



Native Plants for Indiana Landscapes

Developed By:
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This table provides important information about selecting plants for establishing pollinator habitats. It is a companion piece to *Protecting Pollinators: Best Management Practices for Indiana Pollinator Habitat* (Purdue Extension publication POL-5), available from the Education Store, www.edustore.purdue.edu.

Plant Information

The table provides information about many Indiana-native plant species. Native plants are preferable because of their close partnerships with native pollinators. The **Plant Information** columns provide **Sun** and **Soil Moisture** requirements, plant **Height**, plant **Flower Color**, and plant **Bloom Time**.

If checked, the **Hard to Find** column designates a species that may be difficult to find for sale, but is both very important to pollinators and very common in remnant forests. These hard-to-find

species may already be on your land, so watch for them and conserve them if possible.

If checked, the **Ephemeral** column refers to species that come up each year in the spring, produce flowers and fruits, and then die-back by late May. While they are only aboveground for a few months each year, these ephemerals are particularly important to pollinators, because so few species are in bloom in early spring.

Pollinator Connection

The **Pollinator Connection** columns indicate which pollinator groups (**Bee**, **Beetle**, **Butterfly/Moth**, **Fly**, **Hummingbird**, and **Wasp**) use each plant species.

The **Special Notes** column notes whether a plant is a host for larval butterflies or moths or if it attracts specialist bees (those bees which only pollinate a few plant species).

The **Pollinator Magnets** column, if checked, indicates a plant species that attracts an abundance of pollinators, or a very high diversity of pollinators, based on literature and field experience.

Where Can You Buy These Plants?

Many of these plant species may be available from any plant retailer. Others will require you to find a business that specializes in native plants.

The Indiana Native Plant & Wildflower Society (INPAWS) certifies Grow Native businesses with a wide selection of Indiana native plants at grownativeindiana.org/buy-native. Be careful you purchase plants that have not been treated with neonicotinoid insecticides (commonly used on ornamental plants). Avoid applying insecticides in your planting, because they may kill or injure pollinators.

If you are interested in more information about native plants recommended for Indiana pollinators, please see Purdue Extension publication POL-6-W.

Why Add Native Plants to Your Garden?

There are numerous native plants, whose beauty and characteristics are well-suited for use in landscaping.

Beyond visual interest, other benefits include:

- Adaptation to the local climate and soil conditions
- Typically require low or no additional fertilizer to thrive
- Often require fewer pesticides than non-native landscape plants
- If planted in a suitable location, native plants require less water once they are established.
- Provide food and shelter for native wildlife
- Promote native biodiversity and land stewardship of Indiana's natural heritage



Butterfly weed
Asclepias tuberosa



On the previous slide, we mentioned that native plants require less care if planted in suitable locations.

At the top right corner of the following slides, you'll see a suitable planting location listed. These first plants perform best in full sun.

We will also discuss native plants that do well in shade, learn about native grasses, and then move into native trees and small shrubs.

Keep in mind that by learning about the environments of native plants, we can begin to replace invasive species in the home landscape with plants that are better for the ecosystem, as a whole.

The term "herbaceous" refers to plants that typically have very little woody tissue.

There are **12*** Types of milkweed in Indiana, and we'll go through the 3 most common. All 3 are host plants for Monarch caterpillars in various life stages and are used as nectar sources.

Asclepias tuberosa (Butterfly weed) - prefers to be planted in full sun and well-drained

soil, although it can do well in mesic soils (moderately well-drained).

Mature height is 1 foot to 2.5 feet, and the plant produces bright orange flowers in late June. Flowers can last into August.

Monarchs are not the only creature that uses butterfly weed: bees and other butterflies visit for nectar.

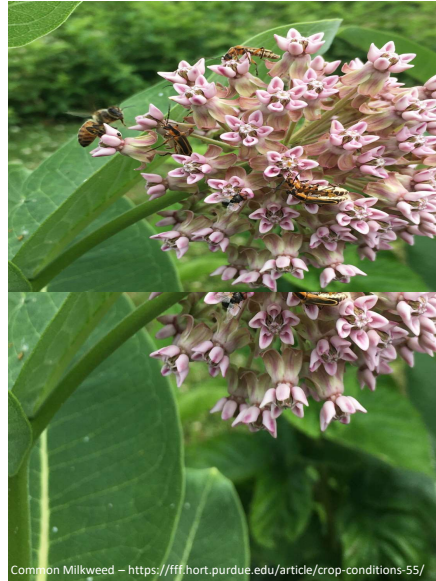
It is slow to emerge in the spring, and transplanting from one place to another is tough due to its deep taproot, once established.

Butterfly weed *can* be started from seed outdoors: Plant in the fall and allow the seed to be exposed to winter cold (called "stratification"). This helps with germination.

Deer don't prefer this plant as food, so deer browse damage is unlikely to affect butterfly weed.

*12 comes from communication with Ellen Jacquart on 2/19/21 - does not include subspecies. If you want a list contact Amy Thompson

Common milkweed *Asclepias syriaca*



***Asclepias syriaca* – Common milkweed –**

Common milkweed is another sun-loving native. It can tolerate moderately wet to dry soils and can be very tolerant to drought.

