroot, including treatments for asthma, fevers, lung conditions, and leprosy. An alkaloid from the plant, sanguinarine, is used commercially in mouthwash and toothpaste. It helps combat plaque.

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SPRING WILDFLOWERS OF OHIO

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KARNER BLUE BUTTERFLY ON WILD LUPINE

PHOTOS BY: PAUL SPARKS AND KELUDMILA IVASHCHENKO

WILDFLOWERS IN OHIO

Ohio is a crossroads state, with influences from the prairie west, boreal north, Appalachian east, and the Ohio River Valley on the south. Our varied geography means great plant diversity. About 1,800 species of native plants are found within the Buckeye State's borders. Another 500 or so species are nonnative but naturalized. While some of the species in the latter group are considered "wildflowers" such as Chicory, *Cichorium intybus*, Queen Anne's Lace, *Daucus carota*, and Dame's Rocket, *Hesperis matronalis*, this publication focuses only on native wildflowers.

The term "wildflower" is somewhat generic. Merriam-Webster defines a wildflower thusly: "the flower of a wild or uncultivated plant or the plant bearing it." Most of Ohio's 1,800 species of native plants would not match most people's idea of a wildflower. Grasses, sedges, trees and shrubs, and ferns, with rare exceptions, do not sport showy flowers and these groups constitute a large portion of Ohio's flora. While there are numerous species of summer and fall blooming wildflowers, to most people, spring and wildflowers go hand in hand. The emergence of showy spring wildflowers after a long cold winter heralds warmer times ahead, and an impending explosion of botanical diversity. This guide focuses on the common, widespread wildflowers of spring.



SNOW TRILLIUM
PHOTO BY @NINA HARFMANN

ECOLOGY OF SPRING WILDFLOWERS

Come March and the melting of winter snows, a rapid increase in temperature of forest soils stimulates wildflowers to commence growth. As leaf-out of the forest tree canopy has not yet begun, at least 50% of available sunlight penetrates to the forest floor, providing the fodder for photosynthesis. By early to mid-May, expansion of leaves will have reduced sunlight to 10-15% of what's available in March and April. It is in this narrow window between winter and late spring that vernal wildflowers flourish. Their blooming coincides with the emergence of early insect pollinators, which are necessary for most spring wildflowers' life cycles. Kicking off the wildflower parade are hardy species such as Harbinger-of-spring, *Erigenia bulbosa*, Hepatica, *Hepatica nobilis*, and Snow Trillium, *Trillium nivale*. It is not uncommon for these early species to be blanketed by late snowfalls. They lead a colorful cast of wildflowers that lasts through spring. Some, such as the Harbinger-of-spring, are true spring ephemerals – once these species are done flowering, the foliage quickly withers. Others, such as Hepatica or May-apple, have long-lasting leaves that persist through summer.

VIRGINIA BLUEBELLS
PHOTO BY: ©JIM MCCORMAC



WILDFLOWER POLLINATION AND DISPERSAL

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POLLINATORS

Most wildflowers depend upon insect pollinators to physically transport pollen from stamens to a stigma which contains the ovary, thus pollinating the plant. Pollinators that are active in early spring include a wide array of native bees, wasps, flies, and beetles. Many of these insects are generalists that will visit many species of flowers. Others are far more specific in their choice of plants. Insects that can only harvest pollen from one genus – or sometimes one species – of plant are known as oligolectic. An excellent example of an oligolectic pollinator is a tiny mining bee called *Andrena nothoscordi*. It only visits the flowers of False Garlic, *Nothoscordum bivalve*, a threatened species in the onion family known only from limited areas of Adams and Clark counties. Common wildflowers that support oligolectic bees include Spring-beauty, *Claytonia virginica*, trout lilies, *Erythronium* spp., various violets, *Viola* spp., and Wild Geranium, *Geranium maculatum*.

SEED DISPERSAL

A serious challenge for plants is spreading themselves about. They've evolved many strategies for dispersal, from simple to complex. Many species have seeds with airy plumes that are readily windborne, such as the Golden Ragwort described on p. 31 of this booklet. Wind dispersal is known as anemochory. Water dispersal via buoyant seeds is very common, and is termed hydrochory. Many of the species featured in this booklet that grow in damp sites are water-dispersed at least in part. Zoochory refers to seed dispersal by various animals, a very common form of plant migration. Colorful berries might be eaten by birds or small rodents such as chipmunks. The tough seeds within the fleshy fruit pass through the animal's digestive tract and are expelled some distance from the plant from which they were obtained. Even box turtles are known agents of zoochory, as they eat the fruit of May-apple (p. 58). Other types of seeds are sticky and readily adhere to animal fur (or people's clothes). Perhaps the most interesting form of seed dispersal, and one that involves many of the species in this booklet, is myrmecochory, or ant dispersal. Plants such as Bloodroot, Dutchman's-breeches, Hepatica, trout lilies, violets, and Wild Ginger have fleshy appendages called elaiosomes attached to their seeds. Elaiosomes are like steak to ants, and they eagerly harvest such seeds and haul them back to their colonies. Once there, the ants chew off the tasty elaiosomes and abandon the seed, often far from the point of harvest.



DWARF LARKSPUR
PHOTO BY © NINA HARFMANN

VALUE OF NATIVE PLANTS

It is not an understatement to say that native plants make the world go 'round. They are the building blocks of biodiversity. Nearly all of our myriad animals are tightly wedded to native plants, either for food or some part of their reproductive life cycle. For instance, the larvae of butterflies and moths – caterpillars – depend upon native flora as host plants. These are species with which the caterpillar has coevolved an intricate relationship. Many caterpillars can only eat one or a few types of plants, and even those that are more general in their diet can only consume a relatively small number of plant species. Most of Ohio's 2,500+ species of butterfly and moth caterpillars cannot process nonnative plants – they have no evolutionary history with introduced species.

All of our songbirds eat insects spawned from plants, and/or the seeds and fruit of plants. Plants provide nesting material for birds and other animals, as well as shelter. Flowers provide nectar and pollen for myriad pollinating insects. Plants sequester carbon and produce oxygen, and their roots hold streambanks and prevent erosion, thus protecting water quality. As plants die and decompose, they contribute to the production of rich soils. Scores of medicines, other chemical compounds, flavorings and foodstuffs are derived from plants. Plants form the rich botanical tapestries that underpin natural communities: our forests, meadows, prairies, and wetlands. Finally, the intrinsic value of plants contributes greatly to people's enjoyment of the outdoors and nature. It's hard to imagine an environment without plants, especially showy spring wildflowers.

APR - EARLY MAY

BLOOM: FEB MAR APR MAY JUN

8

BLUETS

Houstonia caerulea (Hoo-sto-nee-ah • see-roo-le-ah)
Houstonia = for botanist William Houstoun • *caerulea* = blue

MADDER FAMILY (Rubiaceae). 24 native Ohio species.

DESCRIPTION: Tiny clump-forming winter-annual, or sometimes perennial forming tufts of basal leaves. Sparsely leaved stems rise to six inches, flowers blue with yellow “bull’s-eye” center.

DISTRIBUTION: Primarily eastern two thirds of state; rare or absent from much of western Ohio.

HABITAT: A variety of wooded habitats, often persisting in meadows and other open haunts.

NOTES: Large drifts of Bluets can be visible from afar. Nonetheless, this is a plant that warrants dropping to the ground to better appreciate the nuances of the tiny flowers. The genus name commemorates Scottish botanist William Houstoun (1695-1733), who spent time in the American tropics exploring and collecting plants. There are two flower types: “pins”, with long style and short stamens, and “thrums” with short style and long stamens. Such flowers are called *distylous*.

MID APR - EARLY MAY

BLOOM: FEB MAR **APR MAY** JUN

B

Collinsia verna (Col-in-see-ah • ver-na)
Collinsia = for botanist Zaccheus Collins of Philadelphia • *verna* = of spring

BLUE-EYED MARY

FIGWORT FAMILY (Scrophulariaceae). 40 native Ohio species.

DESCRIPTION: Small annual sometimes forming extensive colonies. Rather spindly, frequently branched from base, to one foot (sometimes taller). Leaves remote, opposite. Whorled inflorescence includes few to many distinctive blue and white flowers.

DISTRIBUTION: Statewide but widely scattered and localized. Recorded in about half of our 88 counties.

HABITAT: Reaches peak abundance on wooded floodplains; also lower slopes of rich woods.

NOTES: One of the most fantastic wildflower spectacles is a floodplain forest carpeted with thousands of this astonishingly beautiful wildflower in full bloom. As an annual, Blue-eyed Mary relies completely on each year's seed stock to recolonize. Seeds lay dormant through summer, and germinate in fall. This species is self-compatible (can pollinate itself), but native bees provide the majority of pollination services.



PHOTO BY: © JIM MCCORMAC

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BLOOM: FEB MAR APR MAY JUN

EARLY APR - LATE MAY

10

COMMON BLUE VIOLET

Viola sororia (Vee-ol-ah • sor-or-ee-ah)

Viola = of uncertain origin • *sororia* = sisterly, as in resembling other species

VIOLET FAMILY (Violaceae). 27 native Ohio species.

DESCRIPTION: Perennial, *acaulescent*, meaning the leaves and stem arise directly from the rootstock (stemless). The shallowly toothed leaves are roundish to triangular in shape. Flowers purplish.

DISTRIBUTION: Very common statewide, easily the most frequent of our *Viola* species.

HABITAT: All manner of habitats, both wooded and open, including highly disturbed situations.

NOTES: This is the violet of yards, regularly mowed meadows and other unnatural habitats, although Common Blue Violet also occurs in natural sites, especially woodlands. It, along with other violet species, play host to caterpillars of various fritillary butterflies. Species lines are sometimes blurry with blue violets, and *V. sororia* has been documented hybridizing with at least four other species in Ohio. An interesting form, *Viola sororia* var. *priceana*, the "Confederate Violet" (pictured inset), turns up occasionally.

MID APR - LATE MAY

BLOOM: FEB MAR **APR MAY** JUN

DWARF CRESTED IRIS

Iris cristata (I-ris • cris-tay-ta)

Iris = from Iris of Greek mythology; the rainbow • *cristata* = crested

IRIS FAMILY (Iridaceae). 10 native Ohio species.

DESCRIPTION: Colony-forming perennial from superficial rhizomes. Leaves flat, swordlike, numerous, and to eight inches. Pale lilac-blue flowers held low. Their sepals with elongate whitish patch and adorned with crest.

DISTRIBUTION: Locally common throughout much of eastern half of state; absent from west.

HABITAT: Rich soil of forested stream terraces and lower slopes.

NOTES: In favored sites, this gorgeous little iris forms extensive groundcover. It has become more frequent in the nursery trade and is an outstanding substitute for traditional nonnative species. Rarely a white-flowered variant is found. Three of the other four natives in the genus *Iris* in Ohio are much taller plants of wetlands. The fourth is Dwarf Iris, *I. verna*, which resembles Dwarf Crested Iris. It is much rarer, being confined to scattered locales in Adams, Lawrence, and Scioto counties, and has deeper purple flowers that lack a crest, and it grows in drier upland sites.



EARLY APR - LATE MAY

BLOOM:

FEB MAR

APR MAY

JUN

12

DWARF LARKSPUR

Delphinium tricorne (Del-fin-ee-um • tri-cor-nee)

Delphinium = from *Delphinus* (dolphin) as flowers resemble dolphins • *tricorne* = three-horned

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Succulent perennial with a few basal leaves, these large and deeply cleft into narrow lobes. Bluish or purple (occasionally white in forma *albiflorum*) flowers in a raceme held well above leaves. Five-petaled flowers have long upwardly projecting spur, and resemble a witch's hat.

DISTRIBUTION: Known from most counties in the southern half of the state, below a line from Butler County north and east to Columbiana County. A few scattered populations north of this area.

HABITAT: Rich humus of woods, often in association with colonies of other spring ephemerals such as Virginia Bluebells (pictured inset).

