

OUTDOOR INDIANA



**The plant features in this
document originally appeared in
Outdoor Indiana magazine in
2015**

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ELLIPTICAL-LEAF WINTERGREEN

(*Pyrola elliptica*)

By Derek Nimetz

Like many outdoor enthusiasts, elliptical-leaf wintergreen endures low temperatures, deep snow, and prefers the cooler climates of Indiana's northern counties.

If you want to see this plant, now is a good time.

The name elliptical-leaf wintergreen leaves little to imagination. The leaves are elliptical to oval shaped and remain green during winter. Other common names include waxflower shinleaf, elliptic or large-leaved shinleaf, and sometimes just shinleaf.

Pyrola is derived from a Latin word meaning “pear.” The reason is the leaf shape of some species in the *Pyrola* genus resembles that fruit.

Of the five *Pyrola* species that have been known to occur in Indiana, *Pyrola elliptica* is by far the most common; however, the Indiana DNR considers even it to be a watch-list plant, which means its numbers are few.

Elliptical-leaf wintergreen can be found in numerous states and provinces in North America. It prefers shady locations in oak woodlands and is often found in areas with sandy soils. Some populations of this plant are scattered along Trails 4 and 10 of Indiana Dunes State Park.

Close observations are necessary when identifying *Pyrola* species in the park's Dunes Nature Preserve because American wintergreen (*Pyrola rotundifolia* var. *americana*) also is found within the property.

The leaves of elliptical-leaf wintergreen are low to the ground and originate near the base of the plant. Upon close examination, the leaves have diminutive teeth along the margins. The leaf blades are mostly as long as or longer than the leaf stalks, also known as petioles. The

leaves of American wintergreen are rounder and shinier than the leaves of *Pyrola elliptica*.

Elliptical-leaf wintergreen blooms during June and July. It is a perennial forb, or wildflower, 6 to 12 inches tall. It often has more than 10 flowers per plant, and the flowers suspend from a slender stalk. There are five petals per flower. The petals are white to cream in color with a waxy appearance, thus the common name waxflower shinleaf mentioned earlier. Also, the petals can sometimes have green veins.

The “style” of a flower refers to a long, slender stalk that connects the stigma and the ovary. The style of the flower of elliptical-leaf wintergreen is its most noticeable feature—it curves down below the petals. Using some imagination, this plant's style resembles the trunk of an elephant.

American Indians used portions of *Pyrola* plants for a variety of medicinal treatments. The common name shinleaf originated when smashed plants were applied to the shins of sore legs as an orthopedic aid. *Pyrola* species were also used to relieve indigestion. American Indians also used infusions of the leaves as mouthwash to treat sore throats and mouth sores.

Even if you're not a winter outdoor enthusiast, take heart. Elliptical-leaf wintergreen can be found and appreciated in the heat of summer as well as the chill of winter. Either season, visit Dunes Nature Preserve to test your botany skills and enjoy the beauty of one of Indiana's most distinct natural areas. ■

Derek Nimetz is an ecologist with the DNR Division of Nature Preserves in the Coastal Region.



Frank Oliver photo

This perennial forb often has more than 10 flowers per plant. Each flower has 5 petals, and the flowers suspend from a slender stalk.

DOWNY SERVICEBERRY

(*Amelanchier arborea*)

By Emily Stork

What's in a name? Serviceberry, juneberry, shadbush, shadblow—these are just a few of the monikers by which we know this small understory tree.

While a rose by any other name may smell as sweet, a serviceberry might surprise you. Although a member of the rose family, *Amelanchier* is what many botanists consider a “difficult” group. That's because the various species can intergrade so readily there is not even consensus on how many distinct species there are.

Not only does downy serviceberry have a questionable family tree, some question if it is a tree.

The species name *arborea* literally means “the tree,” but the trunk, which typically rises 10–20 feet aboveground and on rare occasions as high as 40 feet, is often divided into several slender trunks.

Is it a small tree or a tall shrub?