Pollinators love common milkweed; expect bees, butterflies, and beetles to frequent the plant.

Left photo

Common milkweed is a monarch host plant and nectar source. See the monarch caterpillar in the left-hand photo?

Expect the plant to reach a mature height of 3 to 5 feet, with pink blooms from June to August. Space individuals about 2 feet apart, and allow them to readily self-seed.: They will establish easily and quickly.

If you are planting by seed, plant in late fall/early spring (for stratification) at no more than ¼" deep.

****Speaker Note:** Collecting and cleaning your own seed is easy. Here's a video from Prairie Moon Nursery <https://www.youtube.com/watch?v=NpWHIz57dnU> that you might want to share with members as a resource.

Occasionally, this milkweed's appearance can be damaged by aphid feeding. Aphids then excrete a sticky, sugary substance called honeydew, which is a perfect nutrient-rich environment for sooty mold (appears like black soot on the plant).

Swamp milkweed
Asclepias incarnata



Photo credit- Swamp Milkweed - Amy Thompson

***Asclepias incarnata* (Swamp milkweed) -**

Swamp, Mash, Red, and Rose are all common names of this sun-loving milkweed. As indicated by one of its common names, Swamp milkweed thrives in wet soils, but it can also tolerate moderately well-drained soil. It works well in a rain garden setting.

One nice characteristic of these dusty rose-colored blooms are their vanilla/carnation-like fragrance. Blooms are short-lived in summer, lasting for about one month, and during that time, they are a food source for monarchs, bees, beetles, moths, and other butterflies.

Maturing to a height between 2 feet and 5 feet, space plants 1-3 feet apart. If seeding, do so in the fall or stratify seeds. This can be done by leaving seeds outside in cold weather or placing them in a refrigerator.

Deer aren't big fans of this plant as a food source, so browse should not be an issue.

New England aster
Aster novae-angliae



Photo – <https://plants.ces.ncsu.edu/plants/symptoms/aster-novae-angliae/>

***Aster novae-angliae* (New England aster) –**

New England aster is another plant that enjoys full sun, but it does tolerate light shade. It can do well in a wide range of soils, except for consistently dry sites. This is a good rain garden plant.

If grown from seed, this plant will flower in the 2nd or 3rd year. Reaching a mature height of 3-5 feet, New England aster flower color ranges in shades of purple and pink, depending on each plant's genetics.

Bees, beetles, flies, and many butterflies are attracted to this plant, and it is a larval host of the pearl crescent butterfly.

Because of its late-blooming habit (late summer through October), it serves as extended visual interest in the garden and provides a stable nectar source when other flowers are unavailable.

There are many aster types. New England aster can be identified by the hairy stem and leaves that clasp the stem in a distinct way – nearly encircling the stem, which is unique among asters.

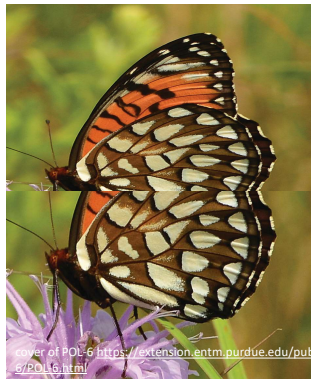
“Purple dome” is a common low-growing variety that might be a good choice for landscapes.

Pink turtlehead
Chelone obliqua

Sun-loving Herbaceous Plants



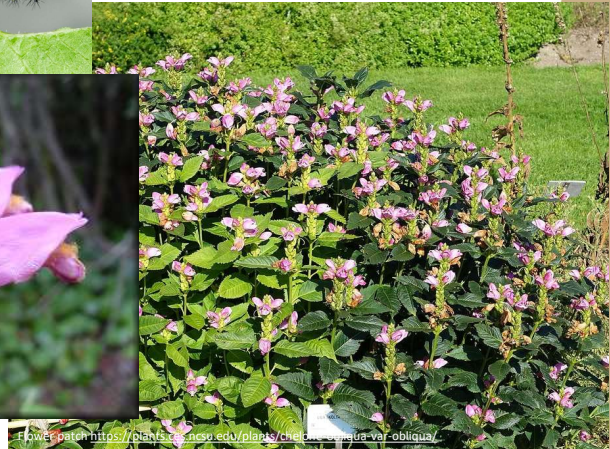
Caterpillar David Cappaert, Bugwood.org



Cover of POL-6 <https://extension.entm.purdue.edu/publications/POL-6/POL-6.html>



Amy Thompson



Flowerpatch <https://plants.eg.ncsu.edu/plants/chelone-obliqua-var-obliqua/>

***Chelone obliqua* (Pink turtlehead) -**

Turtlehead is a clumping native perennial in the plantain family. “Perennial” means that the plant regrows each spring, as opposed to “Annual” plants, which complete their lifecycle in a single season.

Pinkish-purple blooms occur on terminal spikes and resemble snapdragon flowers. The plant gets its name from the shape of its flowers, which some say look like the head of a turtle.