NOTES: Few spring wildflower scenes can rival a hillside carpeted in Dwarf Larkspur for sheer spectacle. This plant contains two poisonous alkaloids, lycotoxine and tricorinine, which render this species toxic to cattle, and humans. Many early spring insects – native bees, flies, moths, and butterflies – visit for pollen and/or nectar. Most flower visitors cannot successfully pollinate Dwarf Larkspur, though. Successful pollination is accomplished primarily by Ruby-throated Hummingbirds, and queen bumblebees in the genus *Bombus*.



PHOTOS BY: © JIM MCCORMAC

EARLY APR - MID MAY

BLOOM: FEB MAR APR MAY JUN

Polemonium reptans (Pol-ih-mo-nee-um • rep-tans)
Polemonium = of uncertain origin, possibly for Polemon, ancient Greek philosopher
 • *reptans* = creeping; misapplied as plant is erect

JACOB'S LADDER

PHLOX FAMILY (Polemoniaceae). 9 native Ohio species.

DESCRIPTION: Elegant perennial herb to 16 inches, leaves pinnate with up to 17 leaflets. Small corymbs of rich bluish-purple flowers. Quite distinctive among our wildflowers.

DISTRIBUTION: Nearly statewide, but often rather scattered and local.

HABITAT: Rich woods, in greatest abundance on stream terraces and moist lower slopes.

NOTES: Jacob's ladder is sometimes called Greek Valerian, but that name usually refers to *Polemonium vanbruntiae*, a northeastern species that doesn't occur in Ohio. Plants from several extreme south-central counties are differentiated by densely glandular hairs in the inflorescence. These have been described as var. *villosum*. This species supports a highly specialized bee pollinator, *Andrena polemonii*, which only visits plants in this genus.



BLOOM: FEB MAR APR MAY JUN

EARLY APR - EARLY MAY

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Viola rostrata (Vee-ol-ah • ro-stra-ta)
Viola = of uncertain origin • *rostrata* = beaked

LONG-SPURRED VIOLET

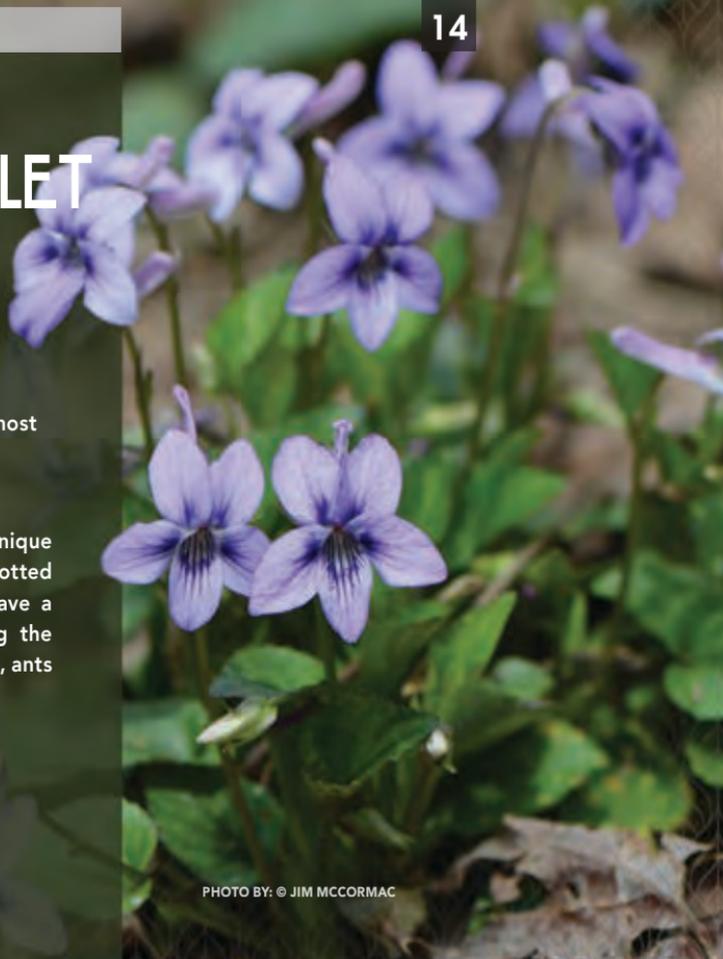
VIOLET FAMILY (Violaceae). 27 native Ohio species.

DESCRIPTION: Another of the caulescent, or leafy-stemmed, violets. Roundish leaf blades are subtended by sharp, prominently toothed stipules. A conspicuous spur extends from the pale lilac flower.

DISTRIBUTION: Common in suitable habitats nearly statewide, most frequent in southern and eastern Ohio.

HABITAT: Rich woodlands, most commonly in moist soils.

NOTES: The pale lilac flower color of Long-spurred Violet is unique among Ohio species, and with familiarity this species can be spotted from afar just by that character. While a few other violets have a prominent spur on the flower, none come close to matching the elongate protuberance of this species. As with most other violets, ants are the primary seed dispersers.



LATE APR - MID MAY

BLOOM: FEB MAR APR MAY JUN

MIAMI-MIST

Phacelia purshii (Fa-see-le-ah • per-she-eye)
Phacelia = from Greek "phacelos" (fascicle) referring to flower arrangement • *purshii* = for discoverer Frederick Traugott Pursh

WATERLEAF FAMILY (Hydrophyllaceae). 8 native Ohio species.

DESCRIPTION: Annual, sometimes biennial, that often forms colonies. Somewhat leafy with many-lobed alternate leaves. Distinctive flowers are pale blue with whitish center, with five heavily fringed lobes.

DISTRIBUTION: Scattered but local throughout most of state, scarce or absent in northwestern counties.

HABITAT: Low-lying damp woods, floodplains, stream terraces, etc.

NOTES: Three other *Phacelia* species occur in Ohio, but all are rare and highly localized. This is the only one likely to be encountered. This plant's namesake, Frederick Pursh, was a German botanist who explored widely in eastern North America. Several other plant species bear his name. There are almost 170 species in this genus in North America, nearly all of them found in the west.



PHOTO BY: © JIM MCCORMAC

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BLOOM: FEB MAR **APR MAY** JUN

MID APR - EARLY MAY

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VIOLET WOOD-SORREL

Oxalis violacea (Ox-al-iss • vi-ol-a-see-ah)
Oxalis = from Greek *oxys*, meaning sour • *violacea* = violet

WOOD-SORREL FAMILY (Oxalidaceae). 5 native Ohio species.

DESCRIPTION: Delicate perennial with showy purple-violet flowers in small umbel, arising from bulb and spreading in part by runners. Leaves consist of three heart-shaped leaflets which are purplish beneath. Occasional white-flowered forms occur, which are known as forma *albida*.

DISTRIBUTION: Common in suitable habitats nearly statewide, most frequent in southern and eastern Ohio.

HABITAT: A variety of wooded habitats, and occasionally open habitats such as meadows and prairies.

NOTES: Members of this genus are sometimes known as "sour-grass" due to the taste of the foliage. A variety of small native bees provide pollination services. This is a small-statured but extremely showy wildflower that often forms small colonies. The caterpillars of one of the "midget" group of moths, the Wedgling, *Galgula partita*, feed upon the foliage of this species and others in the genus *Oxalis*.



PHOTO BY: © NINA HARFMANN

BLOOM: FEB MAR **APR MAY** JUN

VIRGINIA BLUEBELLS

Mertensia virginica (Mer-ten-see-ah • ver-jin-ih-ka)
Mertensia = for German botanist Franz Karl Mertens • *virginica* = of Virginia

BORAGE FAMILY (Boraginaceae). 11 native Ohio species.

DESCRIPTION: Perennial to 2 ½ feet, often forming sizeable colonies. After blooming, plants quickly wither away. Large entire ovate leaves reduced in size upwards, showy cymes of bright blue flowers, these pink when young.

DISTRIBUTION: Statewide, but scarce or absent in some northwestern counties.

HABITAT: Low-lying damp woods, floodplains, stream terraces, etc.

NOTES: Virginia Bluebells ranks high among our showiest and most coveted spring wildflowers. In optimal habitats, enormous colonies can form. Rarely, a white-flowered form is found; this has been described as forma *berdii*. This plant is dependent upon long-tongued bees, especially bumblebees, for pollination services. Various butterflies, moths, and even Ruby-throated Hummingbirds will also visit flowers.



MID APR - EARLY MAY

BLOOM: FEB MAR APR MAY JUN

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VIRGINIA WATERLEAF

Hydrophyllum virginianum (Hy-dro-fil-um • ver-jin-ee-ay-num)
Hydrophyllum = from Greek "hydro" (water) and "phylon" (leaf) • *virginianum* = of Virginia

WATERLEAF FAMILY (Hydrophyllaceae). 8 native Ohio species.

DESCRIPTION: Perennial, often forms colonies, leaves pinnate with up to seven lobes, these toothed and sometimes incised. Small clusters of flowers on long peduncle arising from base of stem leaves. Flower color varies from pale pink to deep purple; occasionally white.

DISTRIBUTION: Locally common in most of state, rare or absent in many Ohio River counties.

HABITAT: Low-lying damp woods, floodplains, stream terraces, etc.

NOTES: Four species of waterleaf occur in Ohio, and all are fairly common. Only one other has pinnate leaves, the Large-leaved Waterleaf, *H. macrophyllum*. It is much hairier, with broader, coarser leaf segments and off-white flowers. The other two species have palmately lobed leaves that are somewhat circular in outline and suggest the appearance of a maple leaf. A small bee, *Andrena geranii*, is a specialist pollinator of *Hydrophyllum* species.



MID APR - EARLY MAY

BLOOM: FEB MAR APR MAY JUN

WILD HYACINTH

Camassia scilloides (Ka-mass-ee-ah • skil-oh-eye-dees)
Camassia = derived from American Indian name, "quamash" • *scilloides* = resembles *Scilla*

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Perennial from bulb, often colonial, long linear leaves, conspicuous terminal raceme of numerous pale blue flowers. Plants to two feet in height.

DISTRIBUTION: Statewide but often scattered and local, rare or absent in northwest corner of state.

HABITAT: Rich soil of wooded floodplains, stream terraces, lower slopes, and sometimes open meadows and prairies.

NOTES: Wild Hyacinth is one of our most striking spring wildflowers, but its beauty is fleeting. This is a true ephemeral, and quickly wilts following flowering. The flowers lure a wide array of native bees, wasps, flies and other pollinators. The bulbs are edible, and were prepared in a variety of ways by American Indians. As with other species in the lily family, White-tailed Deer are fond of this plant.



PHOTO BY: © NINA HARFMANN

EARLY APR - JUN

BLOOM:

FEB MAR

APR MAY JUN

JUL

20

FIRE-PINK

Silene virginica (Sy-lee-nee • ver-jin-ih-ka)
Silene = from *Silenus*, character in Greek mythology • *virginica* = of Virginia

PINK FAMILY (Caryophyllaceae). 18 native Ohio species.

DESCRIPTION: Brilliant scarlet five-petaled flowers, petals deeply cleft at tip. Perennial; weak somewhat reclining stems bear opposite leaves, one-two feet in height.

DISTRIBUTION: Statewide, although usually small scattered populations.

HABITAT: Forests, ranging from well-drained upland sites to mesic bottomlands.

NOTES: Fire-pink seldom fails to stir a reaction, as its brilliant red flowers are often the most colorful flower in its haunts. As with other bright red species in the genus *Silene*, hummingbirds are important pollinators. The calyx and upper portions of the stem are covered with sticky glandular hairs. These discourage ants and other flightless insects from climbing to the flowers and taking nectar.



PHOTO BY: © NINA HARFMANN

BLOOM: FEB MAR **APR MAY** JUN

LATE APR - MID MAY

PINK LADY'S-SLIPPER

Cypripedium acaule (Sip-rih-ped-ee-um • a-col-ee)
Cypripedium = from Greek "Cypris" (for Aphrodite) and *pedilon* (sandal) • *acaule* = stemless

ORCHID FAMILY (Orchidaceae). 46 native Ohio species.