Whichever it is, downy serviceberry cuts a striking appearance in the landscape.

DNR botanist Mike Homoya perhaps put it best when he said “they look like miniature cloud puffs, hanging onto bluff edges as if about to spill into the valley below.”

The dense clusters of delicate white flowers open as early as March or April, before the leaves emerge. The result is an ethereal display of star-shaped flowers dangling from slender branchlets against a backdrop of dormancy. Serviceberry blooms so early that in the eastern United States it earned the name shadbush or shadblow because, by coincidence, the flowers emerge at the

same time the fish American shad ascends coastal streams to spawn.

As the petals fall and scatter about the ground below, the dramatic cloud-like figure Homoya spoke of gives way to spring's green-up, disappearing into the woodland. Upon closer inspection, the charm remains in the pale, soft white-downy leaves just beginning to unfold, revealing a medium-green upper surface, fine teeth and a faintly heart-shaped base.

Thanks to the early bloom, by June, reddish-purple edible fruits that look like tiny apples are ripe for picking before most other fruits. This earns it the name juneberry.

The popular story behind the name serviceberry says that its early bloom cued settlers that the ground had sufficiently thawed to dig a grave and hold a funeral service. The name is more likely related to these useful little fruits that resemble those of mountain

ash (*Sorbus*), the old name for which was sarviss.

Because they are coveted by songbirds, wild turkeys, bobwhite quail, mourning doves, red fox, chipmunks, squirrels, and humans alike, the ripe berries may be hard to find. But if you can beat the competition, the fruit makes delicious jams, jellies and juneberry pies.

Downy serviceberry can be found infrequently throughout Indiana on the dry soils of wooded slopes and bluffs. It also can make an attractive native addition to landscaping, with its all-season appeal of flowers, fruits, yellow-to-red autumn leaf color, and smooth, light-gray bark.

To see serviceberry in its natural habitat, try Trail 2 at Dunes Nature Preserve in Indiana Dunes State Park. ■

Emily Stork is the ecologist covering the Grand Calumet Region for the DNR Division of Nature Preserves.



Frank Oliver photo

Whether you consider it a small tree or a tall shrub, downy serviceberry is an eye-catcher whose flowers sometimes open before their leaves.

WILD COLUMBINE

(*Aquilegia canadensis*)



Frank Oliver photo

Part of wild columbine's common name comes from the Latin word for dove. The flower is said to look like a circle of doves.

By Michael Homoya

Many old-fashioned decorative gardens include an attractive purple-flowered plant known as granny's bonnet or garden columbine (*Aquilegia vulgaris*). It is a nice plant, but how it gained preference in gardens over Indiana's native wild columbine is hard to figure.

Not to demean the garden variety, but wild columbine's fiery-red blossoms nearly shout excitement. In comparison, the wild version's blooms are show-stoppers.

Lately, wild columbine's stature is rising. It is gaining popularity as a garden ornamental, and may soon equal or surpass the use of other columbine species. It is easy to grow from seed and does well in most soils that aren't too wet. Although generally considered a shade plant, wild columbine may do best when exposed to morning or late afternoon sun.

Or both.

Wild columbine is a perennial member of the buttercup family (*Ranunculaceae*) that grows from 1–3 feet tall. It has alternate compound leaves and flowers with five-spurred petals, blooming from April to June.

There are 21 native species of columbine in North America. Most are western mountain or canyon plants with strong preferences for growing on rock.

Indiana has no mountains or grand canyons, and the rock outcrops, while impressive, are limited in number. Perhaps this relative lack of rock habitat explains why only one native columbine species is known to occur naturally in Indiana. Fortunately for Hoosiers who notice it, wild columbine occurs in a variety of other habitats, too. This versatility makes it the most common and wide-ranging of all colum-

bines in North America. It occurs in most Indiana counties.

The Hoosier state's wild columbine favors shaded outcrops of limestone or rocky soils, but is also at home on sandstone cliffs, steep banks of streams, and even in well-drained floodplain forests. The tall sand dunes along Lake Michigan are another habitat for this showy plant.