Deep green foliage on lance-shaped leaves provide visual interest in a landscape, and Turtlehead can be planted in full sun to part shade.

This plant likes wet soils, so the deeper portions of a rain garden could be ideal locations for planting.

Growing 2-4 feet tall, turtlehead blooms in July and flowers continue through September.

Keep an eye out for the Baltimore checkerspot butterfly and caterpillar, as well as bees and other butterflies/moths. Hummingbirds may also be enticed by this plant.

If you buy turtlehead plants, check the species name: Hybrids will have different species names, and they may not provide the same benefits to pollinators.

Purple coneflower
Echinacea purpurea



***Echinacea purpurea* (Purple coneflower) –**

Purple coneflower is probably one you are more familiar with, and for good reason. It is easy to grow, attractive to pollinators, and its seed heads remain on the plant through winter, adding visual interest and food for overwintering birds.

Purple coneflower does well in most soils, but does not like consistently wet roots.

Once established, coneflowers handle drought quite well, and deer don't generally snack on it.

Expect a 3-4 foot tall plant under optimum conditions. Height will decrease in challenging environments.

Long-blooming flowers are shades of pink/purple, and it will readily self-seed in the garden.

Other *Echinacea* varieties can have different mature heights and colors.

As seen in the photos, this plant attracts bees, butterflies, and moths.

Left Photo

In the left-hand photo, a red admiral butterfly nectars on a purple coneflower.

You can expect this plant to be relatively pest-free, but aster yellows can be a disease

concern. It is a bacteria transferred by insects and can cause unusually bushy growth, stunting, and yellowing of leaves.

<http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/pests-and-problems/diseases/viruses/aster-yellows.aspx> as well as head clipping weevil <https://bygl.osu.edu/node/1087>

Interesting note: Plains Indians used the root to treat rattlesnake bites, bee stings, headaches, toothaches, sore throats, and distemper in horses. Coneflowers are still widely used today in pharmaceutical preparations.

Black-eyed Susan
Rudbeckia hirta

Sun-loving Herbaceous Plants



David Cappaert, Bugwood.org

UGA2158094



Amy Thompson

***Rudbeckia hirta* (Black-eyed Susan)**

Black-eyed Susan, a commonly cultivated garden plant, is an opportunist that thrives easily in disturbed areas.

It prefers full sun and dry or moderately well-drained soils.

Mature height is 1 to 3 feet, and the yellow blooms continue June through October. Black-eyed Susan is an Indiana native, but it has naturalized (grows without negatively impacting habitat) through most of North America.

We've talked about perennials and annuals, but here's a new one: Black-eyed Susan is a *biennial* – which means it blooms and completes its life cycle in the 2nd year and then reseeds.

Leaves are alternate on the stem and can have toothed or smooth margins. Some leaves can have 3 or more lobes.

Left photo:

As you can see in the left-hand photo, the flowers have a brown, domed-shaped center surrounded by bright yellow to orange ray florets.

Flowers mature in mid-summer and will continue into mid-fall, if you dead-head the

blooms regularly.

This is a super hands-off plant, requiring little in the way of care, with moderate drought tolerance.

The trick to growing black-eyed Susan is to give it full sun in decent soil. Moderate fertility will give you the best flower show so avoid the edges of lawns where lawn fertilizer will provide excess nitrogen.

For a long-lived perennial Black-eyed Susan, choose [Sweet Black-eyed Susan \(*Rudbeckia subtomentosa*\)](#).

Stiff goldenrod
Solidago rigida



Ansel Oommen, Bugwood.org

5574746



Amy Thompson

***Solidago rigida* (Stiff goldenrod) –**

Stiff goldenrod is a lesser-known native flowering plant that is suitable for home landscape and likes full sun to light shade and moderately moist soils.

It is a rhizomatous, native perennial. *Rhizomatous means “having rhizomes” – Rhizomes are modified underground stems.

This plant is usually found in open woods, glades (open area within a forest), and thickets.

It features tiny, bright yellow, daisy-like flowers in dense, erect, flat-topped terminal clusters (at the tip of the plant). It sits above stiff, broad leaves on hairy stems.

Growing 3 to 5 feet tall, stiff goldenrod’s individual flowers can be up to ½ inch in diameter (larger than most other native goldenrods).

Flowers bloom from late summer into early autumn and attract bees and butterflies.

Stiff goldenrod has relatively few insect or disease problems. Leaf rust is an occasional issue, and head clipping weevil has been noted in southern IN.

The plant benefits from being divided every 2-3 years to control its growth.

Interesting notes *

Goldenrods are often wrongfully accused of causing hay fever. In reality, hay fever is an

allergic reaction to wind-borne pollen from other plants, like ragweed.

The genus name *Solidago* is derived from the Latin words *solidus*, meaning “whole” and *ago*, meaning “to make” – Reference to medicinal healing properties of some plant species.