DESCRIPTION: Unmistakable; a pair of thick prominently veined leaves arises from rootstock, these frame a single flowering stalk capped with a pouchlike pink flower streaked with darker purple veins.

DISTRIBUTION: Widely scattered and local in eastern half of state, probably most frequent in southeast.

HABITAT: Dry acid soils of upland forests. Rarely in bogs.

NOTES: So fantastic is the appearance of a Pink Lady's-slipper that it hardly looks real. The large pinkish flower contains a slit that enables bumblebees to enter; these large insects are the primary pollinators. Charles Darwin wrote about bumblebee/lady's-slipper pollination in his seminal work *On the Origin of Species*, published in 1859. Rarely, white-flowered forms occur; these have been described as forma *albiflorum*.



PHOTO BY: © JIM MCCORMAC

PURPLE CRESS

Cardamine douglassii (Car-dam-in-ee • dug-las-ee-eye)
Cardamine = an ancient Greek name for a cress • *douglassii* = for David Bates Douglass, plant's discoverer

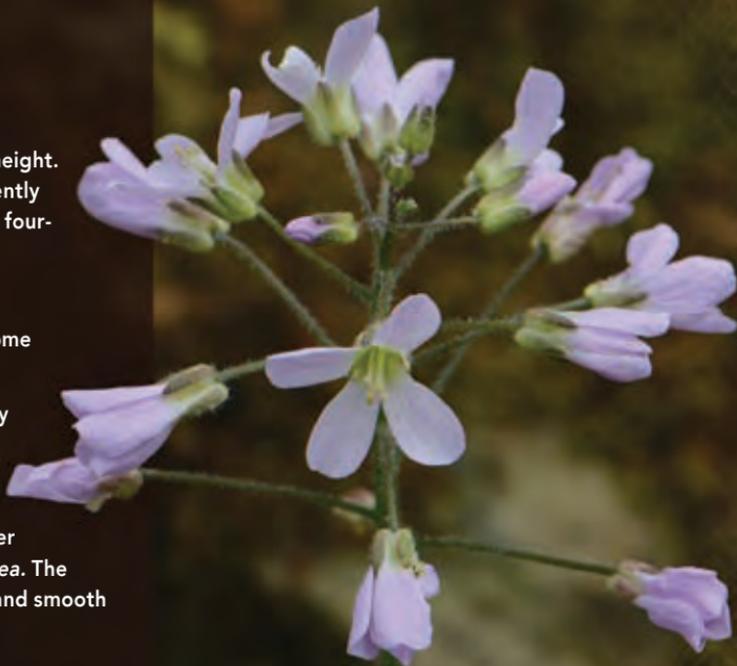
MUSTARD FAMILY (Brassicaceae). 32 native Ohio species.

DESCRIPTION: Perennial arising from tubers, to 16 inches in height. Three cauline leaves, each deeply divided and usually prominently toothed. Conspicuous white (sometimes suffused with purple) four-petaled flowers in loose terminal raceme.

DISTRIBUTION: Common statewide, in every county.

HABITAT: At peak abundance in rich woods, but tolerant of some disturbance.

NOTES: This showy little wildflower was discovered by military engineer and mathematician David Douglass . He served as president of Kenyon College in Gambier, Ohio from 1841-1845. Purple Cress's flower color can be almost white, the petals mildly suffused with purple. Such plants suggest another spring-blooming mustard, Spring Cress, *Cardamine rhomboidea*. The latter species prefers wetter habitats, has pure white petals, and smooth stem (Purple Cress is somewhat hairy).



LATE APR - MAY

BLOOM: FEB MAR **APR MAY** JUN

SHOWY ORCHIS

Galearis spectabilis (Gal-ee-ar-is • spek-tab-il-is)
Galearis = from Greek Galea; "helmet-like" • spectabilis = showy

ORCHID FAMILY (Orchidaceae). 46 native Ohio species.

DESCRIPTION: A pair of fleshy lustrous leaves arises from thick perennial rootstock; attending a short stem capped with a raceme of up to nine flowers. Flower with prominent white lip and pink helmetlike upper petals.

DISTRIBUTION: Occurs throughout much of state but very localized; largely absent from northwest counties.

HABITAT: Rich soil of forests, often on steep slopes or eroding banks.

NOTES: While truly extraordinary in appearance, Showy Orchis can easily be overlooked due to its low stature. It is one of the few spring "wildflower" orchids; the majority of our 46 native species bloom in summer and fall. Various long-tongued insects provide pollination, especially bumblebees. This species provides a nectar reward to pollinators, unlike many orchids which rely on visual or aromatic trickery to lure insects, but do not offer nectar.



BLOOM:

FEB

MAR APR MAY

JUN

24

S

PRING-BEAUTY

Claytonia virginica (Clay-to-nee-ah • ver-jin-ih-ka)

Claytonia = in honor of John Clayton, early N. American botanist • *virginica* = of Virginia

PURSLANE FAMILY (Portulacaceae). 2 native Ohio species.

DESCRIPTION: Small, delicate perennial from deeply buried tuber from which two or more stems arise. Leaves two, opposite, straplike and somewhat succulent. Flowers whitish to more commonly tinged heavily with pink due to prominent colored nectar guides on petals.

DISTRIBUTION: Common statewide, one of our most frequent spring wildflowers.

HABITAT: All manner of wooded sites, often long-persistent in pastures and lawns.

NOTES: The flowers of this species are an important early spring source of nectar for pollinating insects, mostly small native bees and some flies. A species of mining bee, *Andrena erigeniae*, is a specialist on Spring-beauty. A closely related species also occurs in Ohio, the Carolina Spring-beauty, *C. caroliniana*. It differs in its much broader leaves, and is limited to a few counties in extreme northeast Ohio.



PHOTO BY: © NINA HARFMANN

EARLY APR - MID MAY

BLOOM: FEB MAR APR MAY JUN

T ROAD-SHADE

Trillium sessile (Tril-ee-um • ses-il-ee)
Trillium = derivation of "tres"; three • *sessile* = sessile

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Perennial, low-statured trillium, often only 6-8 inches high. Whorl of three leaves at summit, these sessile. Maroon (rarely pale yellow) flowers with petals stiffly erect.

DISTRIBUTION: Statewide, undoubtedly in every county.

HABITAT: In all manner of wooded habitats, even fairly disturbed situations.

NOTES: Toad-shade is quite distinct among Ohio trilliums with its strange upright petals, small stature, and highly mottled leaves. The only species that suggests it is the much larger Prairie Wakerobin, *T. recurvatum*, which is rare and only known from Auglaize, Clermont, and Hamilton counties. Occasional yellow-flowered variants suggest the southern Yellow Wakerobin, *T. luteum*, but this species gets no closer to Ohio than central Kentucky.



PHOTO BY: © JIM MCCORMAC

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BLOOM: FEB MAR APR MAY JUN

MID APR - MID MAY

26

WILD GERANIUM

Geranium maculatum (Jer-a-nee-um • mak-u-late-um)
Geranium = from Greek *geranos*; "a crane" • *maculatum* = mottled

GERANIUM FAMILY (Geraniaceae). 4 native Ohio species.

DESCRIPTION: Perennial to two feet, a pair of large deeply five-cleft leaves arise from upper portion of stem. Flowers five-petaled, pink to rose-purple.

DISTRIBUTION: One of our more common spring wildflowers, known from all counties.

HABITAT: Rich soil of woodlands.

NOTES: Geraniums are sometimes known as "cranes-bill", which is the definition of the generic name *Geranium*. This odd name stems from the appearance of the fruit, with its long beak suggesting that of a crane. Wild Geranium is an important energy source for various spring-flying native bees, wasps, beetles, and other insects. An oligolectic mining bee, *Andrena distans*, specializes on this species.



EARLY APR - LATE MAY

BLOOM: FEB MAR APR MAY JUN

WILD BLUE PHLOX

Phlox divaricata (Flox • di-var-ih-kay-ta)

Phlox = old Greek, meaning "flame" • *divaricata* = divergent, from branching pattern of inflorescence

PHLOX FAMILY (Polemoniaceae). 9 native Ohio species.

DESCRIPTION: Rather spindly perennial to nearly two feet in height; stem with widely spaced opposite leaves, these oblong-lanceolate with smooth margins. Showy blue-purple (rarely white) flowers few to many in fairly compact cymes.

DISTRIBUTION: Statewide, in every county.

HABITAT: A variety of woodlands, including cut-over and young regenerating sites.

NOTES: One of our showiest and most beloved wildflowers. The flowers are normally deep blue tinged with purple, but occasionally a white variant is encountered; the so-called forma *albiflora*. The flower's very long corolla tube, with nectaries deep in the base, selects for pollinators with very long tongues. Swallowtail butterflies are especially attracted to the flowers. A vibrant patch of phlox will often entice a constant procession of butterflies to visit.



PHOTO BY: ©JIM MCCORMAC
INSET PHOTO BY: ©NINA HARFMANN

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WILD GINGER

Asarum canadense (A-sar-um • can-ah-den-see)
Asarum = from ancient Greek word *asaron* (meaning obscure) • *canadense* = of Canada

BIRTHWORT FAMILY (Aristolochiaceae). 2 native Ohio species.

DESCRIPTION: Low-growing perennial from a creeping rhizome, petals and calyces are conspicuously hairy. Leaves broadly kidney-shaped (reniform), often paired. Flowers brownish-maroon, fleshy, with long attenuate lobes, arising from rootstock and often lying on ground.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Rich woods and shaded rocky outcrops, often in association with a diverse wildflower flora.

NOTES: The brownish flowers are often said to be fly-pollinated. This theory seems logical, as fleshy non-showy flowers sometimes have evolved to lure carrion-seeking insects. However, evidence demonstrates convincingly that Wild Ginger flowers are mostly self-pollinated. Unlike many carrion-mimicking flowers, those of Wild Ginger emit no detectable odor. As the flower matures, the filaments elongate and bring the pollen into contact with stigmas. The pipevine swallowtail butterfly, *Battus philenor*, is said to use this species as a host plant, but it is probably far more dependent upon the closely related Virginia Snakeroot, *Aristolochia serpentaria*. Early settlers and Native Americans used the roots as a spice, hence the source of the common name.



PHOTOS BY: ©JIM MCCORMAC

LATE APR - MAY

BLOOM: FEB MAR **APR MAY** JUN

WOOD-BETONY

Pedicularis canadensis (Ped-ih-kew-lar-is • can-ih-dens-is)
Pedicularis = a louse • *verna* = of Canada

FIGWORT FAMILY (Scrophulariaceae). 40 native Ohio species.

DESCRIPTION: Perennial to a foot (sometimes more) in height, deeply divided alternate leaves are somewhat fernlike. Densely congested terminal cluster of reddish-maroon (sometimes creamy-yellow) flowers.

DISTRIBUTION: Statewide, but scarce or absent in some western counties.

HABITAT: A diversity of wooded habitats.

NOTES: This distinctive wildflower usually has reddish flowers; the scarcer yellowish-flowered form is arguably even handsomer (pictured inset). Another common name is Lousewort. This odd moniker stems from an Old World species, *Pedicularis palustris*. It was once thought that cattle that grazed in pastures populated by this plant would become infested with lice. Swamp Lousewort, *P. lanceolata*, also occurs in Ohio. It is much rarer, confined to high-quality wetlands, and blooms in fall.



PHOTOS BY: © JIM MCCORMAC

D*Viola pubescens* (Vee-ol-ah • pew-bes-ens) *Viola* = of uncertain origin • *pubescens* = downy

Downy Yellow Violet

VIOLET FAMILY (Violaceae). 27 native Ohio species.

DESCRIPTION: Broadly triangular leaves with toothed margins attached to aerial stem (caulescent). Bright lemon-yellow flowers with deep maroon nectar guides on lower petal.

DISTRIBUTION: Very common throughout the state.

HABITAT: All manner of wooded habitats, including highly disturbed situations.