In the wild, this plant grows with a rather consistent suite of other plants, including wild hydrangea, witch hazel, prickly gooseberry, running strawberry bush, smooth rock cress, walking fern, purple cliff brake, hepatica, Solomon's plume, mountain stonecrop and blue-stemmed goldenrod.

Some reports indicate that the genus name *Aquilegia* comes from *aquila*, for eagle. Observers often say the curved spurs of the flowers look like eagle claws. Another source claims the genus name is from the Latin word *aquilegus*, meaning "collecting water." The opinion refers to either the nectar in the spurs, or to drops of water beading up on the leaves after a rain. Yet another source says the name comes from the German word *ageleia*, a name originally for plants that have spikes, or in the case of *Aquilegia*, spurs.

The origin of the common name columbine is more certain. The word is now most familiar to many people not because of the flower but because of the 1999 shootings in the Colorado high school that carries the flower's name.

That fact is both heartbreaking and tragically ironic. "Columbine" is from the Latin *columbina*, meaning dovelike. The flower's structure gives the appearance of a circle of doves, a universal symbol of peace and hope. ■

For more than 33 years, **Michael Homoya** has been surveying Indiana's natural areas for the DNR Division of Nature Preserves.

SENSITIVE FERN

(*Onoclea sensibilis*)



Jason Larson photo

The sensitive fern doesn't like the cold but fossils indicate the species has managed to survive unchanged for 65 million years.

By Jason Larson

Some plants, like some people, are easier to please than others. Although its name might suggest otherwise, sensitive fern is actually a rugged plant that thrives in a wide variety of situations. It is one of our most common ferns, and can be found throughout the state. This plant's main requirement is moist soil. It is commonly found in low or wet woods, in ditches, along streams and lakes, and even in power line right-of-way areas. It grows in areas with full shade to full sun, as long as there is enough moisture.

The light-green leaves (fronds) are usually around a foot tall, but can be taller or shorter, depending on local soil and light conditions. Each leaf is divided into six to 10 pairs of leaflets (pinnae). The leaves emerge in April or May as the weather warms. The previous year's brown and tattered fertile fronds are often seen next to the newly emerging fronds.

You might guess from the name that the leaves are sensitive to touch, as in the aptly named sensitive plant (*Mimosa pudica*), but that is not the case. The "sensitive" in this plant's name comes from its susceptibility to cold. It withers and turns brown after the first frost but returns each spring from the underground rhizome.

The fertile fronds, which bear spores, have a much different appearance than the more-abundant sterile leaves. They have much thinner leaflets curled up into tight balls. This characteristic lends the plant another common name: bead fern. The genus name, *Onoclea*, is Greek for "closed vessel" and also references this structure.

Close examination of a frond will reveal a unique feature of this plant, the pattern of its veins. Most ferns in Indiana have "free veins" that travel from the middle of a leaflet to its edge. Sensitive fern has "netted veins" that

State Range: Statewide

Size: Fronds (leaves) are usually about a foot tall

Habitat Requirement: Moist soil, sun or shade

Emerges: April or May, as the weather warms

interconnect in a pattern resembling the links of a chain.

Sensitive fern has one close look-alike in the state, the netted chain fern (*Woodwardia areolata*), which has a more restricted range and is much less likely to be encountered. To distinguish between the two, look at the lower leaflets of a frond. The sensitive fern's are directly across from each other. A chain fern's are staggered. Additionally, netted chain fern fronds have fine-toothed edges like a hacksaw blade. With sensitive fern, the edges are smooth.

Fossils found in the United States and Canada indicate this species has been virtually unchanged for around 65 million years. That's the Paleocene Epoch, around the time of the great dinosaur extinction.

Not a bad run for a plant with "sensitive" in its name. □

Jason Larson is the southeast regional ecologist for the DNR Division of Nature Preserves.