Spiderwort
Tradescantia spp

Sun-loving Herbaceous Plants



Photo – Left

Close-up of Spiderwort flowers -- <https://plants.ces.ncsu.edu/plants/tradescantia-ohiensis/> Debbie Roos

***Tradescantia spp* (Spiderwort) –**

Spiderwort prefers full sun and tolerates all soils, except those that are consistently wet. Long-blooming, 3-petaled flowers and usually violet-blue, but sometimes they show tinges of pink. Yellow stamens contrast nicely with petal color.

Flowers last from May-July, sometimes longer, with each flower lasting for one day.

Leaves are iris-like, arching and dark green, 1-foot long and 1-inch wide, folded lengthwise. Expect a 2 to 3 foot tall , clump-forming perennial plant at maturity.

Seeds germinate well when planted in the fall. You can also moist-cold stratify seeds for about 120 days.

Spiderwort is native throughout the continental US, and Ohio Spiderwort is the most widespread.

This is a tough plant, adaptable to sand, clay, and other less hospitable sites.

In its native presentation, Spiderwort is commonly found on open wooded slopes and moist, shade bluff ledges.

Bees and flies use spiderwort.

Interesting Note*

The genus name honors John Tradescant (1570-1638) and his son John Tradescant (1608-1662), both botanists and successive gardeners to Charles I of England.

When the stems of Spiderwort are cut, a stem secretion is released. Upon drying, it becomes threadlike and silky like a spider's web: Hence, the common name.

There are several native Indiana species of Spiderwort - -

https://www.illinoiswildflowers.info/prairie/plantx/pr_spiderwort.htm

Blue mistflower
Conoclinium coelestinum



Photos by Amy Thompson

***Conoclinium coelestinum* (Blue mistflower) –**

Growing 1 to 2 feet tall at maturity, Blue mistflower resembles a lovely blue-purple fog when planted in dense stands.

The downy, purplish disk-like flowers form in clusters of 35-70 at the tops of stems in late summer and autumn, attracting late-season butterflies, bees, moths, and flies.

Oval/triangular leaves are opposite each other on the stem (see **left photo**) with large-toothed edges.

Soil preferences are wet mesic, mesic, and dry mesic – (mesic means “containing a moderate amount of moisture”).

Blue mistflower spreads by rhizomes (remember, underground stems), and William Cullina of the New England Wildflower Society advises that, in a garden setting, mistflower requires “frequent thinning and division to keep vigorous.”

Interesting Notes**

Blue mistflower was previously classified in the genus *Eupatorium* but has been changed: See <https://plants.usda.gov/core/profile?symbol=COCO13>

Sun-loving Herbaceous Plants

Spotted joe-pye weed
Eutrochium maculatum



Right Photo by Amy Thompson – Joe-pye weed group

Left Photo by Homer Price – Joe-pye weed flower head -

<https://plants.ces.ncsu.edu/plants/eutrochium-maculatum/>

***Eutrochium maculatum* (Spotted joe-pye weed) –**

Spotted joe-pye weed is best planted in full sun and rich, moist soils, where its fibrous, rhizomatous root system spreads to form small clonal colonies (clonal means that each plant is a genetic replica of the parent plant). Because of this habit, Joe-pye weed should be planted with caution in small landscape situations. Under ideal growing conditions, this perennial plant can grow very tall (4 to 6 feet), with strong wine-colored stems that rarely need additional support.

The dusty rose/mauve flowers can be seen growing along roadside ditches, with 12-18 –inch bloom clusters lasting from July through August.

Blooms attract dozens of butterfly species, bees, and moths.

Flowers give way to attractive seed heads that persist on the plant into winter.

Deer are not likely to browse its coarsely serrated, lance-shaped dark green foliage.

In the spring and fall, Joe-pye weed can be divided and transplanted to other sites.

‘Gateway’, a popular cultivar, is bred to be more compact, bushier, and shorter (4 to 5 feet tall) with tighter and thicker flower clusters.

No serious insect or disease problems should be expected. Leaf scorch can occur if soils are continuously dry.

Interesting notes**

Joe-pye weed has undergone changes to the genus classification, formerly known as *Eupatorium maculatum*, and is still sometimes referred to as such. - -

<https://plants.usda.gov/core/profile?symbol=EUTRO>

The genus name is derived from the Greek words *eu*, meaning “well,” and *troche*, meaning “wheel-like,” in reference to the whorled leaves. – Whorled leaves are three or more leaves equally spaced at a node, like spokes on a wheel.

Queen of the prairie
Filipendula rubra

Sun-loving Herbaceous Plants

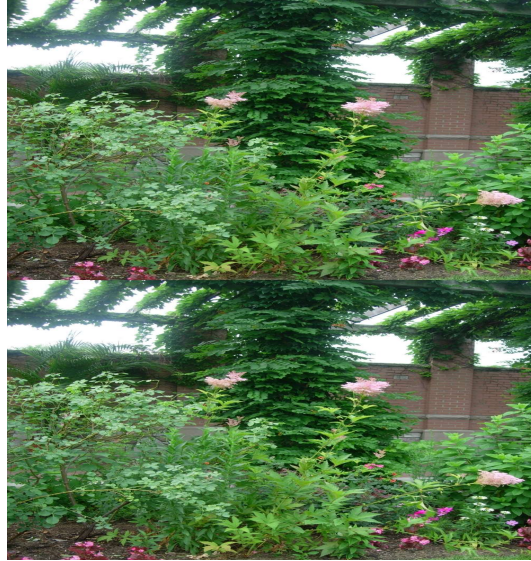


Photo by Mary Welch-Keeseey

***Filipendula rubra* (Queen of the prairie) –**

Queen of the prairie is a tall, upright, clump-forming perennial that spreads by rhizomes, making it a great plant for naturalizing moist meadows and clay soils. Be aware of the spreading habit, as it is semi-aggressive in small garden settings.