NOTES: Downy Yellow Violet is probably the second most common violet in the state, eclipsed only by Common Blue Violet, *V. sororia*. Violets can be difficult – sometimes maddening – to identify. However, only four of our species are yellow, and in most regions of the state, this is the only yellow species. Petaliferous violet flowers are usually conspicuous and showy. Less so are the apetalous cleistogamous flowers sometimes formed long after spring flowering. Ants disperse the seeds of this species and many other violets.



LATE MAR - MAY

BLOOM: FEB MAR APR MAY JUN

Packera aurea (Pak-er-ah • ar-ee-ah)
Packera = honors American botanist John G. Packer • *aurea* = golden

GOLDEN RAGWORT

SUNFLOWER FAMILY (Asteraceae). About 190 native Ohio species.

DESCRIPTION: Perennial, typically forms colonies via creeping shoots, basal leaves often heavily purplish on undersides. Stems to three feet, leaves deeply pinnatifid, lemon-yellow flowers in flat-topped clusters.

DISTRIBUTION: Statewide, although rare or absent from heavily agricultural areas of western Ohio.

HABITAT: Rich moist soil of shaded woodlands, often conspicuous along roadsides.

NOTES: The bright yellow flowers are a classic example of the "composite" family: conspicuous ray flowers surrounding a button of tightly packed disk flowers. Another species, Round-leaved Ragwort, *P. obovata*, is very similar but has much rounder basal leaves and grows in well-drained upland soils. Many spring pollinating insects use this species, and the caterpillars of the Le Conte's Haploa moth, *Haploa lecontei*, feed on the emerging leaves in early spring.

YELLOW WILDFLOWERS

PHOTOS BY: © JIM MCCORMAC

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MID APR - LATE MAY

BLOOM: FEB MAR **APR MAY** JUN

32

Uvularia grandiflora (U-vew-lar-ee-ah • gran-dih-flor-ah)
Uvularia = [flowers] hanging like an uvula • *grandiflora* = large-flowered

LARGE-FLOWERED BELLWORT

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Small perennial herb from forking rhizome, to 18 inches in height. Oblong leaves are perfoliate, mostly clustered at summit, drooping. Pale yellow flowers with twisting tepals dangle, often partially concealed by leaves.

DISTRIBUTION: Statewide, probably in all counties but peaks in extensive wooded habitats.

HABITAT: Rich wooded habitats, favors calcareous soils.

NOTES: There are two other species of bellworts in Ohio, and both are locally common. Perfoliate Bellwort, *U. perfoliata*, is smaller with inner tepals encrusted with orange pubescence, and is largely confined to the eastern half of Ohio. Sessile-leaved Bellwort, *U. sessilifolia*, is mostly in northeast and southern Ohio, and has sessile, not perfoliate, leaves. Small native bees provide pollination, and ants disperse the seeds.

YELLOW WILDFLOWERS

PHOTO BY: @MIKE TRUCHON



EARLY APR - MID MAY
PEAKING IN MID APR

BLOOM: FEB MAR **APR MAY** JUN

MARSH-MARIGOLD

Caltha palustris (Cal-tha • pa-lus-tris)
Caltha = from Latin word *calathos*; a cup • *palustris* = of swamps

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Colonial perennial, large glossy dark-green kidney-shaped leaves held erect on succulent stems, up to a foot or so in height. Shiny yellow sepals form showy flowers with thick brush of stamens.

DISTRIBUTION: Most frequent in northeast Ohio, with widely scattered populations throughout the western half of the state. Scarce or absent in much of the unglaciated hill country.

HABITAT: Waterlogged soils of swampy woods, but not usually in standing water more than a few inches deep. Occasionally persists in sunny sites that were recently cut over.

NOTES: As with some other buttercups, the showy yellow flowers are comprised of sepals, or modified leaves – not true petals. Native bees and hoverflies in the family Syrphidae are primary pollinators. Ultraviolet pigments infused in the flowers' sepals are not visible to the human eye, but are conspicuous to certain insects. These nectar guides lure pollinators. Marsh-marigold flowers are also attractive to butterflies such as hairstreaks. Few wildflower displays rival an early spring woods carpeted by hundreds or thousands of these plants.



PHOTO BY: © JIM MCCORMAC

SWAMP BUTTERCUP

Ranunculus hispidus (Ra-nun-cul-us • his-pih-dus)

Ranunculus = Latin for "little frog", in reference to the wetlands where many species grow • *hispidus* = stiffly hairy

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Large, somewhat coarse perennial herbs developing three to five-parted leaves. Grows to two feet, often loosely colonial. Flowers conspicuous, glossy yellow. Foliage and stems hairy to nearly smooth.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Varies from seasonally inundated wooded wetlands to fairly dry upland forests, but usually in rich mesic soils.

NOTES: Variable in appearance and habitat. Some forms grow in very wet soils of vernal pools and floodplains, while others occur in well-drained woodlands. At one time, some forms were separated as a separate species, *Ranunculus septentrionalis*. Currently *Ranunculus hispidus* is treated as consisting of three varieties, all of which occur in Ohio: var. *caricetorum* and *nitidus* (normally in wet soils), and var. *hispidus* (well-drained soils). *Ranunculus* is by far the largest genus in the buttercup family in Ohio, with 12 native species.



MID APR - LATE MAY

BLOOM: FEB MAR APR MAY JUN

TWO-FLOWERED CYNTHIA

Krigia biflora (Kre-je-ah • bi-flor-ah)

Krigia = for German physician David Krieg, an early collector • *biflora* = two-flowered

SUNFLOWER FAMILY (Asteraceae). About 190 native Ohio species.

DESCRIPTION: Rather spindly perennial to 2 feet, stem mostly naked, a few alternate clasping leaves. Flowers often paired, bright yellow, ligulate (ray flowers only, no differentiated central disk flowers).

DISTRIBUTION: Nearly statewide, but scattered and local in much of western Ohio.

HABITAT: Well-drained, often dry soil of woodlands, especially sunnier edge habitats such as partially shaded roadbanks.

NOTES: The sunflower family, to which this species belongs, is perhaps the world's largest flowering plant family (orchids rival it), and the largest plant family in Ohio by far, if one counts nonnatives. Plants in the Asteraceae are mostly summer and fall bloomers, so sorting out the relatively few spring species is not too tough. As with many species in this family, the seeds have a crown of hairs which catch the wind and aid in seed dispersal.



PHOTO BY: © NINA HARFMANN

WOOD POPPY

Stylophorum diphyllum (Sty-lo-for-um • di-fil-um)
Stylophorum = style bearing; refers to long style • *diphyllum* = two leaved

POPPY FAMILY (Papaveraceae). 2 native Ohio species.

DESCRIPTION: Perennial with large, exceptionally showy four-petaled yellow flowers. The flimsy leaves are deeply pinnatifid, and each division is shallowly lobed. Fruit is prominently bristly-hairy.

DISTRIBUTION: Scattered and irregularly distributed, mostly in southern and southeastern regions.

HABITAT: Rich woods, especially on moist slopes.

NOTES: There are only two species of native poppy in Ohio, this and Bloodroot. Wood Poppy sometimes forms large colonies, and a slope drenched in yellow courtesy of its showy blooms is a sight not soon forgotten. A similar nonnative species is Celandine, *Chelidonium majus*. It differs in having smaller flowers and smooth fruit. The infamous Opium Poppy, *Papaver somniferum*, belongs to this family.



LATE APR - MID MAY

BLOOM: FEB MAR **APR MAY** JUN

Y YELLOW MANDARIN

Prosartes lanuginosa (Pro-sar-tees • lan-u-jin-oh-sa)
Prosartes = Greek for "fastened", apparently referring to fruit attachment • *lanuginosa* = woolly

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Low perennial herb with erect stems that are branched above. Leaves prominently veined, alternate, sessile. Pale greenish-yellow flowers six-parted, dangling under leaves.

DISTRIBUTION: Eastern half of state.

HABITAT: Moist soil of forests, lower terraces and mid-slopes.

NOTES: Yellow Mandarin is easily passed by, and is probably more frequent than is suspected. The inconspicuous flowers are quite showy upon inspection, but droop under the leaves and can be largely hidden from view. A very similar species, the Spotted Mandarin (pictured inset), *P. maculata*, is much rarer and known only from Adams and Scioto counties. It differs in having flowers copiously spotted with purple.



PHOTO BY: ©NINA HARFMANN
INSET PHOTO BY: ©JIM MCCORMAC

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YELLOW TROUT LILY

Erythronium americanum (Er-ih-thro-nee-um • ah-mer-ih-kan-um)
Erythronium = From Greek erythros, red • *americanum* = American

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Perennial from bulb, often colonial from shoots. Essentially stemless, a pair of brown-spotted green leaves arising from bulb, lemon-yellow flowers with six strongly recurved tepals, fruit thick capsule.

DISTRIBUTION: Statewide, scarcest in northwestern counties.

HABITAT: Rich soil in a variety of wooded habitats.

NOTES: This gorgeous lily goes by many names, including dogtooth violet, fawn lily, and yellow adder's-tongue. Colonies can be extensive, and are comprised of many young non-flowering plants. The "petals" are really not per se, they are essentially a combination of petal and sepal. A very rare lookalike is the Goldenstar, *E. rostratum*. This endangered plant is known from only two locales in southernmost Ohio. A white-flowered species, White Trout Lily, *E. albidum*, is common statewide.



MID MAR - MID APR

BLOOM:

FEB

MAR APR

MAY JUN

B

Sanguinaria canadensis (San-gwin-ar-ee-ah • can-ah-den-sis)
Sanguinaria = blood, or bleeding • *canadensis* = of Canada

BLOODROOT

POPPY FAMILY (Papaveraceae). 2 native Ohio species.

DESCRIPTION: Large showy flower with numerous white petals; ephemeral, petals often falling within a day. Single leaf enwraps stem at flowering time, eventually expands into a large rounded leaf with lobed margins and deep basal sinus.

DISTRIBUTION: Locally common statewide in appropriate habitat.

HABITAT: Rich woods, sometimes persists in cut-over sites.

NOTES: The common name is derived from the acrid orange-red juices within the roots. This compound has been used as a dye. Many medicinal properties have been attributed to Bloodroot, including treatments for asthma, fevers, lung conditions, and laryngitis. An alkaloid from the plant, sanguinarine, is used commercially in mouthwash and toothpaste. It helps combat plaque.



BLUE COHOSH

Caulophyllum thalictroides (Col-oh-fil-um • tha-lik-tro-i-dees)
Caulophyllum = stem leaf • *thalictroides* = resembling *Thalictrum*

BARBERRY FAMILY (Berberidaceae). 4 native Ohio species.

DESCRIPTION: Smooth perennial herb up to three feet. Several two to three-lobed leaflets make up the delicate leaves. Small flowers appear while leaves not yet fully expanded, in small panicles held above leaves. Flowers with six obvious sepals, these greenish-yellow and often tinged with maroon. Petals inconspicuous and glandlike.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Rich well-shaded woodlands.

NOTES: The fruit are blue and berry-like (pictured inset); one might argue this plant is handsomer in fruit than in flower. Many medicinal uses have been attributed to cohosh, including treatment of fevers, lung ailments, rheumatism, and more. The similar species Giant Cohosh, *C. gigantea*, differs in having purplish flowers which bloom when the leaves are still tightly rolled, and styles about twice as long as Blue Cohosh.



BLOOM:

FEB

MAR

APR

MAY

JUN

CANADA MAYFLOWER

Maianthemum canadense (May-an-the-mum • can-ah-dens-ee)
Maianthemum = may flower • canadense = Canadian

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Perennial forming small colonies, plants to six inches in height. Oblong shiny leaves are topped by small cluster of tiny white flowers.

DISTRIBUTION: Most common in northern and eastern Ohio, scattered populations elsewhere.

HABITAT: Well drained sparsely vegetated microhabitats, often on hummocks, in cool woods.

NOTES: This is a species that is abundant throughout northern woods and boreal forest; it nears the southern limits of its range in Ohio. Isolated populations occur in relict boreal habitats such as Clifton Gorge in Greene County. Plants spread in part by rhizomes and the carpets of small glossy leaves are distinctive. A close relative, Three-leaved Solomon's-seal, *M. trifolium*, was once known from four northern counties, but has not been seen in over a century.

C COMMON ALUMROOT

Heuchera americana (Hoo-ker-ah • ah-mer-ih-kan-ah)
Heuchera = for German botanist Johann Heinrich Heucher • *americana* = American

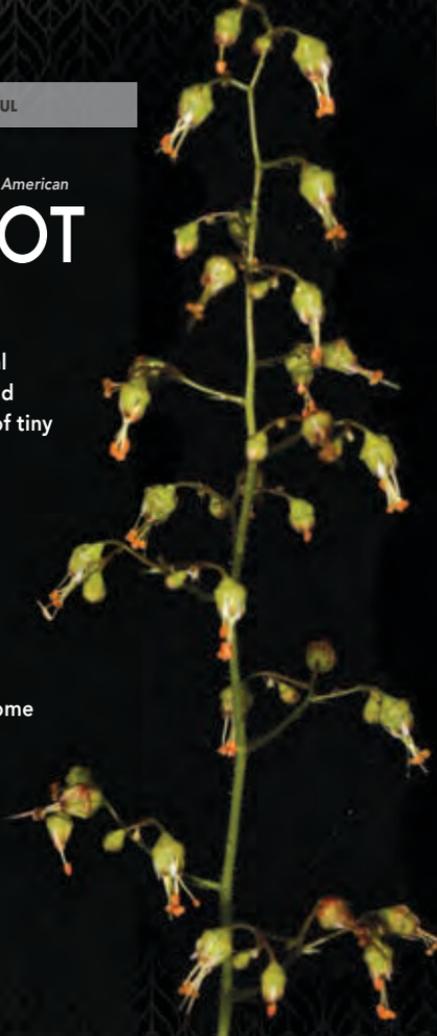
SAXIFRAGE FAMILY (Saxifragaceae). 12 native Ohio species.

DESCRIPTION: Perennial with few to many large, roundish basal leaves, these deeply cordate at base and with rounded lobes and teeth. Flowering stems to nearly three feet, cylindrical panicle of tiny whitish-green flowers, sometimes suffused with purple.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Rich well-shaded woodlands, often in rocky soil.

NOTES: Three other species of alumroot occur in Ohio, all of which are rare and localized. Common Alumroot is the only *Heuchera* likely to be encountered. This species is pollinated primarily by small native bees. One species, *Colletes aestivalis* ("Alumroot Bee") specializes on *Heuchera*. This species has become popular in the nursery industry, and there are many cultivars.



EARLY MAR - APR

BLOOM: FEB MAR APR MAY JUN

CUT-LEAVED TOOTHWORT

Cardamine concatenata (Car-dam-in-ee • con-cat-en-ate-ah)
Cardamine = an ancient Greek name for a cress • *concatenata* = linked, or chainlike, referring to tubers

MUSTARD FAMILY (Brassicaceae). 32 native Ohio species.

DESCRIPTION: Perennial arising from tubers, to 16 inches in height. Three cauline leaves, each deeply divided and usually prominently toothed. Conspicuous white (sometimes suffused with purple) four-petaled flowers in loose terminal raceme.

DISTRIBUTION: Common statewide, in every county.

HABITAT: At peak abundance in rich woods, but tolerant of some disturbance.

NOTES: Cut-leaved Toothwort is an important early season nectar source for native pollinators. It is also a food plant for caterpillars of the Falcate Orangetip and West Virginia White butterflies. The spread of an invasive nonnative mustard, Garlic Mustard, *Alliaria petiolata*, has displaced lots of toothworts and other native wildflowers. Older guides may list this species under an old synonym, *Dentaria laciniata*. There are three other toothwort species in Ohio.



DROOPING TRILLIUM

Trillium flexipes (Tril-ee-um • flex-ih-pes)
 Trillium = derivation of "tres"; three • flexipes = bent foot-stalk

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Robust perennial to 16 inches, whorl of three large sessile leaves at summit of stem. Flowers held on recurved peduncle parallel to or under the leaves, petals normally cream-white; occasionally maroon-colored.

DISTRIBUTION: Statewide, but tends to be widely scattered and quite localized.

HABITAT: Rich undisturbed woods, often in calcareous soils.

NOTES: As the flowers often dangle below the huge leaves, they can easily be missed. While most of our plants have typical creamy-white flowers, maroon forms occur on occasion, sometimes with white forms. Reddish-flowered plants have been described as forma *Walpolei*. Eight species of Trillium have been recorded in Ohio. Four species are fairly common, three are rare and local, and one, Nodding Trillium, *T. cernuum*, has not been found since 1879.



LATE APR - MAY

BLOOM:

FEB

MAR

APR

MAY

JUN

DWARF GINSENG

Panax trifolius (Pan-ax • tri-fol-ee-us)

Panax = all-healing, a reputed panacea for many ills • *trifolius* = three-leaved

GINSENG FAMILY (Araliaceae). 6 native Ohio species.

DESCRIPTION: Small perennial, seldom over 6 inches in height. A whorl of three leaves, each comprised of 3-5 leaflets, arises near summit of stem. A tightly congested umbel of tiny white flowers on a long pedicel is held well above the leaves.

DISTRIBUTION: Uncommon and local, northern third of the state, with disjunct populations in Hocking County.

HABITAT: Moist well-shaded woodlands.

NOTES: This species' larger relative, American Ginseng, *P. quinquefolius* (pictured inset), is far better known. It is widely believed to be endowed with many cure-all properties, and is avidly sought by diggers. The comparatively tiny Dwarf Ginseng is not now considered valuable medicinally, but American Indians used the plant to treat a variety of ills. Its roots are edible and reportedly tasty.



PHOTO BY: ©NINA HARFMANN
INSET PHOTO BY: ©JIM MCCORMAC

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DUTCHMAN'S-BREECHES

Dicentra cucullaria (Di-sen-tra • koo-kewl-lar-ee-ah)
Dicentra = twice spurred • *cucullaria* = hood-like

FUMITORY FAMILY (Fumariaceae). 5 native Ohio species.

DESCRIPTION: Delicate low perennial with highly dissected leaves arising from clusters of tubers coalesced into a bulb. Distinctive white flowers dangle from pendant pedicels in elongate racemes.

DISTRIBUTION: Common statewide.

HABITAT: A variety of wooded habitats, but usually in moist to fairly well-drained soils.

NOTES: A similar species, somewhat less common, is Squirrel-corn, *D. canadensis*. It differs in its corolla, which is heart-shaped at the base rather than two-spurred, and somewhat more finely dissected leaves. Dutchman's-breeches is one of the most recognized classic spring ephemeral wildflowers. Bumblebees, especially *Bombus bimaculatus*, are the chief pollinators. Ants disperse the seeds.



MID APR - EARLY MAY

BLOOM: FEB MAR **APR** MAY JUN

EARLY MEADOW-RUE

Thalictrum dioicum (Tha-lik-trum • di-oh-i-kum)

Thalictrum = from the Greek thaliktron, "to bloom" • *dioicum* = dioecious

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Perennial herb up to two feet. Delicate leaves on long petioles, partially expanded at flowering time, normally with three rounded lobes. Spindly, dangling "flowers" consist of stringy greenish anthers and filaments subtended by four-five whitish sepals.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Partially shaded woods and thickets.

NOTES: The specific epithet, *dioicum*, refers to the dioecious nature of this species: male and female flowers are on separate plants. Male flowers appear more yellow due to the color of the drooping anthers, while female flowers are less robust and purplish as that's the color of the pistils. Early Meadow-rue is the first of Ohio's five species of *Thalictrum* to bloom. Plants are wind pollinated. A showy moth caterpillar, the Canadian owlet, *Calyptra canadensis*, feeds on the foliage.



F FALSE SOLOMON'S-SEAL

Maianthemum racemosum (May-an-the-mum • can-ah-dens-ee)
Maianthemum = may flower • *racemosum* = racemed

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Robust arching perennial to three feet in height. Large oblong leaves have deeply impressed veins, arranged alternately. A terminal racemose cluster of small white flowers forms a conspicuous plume.

DISTRIBUTION: Common statewide, probably in every county.

HABITAT: Rich woods.

NOTES: This species is sometimes known as "Solomon's-plume" because of the feathery flower cluster.

Nonflowering plants look very similar to true Solomon's-seals in the genus *Polygonatum*, but can easily be separated by the deeply impressed leaf veins. A similar species is Starry False Solomon's-seal, *M. stellatum*. It is smaller, with much larger flowers in an unbranched raceme. It is found in areas where limestone bedrock is near the surface, and is particularly common around western Lake Erie. Cedar Bog is a good place to see both species nearly side by side.



MID APR - LATE MAY

BLOOM:

FEB

MAR

APR

MAY

JUN

F FOAMFLOWER

Tiarella cordifolia (Te-ah-rel-ah • cor-dih-fo-lee-ah)
Tiarella = turban; refers to shape of the pistil • *cordifolia* = heart-leaved

SAXIFRAGE FAMILY (Saxifragaceae). 12 native Ohio species.

DESCRIPTION: Colony-forming perennial, spreading by runners. Large round leaves form clumps, their margins variously serrate and lobed. Cylindrical racemes of many small white flowers with conspicuously exert stamens.

DISTRIBUTION: Almost exclusively the eastern half of the state.

HABITAT: Rich soil of woodlands, most commonly on stream terraces.

NOTES: The common name stems from the foamy appearance of the dense clusters of white flowers with their long stamens. Large colonies of this beautiful species in full bloom provide one of the most pleasing wildflower displays to be found. This plant has found favor in the nursery trade, and a number of varieties are sold along with pure forms.



PHOTO BY: © NINA HARFMAN

MID APR - EARLY MAY

BLOOM: FEB MAR APR MAY JUN

50

GOLDENSEAL

Hydrastis canadensis (Hy-dras-tis • can-ah-den-sis)

Hydrastis = refers to leaf shape of *Hydrophyllum canadense*, a source of early confusion with this species • *canadensis* = of Canada

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Perennial herb, rhizomatous and often forming sizable colonies. Rounded, prominently wrinkled leaves with cordate bases are distinctive, and continue to expand after flowering. Single tiny flower lacks petals, comprised of numerous stamens and pistils. Fruit an aggregation of red berries (pictured inset).

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Rich woods, often on stream terraces, typically in association with a diverse wildflower flora.

NOTES: Goldenseal is a popular medicinal plant, probably ranking second to Ginseng, *Panax quinquefolius*, in desirability. Another colloquial name is yellowroot, from the color of the roots. It is the underground parts that are sought for medicinal purposes. A recent use is extraction of the alkaloid hydrastine, which is used to staunch bleeding. Tiny native bees and flower flies (family *Syrphidae*) are primary pollinators, and birds and small mammals harvest the fruit and disperse seeds. Many Goldenseal colonies have vanished due to overharvesting for the medicinal trade.

PHOTOS BY: © JIM MCCORMAC

LATE APR - LATE MAY

BLOOM:

FEB

MAR

APR

MAY

JUN

GREEN VIOLET

Hybanthus concolor (Hy-ban-thus • con-col-or)

Hybanthus = from Greek words *hybos* and *anthos*; "hump-backed flower" • *concolor* = one color

VIOLET FAMILY (Violaceae). 27 native Ohio species.

DESCRIPTION: Largish perennial herb to three feet, entire leaves acuminate at each end and alternate. Small greenish flowers very inconspicuous, dangle from pendant pedicels arising from leaf axils.

DISTRIBUTION: Occurs nearly statewide, but populations tend to be scattered and quite local.

HABITAT: Rich woods, most often on steep slopes, sometimes stream terraces.

NOTES: This very atypical violet is easily overlooked, given its stout stature. The flowers are comparatively tiny and quite easy to miss. Otherwise, the plant looks like young Wingstem, *Verbesina alternifolia*, or some other species that has not yet matured. There are about 150 species of *Hybanthus* worldwide, mostly in tropical regions. Only four species are native to North America.