Tiny, fragrant, pale-pink flowers bloom at the terminal (top) of stems, forming 6-9 – inch panicles (loose-branching cluster of flowers)

Soil moisture determines mature height (6 to 8 feet in best conditions, and shorter in drier soils).

Fragrant, deer-resistant leaves are bright green with compound-palmate arrangement. Each leaf has 7-9 lance-shaped leaflets and a large 7 to 9-lobed terminal leaflet than can be 4-8 inches long.

This species is a bit tricky and slow to germinate/grow to maturity, but once flowering, it is attractive to bees, beetles, and flies.

Interesting Notes **

The genus name comes from the Latin words *filum*, meaning “thread” and *pendulus*, meaning “hanging,” for the root tubers in some species that hang together with threads.

Dense blazing star
Liatris spicata



Right photo by Mary Welch-Keesey

Left photo from <https://plants.ces.ncsu.edu/plants/liatris-spicata/>

***Liatris spicata* (Dense blazing star)** – Common names: Marsh blazing star; Gay feather

Dense blazing star thrives in sunny locations with moist to wet soils. This is the most moisture-tolerant of *Liatris* species, but it also does well in well-drained garden sites.

As a member of the daisy/aster family of plants, it is a clump-forming perennial with 2 to 4 foot tall spikes of purple flowers that bloom from the top-down from mid to late summer. These showy flowers attract pollinators and make a good cut or dried flower.

Foliage is grass-like, with alternating 10-inch leaves that narrow as they reach the stem tip.

Roots are shallow and fibrous corms (swollen stem base covered in scaled leaves) that can produce new colonies, though it usually reproduces by seed.

Dense blazing star is most eye-catching when planted en masse.

Great for pollinator gardens, rain gardens, and perennial borders.

Taller stems may require support.

Bergamot
Monarda fistulosa



***Monarda fistulosa* (Bergamot)** – Common names: Bee balm; wild bergamot, Oswego tea, Horse-mint.

Bergamot is a native perennial found in dryish soils on prairies, dry rocky woods, glade edges, unplanted fields, and along roads and railroads.

As a member of the mint family, it grows 2 to 4 feet tall on square stems and can readily spread.

Native to most of North America, bergamot is often cited for its historical medicinal applications among indigenous peoples. Uses included poultices for boils and lacerations and tea infusions for headaches, indigestion, colds, and flu.

The species name *fistulosa* refers to the tube-like structure of its blossoms, which is a favorite of butterflies, bees, and hummingbirds during July to September bloom time.

Bergamot is tolerant of black walnut compounds that inhibit the growth of many other plants nearby, and deer do not prefer it.

The flowers can be both cut and dried in arrangements.

Disease concern is primarily powdery mildew, which can impact all monarda species, usually in crowded gardens with poor air circulation.

Photos by Amy Thompson

Right Photo –

In the right-hand photo, you can see a hawk moth nectaring on a bergamot flower.

Monarda didyma is another common species but it is found further east so would be considered a “near native”

Foxglove penstemon
Penstemon digitalis



Photos by Mary Welch-Keesey

***Penstemon digitalis* (Foxglove penstemon)** - Common name: Foxglove beardtongue; Mississippi Penstemon, Smooth white beardtongue, Talus Slope penstemon
Foxglove beardtongue is a perennial native that reaches 2-3 feet tall at maturity, with white to pink flowers tubular flowers that attract long-tongued bees including honeybees, bumblebees, miner bees, mason bees, and hummingbirds. Penstemons are called “beardtongues” because their sterile stamen has a tuft of small hairs.

Preferring medium to dry medium soils, it is adaptable to full sun or part shade. This plant is readily grown from seed, tolerates deer browse, and can grow in droughty conditions and clay soils.

Do not expect serious insect or disease issues with this plant, although root rot can occur in wet, poorly-drained soils. Leaf spots are an occasional issue. Beardtongue can spread somewhat aggressively in a garden setting.

Interesting Notes **

The genus name comes from the Greek words *penta*, meaning “five” and *stemon*, meaning “stamen,” in reference to each flower having five stamens (four are fertile and one is sterile).

The specific epithet (aka “species) name comes from the Latin word *digitus*, meaning “finger,” as the flowers look like the fingers of a glove.

Obedient plant
Physostegia virginiana



Middle and Right Photos by Amy Thompson

***Physostegia virginiana* (Obedient plant)** – Common name: False dragonhead

Obedient plant is a native perennial member of the mint family that thrives in full sun and wetter soils, but it can do well on moderately drained soils.