LATE FEB - MID APR

BLOOM:

FEB MAR APR

MAY JUN

52

HARBINGER-OF-SPRING

Erigenia bulbosa (Er-ih-jen-ee-ah • bol-bo-sa)
Erigenia = born in the spring • *bulbosa* = bulbous; from shape of tuber

PARSLEY FAMILY (Apiaceae). 27 native Ohio species.

DESCRIPTION: Elfin perennial, often only an inch or two in height. One or two highly dissected parsley-like leaves arise from the upper stem. Tiny white flowers with contrasting purplish anthers born in small umbels.

DISTRIBUTION: Probably occurs in every county, although scarce in some western locales.

HABITAT: Moist well-shaded woodlands, especially on stream terraces.

NOTES: A true spring ephemeral, Harbinger-of-spring withers completely soon after flowering. It can commence blooming in late February in southernmost Ohio. Plants can be easy to overlook due to their small size. Some remain entirely concealed by leaf litter. Another common name is Salt-and-pepper because of the contrast with the white petals and dark anthers. Tiny native bees and flies are principal pollinators.



BLOOM: FEB **MAR** APR MAY JUN

HEPATICAS

Hepatica nobilis (Heh-pat-ih-ka • no-bil-is)

Hepatica = from Latin *hepaticus*, pertaining to the liver (from shape of leaves) • *nobilis* = noble, or high-born

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Perennial herbs with long-lasting basal leaves on long petioles which are often evident through winter. Leaves fleshy, trilobed, often spotted. Showy sepals vary in color from white (forma *candida*), bluish to lavender (forma *purpurea*), to rose-pink (forma *rhodantha*).

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Rich woods, typically in association with a diverse wildflower flora.

NOTES: *Hepatica* is one of the earliest wildflowers to bloom, with ambitious plants sometimes flowering in late February along the Ohio River. The flowers are an important energy source for the earliest insects, including tiny black sap-feeding beetles in the subfamily *Nitidulinae*. Various flower colors can occur in a single colony. *Hepatica nobilis* is sometimes treated as two species: *Hepatica acutiloba*, and *H. americana*. They are weakly separated by overlapping leaf characters.



BLOOM: FEB MAR APR **MAY** JUN

54

Medeola virginiana (Me-de-ol-ah • ver-jin-ee-an-ah)
Medeola = after mythical sorceress Medea • *virginiana* = of Virginia

INDIAN CUCUMBER-ROOT

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Spindly stem bears a whorl of up to nine leaves; another smaller whorl at summit arches over small drooping greenish-white flowers. Perennial from a whitish, faintly cucumber-flavored tuber, to two feet in height.

DISTRIBUTION: Eastern Ohio; widely scattered and localized in western half of state.

HABITAT: Rich soil of woods, sometimes in drier well-drained sites.

NOTES: The interesting flowers are quite small and easily missed, as the terminal whorl of leaves forms an overarching umbrella. Often forms loose small colonies; these often contain many young non-flowering plants. Sterile plants bear great resemblance to nonflowering plants of two species of much rarer orchids, the Whorled Pogonia, *Isotria verticillata* and Small Whorled Pogonia, *I. medeloides*. The specific epithet of the latter's scientific name means "resembles *Medeola*".

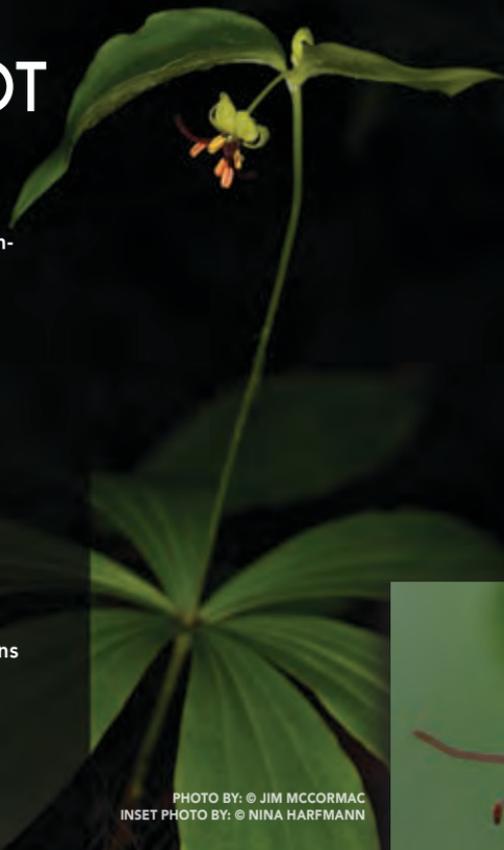


PHOTO BY: © JIM MCCORMAC
 INSET PHOTO BY: © NINA HARFMANN

LATE MAR - MAY

BLOOM: FEB MAR APR MAY JUN

JACK-IN-THE-PULPIT

Arisaema triphyllum (Ah-ris-ee-ma • tri-fil-um)
Arisaema = from Greek aris = arum, and haima = blood • triphyllum = three-leaved

ARUM FAMILY (Araceae). 5 native Ohio species.

DESCRIPTION: Erect perennial herb to three feet, one to three leaves, divided into three leaflets, tiny flowers aggregated into dense spike largely concealed by peculiar fleshy spathe with overhanging hood. Fruit becomes brilliant red (pictured inset).

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: A variety of wooded habitats, usually in rich soil.

NOTES: This odd wildflower is easily recognized by its distinctive spathe, which contains the true flowers. The "Jack" within the "pulpit" is called a spadix, and it is a spike covered with tiny greenish-white flowers. Spathe color can be greenish, or strongly striped with purple. Small flies are attracted to the foetid odor of the flowers, and probably serve as pollinators. This plant is infused with oxalic acid, especially the root, and ingestion can cause an intense burning sensation, or worse.



PHOTO BY: © NINA HAREMANN
INSET PHOTO BY: © JIM MCCORMAC

55

EARLY APR - MID MAY

BLOOM:

FEB MAR

APR MAY

JUN

56

Trillium grandiflorum (Tril-ee-um • gran-dih-flor-um)
Trillium = derivation of "tres"; three • *grandiflorum* = large-flowered

LARGE-FLOWERED TRILLIUM

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Robust perennial to 20 inches, whorl of three large sessile leaves at summit of stem. Bright white flowers held conspicuously above leaves, subtended by three green sepals.

DISTRIBUTION: Statewide, in all counties but reaching peak abundance in extensive wooded areas.

HABITAT: Rich woods, typically in association with diverse wildflower assemblages.

NOTES: The petals, sepals, and leaves of *Trillium* are in threes. Very rarely, four-parted "quadrillium" forms occur. Legislation making this the official Ohio state wildflower was enacted on March 5, 1987. Huge stands of blooming Large-flowered Trillium are breathtaking. However, White-tailed Deer also like them and gobble trilliums like candy. With age, the flowers turn pink. As with other *Trillium*, ants are major seed dispersers.



PHOTO BY: © JIM MCCORMAC

BLOOM: FEB MAR APR **MAY** JUN

Valeriana pauciflora (Val-er-ee-an-ah • pa-sih-flor-ah)
Valeriana = uncertain origin, perhaps from Latin "valere" (to be strong) • *pauciflora* = few-flowered

LARGE-FLOWERED VALERIAN

VALERIAN FAMILY (Valerianaceae). 5 native Ohio species.

DESCRIPTION: Rather weak-stemmed perennial to three feet, spreading in part by suckers, opposite stem leaves pinnate with up to seven leaflets. Flowers in short terminal panicles, flower whitish or sometimes with pink tinge, elongate and tubular with stamens conspicuously exerted.

DISTRIBUTION: Mostly southern one-third of state, scattered and local northward.

HABITAT: Rich soil of wooded floodplains and stream terraces.

NOTES: This beautiful wildflower can easily be overlooked as it blooms after other vegetation in its habitat has become lush and obscures the flowers. Newcomers to this valerian are often stunned by its showiness. The flower's very long corolla tube is suited for sphinx moths, hummingbirds, and other animals with very long tongues. The nectaries are deep at the base of the corolla and inaccessible to short-tongued insects. This is by far the flashiest of the valerian family members in Ohio.



LATE APR - MID MAY

BLOOM:

FEB MAR

APR MAY

JUN

58

M

Podophyllum peltatum (Po-do-fil-um • pel-tate-um)
Podophylum = leaf foot • *peltatum* = shield-shaped

MAY-APPLE

BARBERRY FAMILY (Berberidaceae). 4 native Ohio species.

DESCRIPTION: Mature plants produce two large, rounded, deeply cleft leaves (pictured inset). The large white 6-9-petaled flower with numerous yellow stamens arises from the fork of the two leaves. Fruit greenish-yellow, applelike. Plants perennial, stout, to 18 inches. Rhizomatous rootstocks allow plants to form colonies.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: A variety of wooded habitats, plants often persist for long periods in recently logged sites, even formerly wooded pastures.

NOTES: May-apple colonies form via spreading rhizomes. The plants invest more energy in vegetative reproduction than sexual reproduction. Flowers do not produce nectar, and pollinators seem relatively scarce, but those that visit tend to be various native bees. Eastern box turtles play an important role in seed dispersal, as they are fond of the fruit. The white slantline moth, *Tetraxis cachexiata*, matches the petals to perfection and sometimes spends daylight hours resting on the flowers.



PHOTO BY: ©JIM MCCORMAC
INSET PHOTO BY: ©NINA HARFMANN

MITERWORT

Mitella diphylla (Mi-tel-ah • di-fil-ah)

Mitella = cap; referring to hatlike shape of fruit • *diphylla* = two-leaved

SAXIFRAGE FAMILY (Saxifragaceae). 12 native Ohio species.

DESCRIPTION: Delicate perennial; single stalk to 16 inches with one pair of opposite leaves about halfway up stem. Tiny whitish flowers heavily fringed and resemble snowflakes; in elongate raceme.

DISTRIBUTION: Occurs nearly statewide, but populations highly localized.

HABITAT: Cool moist niches within woods; peak abundance often on rocks and cliff ledges.

NOTES: An alternate name is Bishop's-cap, referring to the shape of the young fruit. Miterwort flowers are incredibly showy and ornate, but are so small they often go overlooked. The tiny seeds are glossy-black when mature, and rest within the cuplike fruit. Rainwater splashes them free, and disperses the seeds. The tiniest of our native bees and flies provide pollination services.



P

PARLIN'S PUSSYTOES

Antennaria parlinii (An-ten-ar-ee-ah • par-lin-ee-eye)
Antennaria = pappus of staminate flowers resemble insect antennae • *parlinii* = botanist John Parlin

SUNFLOWER FAMILY (Asteraceae). About 190 native Ohio species.

DESCRIPTION: Perennial forming small colonies dominated by roundish basal leaves. Flowering stalks of two types: pistillate (female) and staminate (male). Stems with scale-like leaves, flowers densely packed into small corymbs.

DISTRIBUTION: Common in eastern Ohio, scattered and very local to the west.

HABITAT: Various dry sparsely vegetated sites: old fields, roadbanks, open woods.

NOTES: This species belongs to the diverse, species-rich sunflower family. However, relatively few members of this group would be considered spring wildflowers. There are three other species of *Antennaria*, but this is easily the most frequently encountered. Pussytoes is an important source of early season nectar for pollinators, and is a host plant for the American Lady butterfly, *Vanessa virginiensis*.



MID MAR - EARLY MAY

BLOOM: FEB MAR APR MAY JUN

RUE-ANEMONE

Thalictrum thalictroides (Tha-lik-trum • tha-lik-tro-i-dees)
Thalictrum = from the Greek *thaliktron*, "to bloom" • *thalictroides* = resembles *Thalictrum*
(it was formerly placed in a different genus)

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Small delicate perennial plants to 8 inches. Compound leaves typically in threes, each leaflet with three rounded lobes. Flowers two to several, petal-like sepals normally more than five, white, but can be pinkish.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: A range of wooded habitats, from rich floodplains to dry uplands. Often a component of wildflower-rich habitats.