Growing 2 to 4 feet tall, Obedient plant blooms in spikes of pink shades from summer into fall and has a rhizomatous root system that will spread fairly quickly underground.

Each spike of flowers bloom from bottom to top and produce copious amounts of nectar at a time when pollinators need a boost before winter.

The common name of this species has everything to do with its flowers, not its growing behavior. Anyone who has played around with the plant's flower spikes will notice the curious fact that individual flower stems will remain in whichever direction you point them. The corolla (the part of the flower that encloses the reproductive parts) is swollen at the throat (inner part of a flower tube), the upper lip (top petal) is domed (**see Middle Photo**), and the lower lip is spreading and has three lobes.

In rich soils, shade, or hot temperatures, taller stems may require support.

Obedient plant can be propagated by seed or by dividing roots and transplanting in the spring.

Deer are uninterested in this species, and it works well as a cut flower.

Interesting Notes **

The genus name derives from the Greek words *physis*, meaning “bladder,” and *steges*, meaning “covering,” in reference to the calyces (green outer whorl of a flower) that inflate as they develop.

Species name is a reference to the State of Virginia, part of the plant’s native range.

Wild geranium
Geranium maculatum



Photos by Amy Thompson

We've discussed about 16 sun-loving herbaceous plants thus far, and I hope your creative planning process has been awakened thinking about which plants might work best for your sunny garden spaces.

Now we will switch gears and discuss shade-loving herbaceous plants.
The first one on the list is:

***Geranium maculatum* (Wild geranium) -**

Wild geranium likes shade to part-shade, but it will tolerate full sun if given sufficient moisture.

Preferring moderately drained soils, this 1 foot tall mounded plant produces light purple, showy blooms in the spring, which attract bees, butterflies, moths, and flies.

It has a unique way of spreading its seeds: Each seed is packed into a pod, and the pods are attached to a structure that looks like a crane's bill. The "bill" literally catapults the seeds away from the parent plant!

When the seed lands, a small tail-like structure attached to it bends and moves in response to changes in humidity, drive the seed into the soil where it can germinate.

Wild geraniums can be easily cultivated from seed, as well.

Something to note is that foliage may decline and yellow during the hottest part of summer: Shear back to reshape and refresh the plant.

There aren't many insect or disease issues to worry about. Rust and leaf spot might occur, and snails/slugs could hang around.

Interesting Notes **

The genus name comes from the Greek word *geranos*, meaning "crane," referencing the fruit which is said to resemble the head and beak of a crane.

The species name means "spotted"

Wild ginger
Asarum canadense



Photos by Mary Welch-Keesey

***Asarum canadense* (Wild ginger) –**

Wild ginger is a very common woodland plant that makes a great native shady groundcover. It is easily grown in average, medium to wet, well-drained soils.

If you're looking for an optimum location, choose a constantly moist, acidic site that gets heavy shade.

Wild ginger is a low-growing plant featuring two dark green, downy, heart-shaped leaves (up to 6 inches wide).

Flowers are 1-inch cup-shaped with a purple-brown color, and they bloom from between the sets of two basal leaves in spring.

Upon close inspection, the flowers are beautiful, but they are often hidden under foliage.

Pollination of this plant is performed by a ground-crawling insect.

In dry summers, wild ginger will wilt or go dormant, but it will be back when conditions are right.

It seeds readily and tolerates drought, deer, heavy shade, and erosion.

Slugs and snails can be attracted to it, but no serious insect or disease issues.

Interesting Note **

Although Wild ginger is not related to culinary ginger (*Zingiber officinale*), the roots produce a scent that smells a bit like culinary ginger. Fresh and dried roots were used by early Americans as a ginger substitute, but it's not frequently used today.

Christmas fern
Polystichum acrostichoides

Shade-loving Herbaceous Plants



Developer note: “This is not in POL-6, but I wanted to include a few ferns.”

Photo credit: <https://plants.ces.ncsu.edu/plants/polystichum-acrostichoides/> Cranbook Science

***Polystichum acrostichoides* (Christmas fern) –**

Christmas fern is a rhizomatous, woody, densely scaly-scruffy evergreen that can grow 2 to 3 foot high in a fountain-like habit.

Leaves of ferns are known as fronds (fiddleheads, when they are unfurling), and they have many leaflets growing directly from the ground in clumps, so no bark is present.

They emerge silvery in the spring.

Ferns do not have flowers; instead, the fern produces reproductive black spores on the undersides of some, but not all, fronds. Fertile fronds are narrower at the tip.

These plants do best in richly organic, dry to medium, well-drained soils in part shade to full sun.

In poorly drained soils, crown rot can affect plants, usually in winter.

This fern will not spread, but its clumps will increase in size over time.

In winter, ferns provide winter cover for songbirds, who also use the plant’s scale-like hairs in nest construction.

In mass plantings, it makes an excellent soil erosion controller on shaded slopes, and deer/rabbits have little interest in eating ferns.

Consider this plant for dry, heavily shaded sites.

Interesting Notes **

The genus name comes from the Greek words *polys*, meaning “many,” and *stichos*, meaning “in a row”, relating to the arrangement of spore cases in rows.

Ostrich fern
Matteuccia struthiopteris



Developer notes: “This is not in POL-6 but I wanted to include a few ferns. Looks like scientific name has been updated since pol- 6 publication to *Onoclea struthiopteris*.”

Photo credit: <https://plants.ces.ncsu.edu/plants/onoclea-struthiopteris/> Kari Pilaviita frond, upright structure Harem Koh

***Matteuccia struthiopteris* (Ostrich fern) –**

Named for its similar appearance to ostrich feathers, Ostrich fern is easy to grow in average, medium to wet soils. It prefers part to full shade.

Rich soils with constant moisture are preferred – soil cannot dry out.

It spreads by underground rhizomes to form dense colonies of erect crowns and stout, erect rhizomes.

Prepared like asparagus, fiddleheads are edible, and in early spring, foragers seek them out.

To distinguish Ostrich ferns from others, see the celery-like, U-shaped stem.

Remember the rules of sustainable harvest: Never take the first. Never take the last. And never take more than 1/3 of any plant/group of plants.

Deer and rabbits don't eat this plant.

Interesting Notes **

The genus name honors Carlo Matteucci (1800-1863), Italian physicist.

Maidenhair fern
Adiantum pedatum



Photo credit: <https://plants.ces.ncsu.edu/plants/adiantum-hispidulum/> - Walter Siegemund

***Adiantum pedatum* (Maidenhair fern) –**

Maidenhair fern comes highly recommended for home landscaping.

It makes a nice border when paired with Wild geranium (*Geranium maculatum*) and is deer-resistant.

It is a deciduous (loses leaves annually) clump-forming native that grows 1 to 2 feet tall and spreads slowly by creeping rhizomes.

It is frequently found on rich wooded slopes, ravine bottoms, and in damp, shady woods. Featuring finely-texture, somewhat frilly, palmately-divided fronds with curved stalks, its wiry stems are reddish-brown to black.

Cosiers (aka coiled young fiddleheads) emerge pink in the spring.

Maidenhair fern will go dormant if there is not enough moisture, and they enjoy the same environment as do hostas.

Interesting Note **

The genus name comes from the Greek work *adiantos*, meaning “unwetted,” referencing the water-repellant foliage.

The species name means “cut like a bird’s foot,” referring to the frond shape.

Shade-loving Herbaceous Plants

Sweet joe-pye weed
Eutrochium purpureum



Right Photo by Mary Welch-Keesey

Left Photo by Amy Thompson

Earlier, we discussed the sun-loving Spotted joe-pye weed (*Eutrochium maculatum*). Now we will discuss its relative:

***Eutrochium purpureum* (Sweet joe-pye weed) –**

A butterfly favorite, Sweet joe-pye weed is easy to grow, and its vanilla-scented flowers are irresistible for Monarchs, Swallowtails, and many other butterflies.

Not many woodland flowering plants can mature to heights of 4 to 7 feet tall, like this species.

Pale pink to pale purple blooms occur in large clusters above large leaves whorled around the stem from July to September.

Plant it in most to well-drained garden soil in part to full shade.

Pairing it with Tall Bellflower and Wild Golden glow provides a stunning tall savanna or woodland garden.

Sweet joe-pye weed is deer-resistant and makes a wonderful cut flower.

Interesting Note**

In the past, Native Americans used this plant to cure fevers.

Cardinal flower
Lobelia cardinalis



Photos by Mary Welch-Kessey

***Lobelia cardinalis* (Cardinal Flower)**

Cardinal flower grows in rich, medium to wet soils. It needs constant moisture, even tolerating brief flooding.

In northern climates, this plant can tolerate full sun but appreciates afternoon shade in hot summer climates of the lower Midwest and South.

Somewhat short-lived, this clumping perennial features erect, terminal spikes (also called "racemes," pronounced ruh-seem or rah-seem). These racemes have large, cardinal-red flowers on unbranched, alternate-leafed stalks reaching heights of 2 to 3 feet.

Tubular flowers bloom in late summer and are two-lipped, with three lobes of the lower lip appearing more prominent than the two lobes of the upper lip.

Flowers are attractive to butterflies and hummingbirds (not cardinals). *There are also white and rose-colored forms known.

Lance-shaped, finely-toothed leaves are dark green and generally 4 inches long.

Mulching around this plant will help to retain soil moisture.

There are no serious insect or disease issues with this plant, although snails and slugs can damage foliage.

In addition, foliage contains alkaloids that are very toxic to humans, if ingested.

Interesting Notes **

The genus name honors Matthias de l'Obel (1538-1616), French physician and botanist who, with Pierre Pena, wrote *Stirpium Adversaria Nova* (1570) which detailed a new plant classification system based upon leaves.

The species name, *cardinalis*, refers to the cardinal red color of the flowers.

The common name is said to be in reference to red robes worn by Roman Catholic cardinals.