NOTES: Easily confused with a scarcer, very similar species, False Rue-anemone, *Enemion biternatum*, which normally occurs on rich floodplain soils. It differs from Rue-anemone in its alternate leaves, clump-forming growth habit, and (normally) five sepals. A tea prepared from roots was once used by Indians to treat diarrhea and vomiting. While the flowers may be visited by an array of early spring pollinators, they offer only pollen – no nectar is produced. Some small bees collect the pollen to provision nests, while flies consume pollen at the flower.



MID FEB - APR

BLOOM:

FEB MAR APR

MAY JUN

62

Symplocarpus foetidus (Sim-plo-car-pus • fet-ih-dus)
symplocarpus = Greek, meaning "connected fruit" • *foetidus* = foul-smelling

SKUNK-CABBAGE

ARUM FAMILY (Araceae). 5 native Ohio species.

DESCRIPTION: Colonial perennial flowering before leaves emerge. Tiny greenish-white flowers aggregated on club-like spadix within fleshy purple-spotted hood (spathe). Leaves eventually expand into massive cabbage-like foliage far more conspicuous than the flowers.

DISTRIBUTION: Statewide but scattered and local. Most frequent in northeast, scarcest along Ohio River.

HABITAT: Soggy soil of spring-fed wooded wetlands.

NOTES: This is the first native wildflower to bloom in spring, often when snow and ice are still present. The flower structures are thermogenic; they produce enough heat to melt away surrounding ice. The curious leathery spathes are liver-spotted and house the spadix and flowers. About the time that flowering wanes, the leaves emerge. By late spring and on through summer, Skunk-cabbage colonies are very conspicuous due to the profusion of huge foul-smelling leaves.



PHOTO BY: © JIM MCCORMAC

EARLY APR - LATE MAY

BLOOM:

FEB MAR

APR MAY

JUN

Conopholis americana (Co-no-fol-is • ah-mer-ih-can-ah)
Conopholis = from Greek conos (cone), and pholis (scale) • *americana* = American

SQUAWROOT

BROOM-RAPE FAMILY (Orobanchaceae). 4 native Ohio species.

DESCRIPTION: Bizarre cylindrical brownish growths resembling fungus, or conifer cones. Typically forms tufts of thick spikes, each shingled with scales. Small whitish-yellow flowers somewhat concealed by scales. Unmistakable.

DISTRIBUTION: Statewide but much more frequent in eastern Ohio. Rare or absent in many western counties.

HABITAT: Dry oak-dominated woods. Parasitic on roots of various oak species (genus *Quercus*).

NOTES: One of our more unplantlike vascular plants. As noted by Merritt Fernald in his *Gray's Manual of Botany* (5th Edition), Squawroot resembles "old White Pine cones". As the plants senesce with the passing of summer, they increasingly resemble old fungal growths. The flowers are actually rather showy upon inspection. This species derives nutrition from the roots of oaks, which it taps into by means of specialized roots known as haustoria, hence it has no need to manufacture chlorophyll.

WHITE TO GREEN WILDFLOWERS



PHOTO BY: © JIM MCCORMAC

63

STAR CHICKWEED

Stellaria pubera (Stel-ar-ee-ah • pew-ber-ah)
Stellaria = from stella, for the star-shaped flowers • *pubera* = puberulent (short-hairy)

PINK FAMILY (Caryophyllaceae). 18 native Ohio species.

DESCRIPTION: Low statured perennial to ten inches in height, leaves opposite, sessile, broad. Ivory-white flowers ½ inch across, five petals deeply cleft and giving the illusion of ten petals. Dark purplish-red anthers contrast with petals.

DISTRIBUTION: Largely confined to southern and eastern regions.

HABITAT: Woodlands, in various soil types from dry to moist.

NOTES: This is a classic spring wildflower, often growing with a diversity of other wildflower species. Its low stature can cause Star Chickweed to be overlooked, but upon inspection the flowers prove to be the rival of its more conspicuous companions. A very similar species, Core's Chickweed, *S. corei*, has longer sepals that equal or exceed the petals. It can co-occur with Star Chickweed and shares a similar distribution.



MID APR - JUN

BLOOM: FEB MAR **APR MAY JUN** JUL

S

Viola striata (Vee-ol-ah • stri-ate-ah)
Viola = of uncertain origin • *striata* = with fine lines

STRIPED VIOLET

VIOLET FAMILY (Violaceae). 27 native Ohio species.

DESCRIPTION: Perennial, acaulescent, meaning the leaves and stem arise directly from the rootstock. The shallowly toothed leaves are roundish to triangular in shape. Flowers creamy-white, with prominent dark purple nectar guides on lower and lateral petals.

DISTRIBUTION: Very common statewide, one of the most commonly encountered violets.

HABITAT: Rich moist soils of wooded habitats, reaching peak abundance on stream terraces.

NOTES: Striped Violet can grow in profusion in optimal haunts, which are in rich alluvial soils of wooded floodplains. This species also tends to flower later than most of our violets, commonly blooming into June. The off-white creamy flowers are quite distinctive in hue, allowing for long-distance identification. Up close, the deeply-toothed leaflike stipules are diagnostic.



T

TRAILING ARBUTUS

Epigaea repens (Ep-ih-jee-ah • re-pens)
Epigaea = "upon the earth", for trailing habit • *repens* = ground running

HEATH FAMILY (Ericaceae). 22 native Ohio species.

DESCRIPTION: Leathery evergreen oblong-shaped leaves form small mats on ground. White to pinkish-white flowers in small clusters, often concealed by leaves. Species unmistakable but flowers easily overlooked.

DISTRIBUTION: Hill country in eastern half of state, but often rare and local, and locally extirpated in many locales.

HABITAT: Dry woods in acidic soils, often on steep sparsely vegetated slopes.

NOTES: Trailing Arbutus is a harbinger of spring, being one of the first wildflowers to bloom. While scarce and widely scattered over much of its Ohio range, it is easily found in Shawnee State Forest. Bumblebees are important pollinators. Ants apparently are the primary dispersers of seeds. Colonies of this interesting prostrate heath can appear to be dying, due to the tattered browning condition of old leaves. Flowers can pinken considerably with age.



BLOOM:

FEB

MAR APR

MAY

JUN

TWINLEAF

Jeffersonia diphylla (Jef-er-so-nee-ah • di-fil-ah)

Jeffersonia = for Thomas Jefferson, 3rd U.S. President • *diphylla* = two leaved

BARBERRY FAMILY (Berberidaceae). 4 native Ohio species.

DESCRIPTION: Large conspicuous flowers with eight snowy-white petals which drop within a day or so. The much more persistent fruit resembles an acorn. A pair of long-petioled leaves arise directly from the rootstock; leaves deeply cleft into two segments. Perennial, often forming small colonies.

DISTRIBUTION: Locally common statewide in appropriate habitat.

HABITAT: Rich woods.

NOTES: This showy wildflower's scientific name commemorates our 3rd president, Thomas Jefferson, who was a great naturalist with a keen interest in the natural world. He was once president of the American Philosophical Society, which by the late 1700's was the country's leading scientific organization. *Jeffersonia* is not a true spring ephemeral, as its leaves remain green and actively produce chlorophyll throughout summer. Ants are important in seed dispersal.



WHITE BANE BERRY

Actaea pachypoda (Ak-te-ah • pak-ee-po-da)

Actaea = ancient name for the elder tree • *pachypoda* = with thick pedicels

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Upright perennial herb with compound leaves with sharply toothed margins. Leaves said to resemble those of elders in the genus *Sambucus* (See definition of *Actaea* above). Flowers small, white, in dense raceme. Pedicels thicken and elongate with maturity, fruit shiny white, berrylike with central dark spot.

DISTRIBUTION: Common statewide in appropriate habitat.

HABITAT: Rich woods, typically in association with a diverse wildflower flora.

NOTES: Doll's-eyes is another common name for this species, derived from the appearance of the mature fruit (pictured inset). They resemble the china doll eyes used in old-fashioned dolls. Many species in the buttercup family are poisonous, and this plant is no exception. The fruit are especially toxic, but all parts of the plant contain toxins. White Baneberry is far more conspicuous in fruit, and it is more noticed and commented upon in this condition than when in flower. A much rarer similar species, Red Baneberry, *A. rubra*, is listed as threatened and currently known only from Ashtabula, Greene, and Lucas counties.



EARLY APR - LATE MAY

BLOOM: FEB MAR **APR MAY** JUN

WILD STONECROP

Sedum ternatum (Se-dum • ter-nay-tum)
Sedum = to sit • ternatum = in threes

STONECROP FAMILY (Crassulaceae). 1 native Ohio species.

DESCRIPTION: Low growing succulent perennial with numerous small fleshy leaves mostly clustered at ends of branches. White flowers with four-five petals, with contrasting reddish-maroon anthers.

DISTRIBUTION: Locally common in southern and eastern Ohio, largely absent from western till plains.

HABITAT: Rocky slopes, banks, and outcrops in woodlands.

NOTES: Various plants in the genus *Sedum* are well known garden plants. This species is the only native that occurs in Ohio. It often forms large matlike growths in favorable sites, and when in full bloom is quite showy. When the rather weak stems make contact with soil, they can send out rootlets and ultimately new shoots. Several nonnative species can invade rocky habitats; most of these have yellow flowers.

PHOTOS BY: ©NINA HARFMANN

MID APR - JUN

BLOOM: FEB MAR APR MAY JUN JUL

70

WILD STRAWBERRY

Fragaria virginiana (Fra-gar-ee-ah • ver-jin-ee-an-ah)
Fragaria = from Latin fraga; refers to scent of the fruit • virginiana = of Virginia

ROSE FAMILY (Rosaceae). 84 native Ohio species.

DESCRIPTION: Low-growing perennial spreading in part by runners, leaves with three leaflets, these strongly serrate on upper margins. Five-petaled white flowers forming small cyme. Fruit bright red, seeds imbedded in succulent pulp.

DISTRIBUTION: Statewide, probably in every county.

HABITAT: Dry soil of open woods, roadbanks, meadows and fields, prairies, etc.

NOTES: Wild Strawberry is tolerant of a range of habitats, including moderately disturbed sites. Usually favors mostly sunny sites. The well-known fruit are easily recognizable and coveted by a variety of animals, including people. The garden strawberry of commercial fame is derived from hybridizing this species with the Chilean Strawberry, *F. chiloensis*, of Pacific coastal regions. The annual average per-person consumption of strawberries in the U.S. is nearly 8 lbs.



PHOTOS BY: © JIM MCCORMAC

LATE APR - MID MAY

BLOOM:

FEB

MAR

APR **MAY**

JUN

WOOD ANEMONE

Anemone quinquefolia (A-nem-o-ne • quin-que-fol-ee-ah)
Anemone = from Greek anemos, meaning wind • quinquefolia = five-leaved

BUTTERCUP FAMILY (Ranunculaceae). 39 native Ohio species.

DESCRIPTION: Low-growing perennial from whitish rhizome, normally with three aerial leaves below single long-stalked flower, these deeply divided into 3-5 parts. Sepals usually five, bright white, prominently veined. Numerous stamens forming dense brush.

DISTRIBUTION: Most common in glaciated western and northern Ohio, absent or rare in much of southeastern hill country.

HABITAT: Typically in rich woods, but tolerant of some disturbance and occurs in thickets, woodland margins, and clearings.

NOTES: Our native plants in the genus *Anemone* (there are 4 Ohio species) are often called "wind flowers" as the flowers are born on slender pedicels and sway in even slight breezes. The showy "petals" of this species are actually not petals at all. They are sepals, which are modified leaves that form the outer set of floral leaves. True petals are absent. Members of the buttercup family constitute a large part of our spring wildflowers. Ten species are represented in this booklet, a number bested only by the lily family.



PHOTO BY: © JIM MCCORMAC

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LATE APR - JUN

BLOOM: FEB MAR APR MAY JUN JUL

72

WOOLLY SWEET-CICELY

Osmorhiza claytonii (Os-mor-eye-za • clay-toh-nee-eye)
Osmorhiza = scented root • *claytonii* = for John Clayton, early Virginia botanist

PARSLEY FAMILY (Apiaceae). 27 native Ohio species.

DESCRIPTION: Stout perennial from mildly aromatic fibrous roots, to nearly three feet in height. Leaves ternate and each division once or twice compound and rather fern-like. Small white flowers in compound umbels.

DISTRIBUTION: Statewide, probably in every county.

HABITAT: A variety of woodlands, including cut-over and young regenerating sites.

NOTES: Another very similar and about equally common species occurs in Ohio, Smooth Sweet Cicely, *O. longistylis*. It differs in minute technical flower and fruit characters, but usually has a smooth stem and smells like anise when crushed, while the stem of Woolly Sweet Cicely is hairy and has the odor of carrots when crushed. Chewing the root is said to alleviate sore throats. Parsley flowers are often goldmines for pollinators and this species attracts scores of native bees, beetles, and flies.



PHOTO BY: JENNIFER ANDERSON
 HOSTED BY THE USDA-NRCS PLANTS DATABASE

BLOOM: FEB MAR APR MAY JUN

MID APR - MID MAY

SHOOTING-STAR

Dodecatheon meadia (Doh-de-cath-ee-on • me-de-ah) | *Dodecatheon* = combination of Greek *dodeca* (twelve) and *theos* (god) • *meadia* = honors Dr. Richard Mead

PRIMROSE FAMILY (Primulaceae). 12 native Ohio species.

DESCRIPTION: Perennial, sends up a leafless scape to two feet in height, terminated by many-flowered umbel of drooping flowers, these with five long white or rose petals. Yellowish stamens and anthers form a beaklike structure. Numerous basal leaves form large tuft.

DISTRIBUTION: Mostly southwest Ohio, a few scattered locales in northeast quarter of state.

HABITAT: Dry open woods in calcareous soils, often where limestone is at or near the surface.

NOTES: A conspicuous and stunning wildflower that can form sizeable colonies. The large clumps of basal leaves are obvious both pre and post blooming. Flower color is typically pale rose-pink, but can vary from deep magenta to white. Bumblebees are frequent pollinators; they rapidly vibrate their thoracic muscles – “buzz pollination” – which causes pollen to loosen and fall from the flower. Miller State Nature Preserve is an excellent viewing location.

PHOTO BY: © NINA HARFMANN

BLOOM: FEB MAR APR MAY JUN

MAY

WILD LUPINE

Lupinus perennis (Loo-pen-is • per-en-is) | *Lupinus* = from *Lupus* (wolf) • *perennis* = perennial

PEA FAMILY (Fabaceae). 53 native Ohio species.

DESCRIPTION: Clump-forming perennial, distinctive palmately-compound leaves, flowering stalk rises to two feet, capped with spike of blue pea-like flowers (rarely rose or white).

DISTRIBUTION: Almost exclusively the Oak Openings region of Fulton, Lucas, Henry and Wood counties. Extremely rare in northeast Ohio.

HABITAT: Dry open sandy habitats, sand dunes, and sandy soil in regularly burned oak savannas.

NOTES: The mid-May peak blooming of Wild Lupine in the Oak Openings ranks high among Ohio's greatest botanical spectacles. Oak Openings Metropark and The Nature Conservancy's Kitty Todd Preserve are excellent locales. Lupine is dependent upon fire for maintenance of its habitats, and is at peak abundance in the year or two following a fire. It plays host for two extremely rare butterflies, the Karner Blue, and Frosted Elfin.

PHOTO BY: © NINA HARFMANN

BLOOM: FEB MAR APR **MAY** JUN*Tetraneuris herbacea* (Teh-tra-ner-is • her-bay-se-ah) | *Tetraneuris* = four nerved • *herbacea* = herbaceous

LAKESIDE DAISY

SUNFLOWER FAMILY (Asteraceae). About 190 native Ohio species.

DESCRIPTION: Perennial, forms small basal rosettes of linear, straplike leaves. Solitary flower is held on naked scape to a foot or so in height, flower bright lemon-yellow, rays three-toothed at tips.

DISTRIBUTION: Occurs only on the Marblehead Peninsula of Ottawa County. Introduced on Kelleys Island, Erie County.

HABITAT: Barren exposed limestone bedrock in full sun.

NOTES: The mass blooming of Lakeside Daisy in mid-May is an extraordinary spectacle. Seemingly barren limestone pavement is temporarily transformed by golden waves of beautiful flowers. This is one of the rarest plants in the U.S. Ohio harbors the only extant population, all others in the U.S. have been destroyed (a Michigan site is of questionable provenance). The 19-acre Lakeside Daisy State Nature Preserve was acquired specifically to protect this plant.

PHOTO BY: © JIM MCCORMAC

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BLOOM: FEB **MAR** APR MAY JUN

LATE MAR - EARLY APR

Erythronium rostratum (Er-ih-thro-nee-um • ro-stratum) | *Erythronium* = From Greek erythros, red • *rostratum* = beaked

GOLDENSTAR

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Perennial from bulb, often colonial from shoots. Essentially stemless, a pair of brown-spotted green leaves arising from bulb, yellow-orange flowers with six tepals held outwards on a nearly flat plane, fruit thick capsule with prominent beak.

DISTRIBUTION: Extremely rare and local; two populations, in western Scioto County, and eastern Adams County.

HABITAT: Rich soil of wooded stream terraces and lower slopes.

NOTES: This stunning wildflower went undetected until 1938, when the first specimen was collected in Alabama. It was described to science in 1941. In 1964, Ohio botanist Lucy Braun discovered a huge population along Rocky Fork in Scioto County, and another site was found in nearby Adams County in 2011. The blooming is synchronous and occurs over only a few days' time. The colonies are dominated by young nonflowering one-leaved plants. It is very similar to Yellow Trout Lily (p. 38) but differs in the non-recurring tepals and beaked fruit.

PHOTO BY: © NINA HARFMAN

EARLY MAR - EARLY APR

BLOOM: FEB **MAR APR** MAY JUN

SNOW TRILLIUM

Trillium nivale (Tril-ee-um • ni-val-ee)
 Trillium = derivation of "tres"; three • nivale = snowy

LILY FAMILY (Liliaceae). 44 native Ohio species.

DESCRIPTION: Small perennial from tuberlike rhizome, leaves and flower parts in whorls of three. Leaves blue-green and short-petioled, gauzy membranaceous white petals.

DISTRIBUTION: Historically known from 11 counties, but many populations much reduced or gone. Other than a Jefferson County site, all stations are in central and southwest Ohio.

HABITAT: Calcareous soils in open woods, often on or around rock outcrops, or where limestone bedrock is very near the surface.

NOTES: Snow Trillium is one of the earliest wildflowers to bloom, and flowers are sometimes smothered by late snowfalls. This species is very rare and local in almost all of the 16 states in which it occurs, including Ohio. The Buckeye State holds special significance to this gorgeous lily. The first specimen ever collected was in 1834 along the Scioto River near Dublin by John Leonard Riddell. The species still occurs in that area, but is undoubtedly far rarer than in Riddell's day.



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NOMENCLATURE AND TAXONOMY

Serious botanists tend to refer to their favored organisms by scientific names, not common or English names. They do so because scientific names such as *Asarum canadense* (p. 28) are universal and unambiguous. Contrarily, this plant has a whole host of common names: Wild Ginger (the name we use), Canadian Snakeroot, Broad-leaved Asarabacca, Woodland Ginger, Catfoot, Ginger Root, and others. Common names of plants often vary regionally, and sometimes they are so different from other names that it can be hard to be certain of the plant that is being referred to. In this publication, we include scientific names for all included species, along with a definition of their meaning. For common names, we have chosen what we think is the most widely accepted and commonsense moniker. Two Ohio-specific publications helped guide the choice of common names: The Seventh Catalog of the Vascular Plants of Ohio (2001) and the Floristic Quality Assessment Index (FQAI) for Vascular Plants and Mosses for the State of Ohio (2004, with periodic updates). Both of these publications strived to select one appropriate common name for each species. Attempts to standardize common names are important, as doing so provides a “lingo” that is much more readily accepted by casual enthusiasts than obscure, hard-to-pronounce scientific names.

While nomenclature deals with the naming of organisms, taxonomy involves the classification of organisms. The taxonomy of plants (and other organisms) is fluid and ever-changing. As scientists learn more about the relationships of plants and their evolutionary history, species are reclassified into different genera or even families. Any listing of plants is just a snapshot of where things stand at that particular moment. Revisit the list in ten years and it is possible that some species will have been reclassified in some way. For instance, the trilliums (three species are in this booklet) have been variously treated as belonging to their own family (*Trilliaceae*), as part of the Lily Family (*Liliaceae*), or even another family known as the *Melanthiaceae*. We have attempted to use the most recent and widely accepted treatments regarding taxonomy, most of which follow the Manual of Vascular Plants of Northeastern United States and Adjacent Canada (1991).

GLOSSARY

Acaulescent – Stemless

Anemochory – Wind-dispersed

Annual – Living for one year

Anther – Structure that contains pollen

Attenuate – Tapering to a narrow tip

Basal – Disposed at plant base

Biennial – Living for two years

Calyx – Outer layer of a flower's perianth

Caulесcent – Having obvious above-ground stem

Cauline – Of the stem, as in stem leaves

Compound – Of more than two similar parts; e.g. compound leaf

Cordate – Heart-shaped

Corolla – Inner part of perianth, of distinct petals

Corymb – Flat-topped flower cluster

Cleistogamous – Unopened flower fertilized in the bud

Cyme – A broad, usually flat inflorescence

Discoid – Central flowers in sunflower family flower head

Divaricate – Widely branching at angles

Elaiosome – Fatty appendage on some seeds

Ephemeral – Short-lived

Fascicle – A tight bundle or cluster

Filament – Threadlike part of stamen that supports anther

Glandular – Bearing glands

Hauatoria – Rootlike suckers of parasitic plants

Hydrochory – Water-dispersed

Inflorescence – A plant's flowering parts, collectively

Leaflet – A division of a compound leaf

Ligule – Showy rays of sunflower family flower head

Myrmecochory – Ant-dispersed

Nectar – Sugary secretion attractive to pollinators

Nectar Guide – Colorful stripes or ornamentation that lure pollinators

Oligolectic – Bees that specialize on one species or genus of plant

Ovary – Ovule-containing part of pistil

Ovate – Egg-shaped

Palmate – Hand-shaped; radiately lobed

Panicle – Loosely structured compound inflorescence of pedicellate flowers

Pedicel – Supporting stalk of a single flower

Peduncle – Stalk that supports a flower or flower cluster

Perennial – Lives for multiple years

Perfoliate – As if stem apparently pierces leaf or other structure

Perianth – Cup flower sits in; the calyx and corolla

Petiole – Supporting stalk of a leaf

Photosynthesis – Plants' use of sunlight to synthesize foods from carbon dioxide and water

Pinnatifid – Cleft into pinnate divisions

Pinnate – A compound leaf with leaflets arranged on either side of a common axis

Pistil – Seed-bearing organ of flower

Pistillate – Provided with pistils, lacking stamens

Pollen – Reproductive granules within the anther

Pollinator – Animal (usually insect) necessary for plant pollination

Pubescent – Short down-like hairiness

Raceme – An inflorescence of flowers along a common, usually elongate, axis

Rhizome – Underground stem, often prostrate

Scape – A naked (leafless) flowering stem

Sepal – A division of a calyx

Sessile – Stalkless

Spadix – Fleshy spike holding flowers, as in arums

Spathe – Large bract enclosing inflorescence

Stamen – Male fertilizing organ of flower

Staminate – Provided with stamens, lacking pistils

Stipule – An appendage at the base of a leaf or petiole

Superficial – On or near ground surface

Stigma – Part of the pistil that receives pollen

Tepal – Structures similar to petals and sepals but not readily differentiated

Tuber – Short thick root with buds and/or eyes

Umbel – An inflorescence in which multiple pedicels arise from a common point, as in parsleys

Vernal – Spring-blooming

Villous – Long, soft hairs

Whorl – Leaves arranged in a circle around stem

Zoochory – Animal-dispersed



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PINK LADY'S-SLIPPER
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