Great blue lobelia
Lobelia siphilitica



Right Photo by Amy Thompson

Left Photo by Mary Welch-Kessey

***Lobelia siphilitica* (Great blue lobelia)** – Common names: Great lobelia; Blue cardinal flower

Great blue lobelia, a native perennial, typically grows in moist to wet environments along streams, sloughs, springs, swamps, meadows, and in low, wooded areas.

Forming clumps, this plant produces tubular, lipped flowers with three lobes of the lower lip appearing more prominent than the two lobes of the upper lip.

The flowers are found in shades of blue, and they arise from the upper leaf axils (upper angle between leaf and stem from which it grows), forming dense, terminal racemes (spikes) in late summer.

Stalks are stiff and unbranched, reaching 2 to 3 feet in height.

Light green, lance-shaped leaves are up to 5 inches long, with finely-toothed margins.

Clumps can be divided in spring, and the plant may self-seed in optimum conditions, forming attractive colonies.

Great lobelia is deer and heavy shade tolerant.

Snails and slugs might munch on foliage, but no serious insect or disease problems are expected.

Interesting Notes **

You might notice that this plant shares a genus name with the previous plant, Cardinal flower (*Lobelia cardinalis*).

The species name of this plant, *siphilitica*, arose from the historical use of this plant as a medicine for the treatment of venereal disease.

Virginia bluebells
Mertensia virginica



Right Photo by Mary Welch-Kessey

Left Photo by Amy Thompson

***Mertensia virginica* (Virginia bluebells) –**

Virginia bluebells can be found in moist, rich woods and river floodplains.

This erect, clump-forming perennial grows 1-2 feet tall and produces loose, terminal clusters of pendulous (“like a pendulum”), trumpet-shaped blue flowers up to 1-inch long. Blooming in early spring, flower buds are pink, and the flower keeps the pink cast before turning blue.

Bluish-green, oval leaves are up to 4 inches long with smooth margins and surfaces.

By mid-summer, foliage dies back and the plant goes dormant.

In moisture-rich environments, the plant will reseed and spread.

Don’t expect serious insect or disease issues.

Rabbits don’t bother Virginia bluebells, and they will grow under black walnut, unaffected by its toxic compounds.

Interesting Notes **

The genus name Franz Carl Mertens (1764-1831), professor of botany at Bremen.

Jacob's ladder
Polemonium reptans



***Polemonium reptans* (Jacob's ladder)** – Common name: Greek valerian

Jacob's ladder likes rich, moist woods and stream edges.

Growing in a 12 -18 inch tall mound, it produces light blue, bell-shaped flowers up to ¾ inch long in loose, terminal clusters on sprawling, weak stems.

Bloom time is mid-to-late spring.

Pinnately compound leaves with oval leaflets are arranged like the rungs of a ladder (hence, the common name).

Polemonium reptans, commonly called creeping Jacob's ladder, occurs in rich, moist woods and along streams. The plant typically grows in a mound to 12" (less frequently to 18") tall. Features light blue, bell-shaped flowers (to ¾" long) in loose, terminal clusters appearing on sprawling, weak stems in mid to late spring. Pinnately compound leaves with oval leaflets are arranged like the rungs of a ladder (hence the common name).

Bees and flies use this plant

Interesting Notes **

The genus name derives from the Greek *polemonion*, as if refers to a medicinal plant associated with Polemon of Cappadocia (Roman historical figure).

The species name means “creeping”.

Celandine poppy
Stylophorum diphyllum



***Stylophorum diphyllum* (Celandine poppy) –**

Celandine (pronounced Sel-uhn-dine) poppy is an attractive woodland plant that grows well in zones 4-8 with little to no care in rich woodland soils.

With some care, it can tolerate drier, sunnier sites.

The 4-petaled, yellow flowers bloom in spring in small clusters atop stems reaching 12-18 inches tall.

Blue-green, pinnately-lobed foliage is silvery beneath.

Stems contain a bright yellow sap formerly used as a dye by certain Native Americans.

After seeds drop out of the large, hairy pods, Celandine poppy goes dormant. Seedlings readily emerge and spread if fresh seed is scattered on the soil surface, and ants aid in seed dispersal.

Bees and flies are attracted to the flowers.

Interesting Notes **

The genus name comes from the Greek word *stylos*, meaning “style” and *phoros*, meaning “bearing,” with reference to the long, columnar style (part of the reproductive system of a flower– see **left photo** in flower center).

Photos by Amy Thompson

Genus name comes from the Greek words *stylos* meaning style and *phoros* meaning bearing with reference to the long columnar style.

Drooping trillium
Trillium flexipes

Shade-loving Herbaceous Plants



Right photo by Mary Welch-Kessey

Left photo by Amy Thompson

***Trillium flexipes* (Drooping trillium) –**

Indiana woods are rich with native plants, some of which are quietly showy, such as the Drooping trillium.

Please note that it is best not to dig up and remove woodland plants: Instead, buy from reputable nurseries where they propagate their own plants.

This flowering perennial blooms cream-white to maroon-colored from mid-April to mid-May on a robust, 16 inch tall plant.

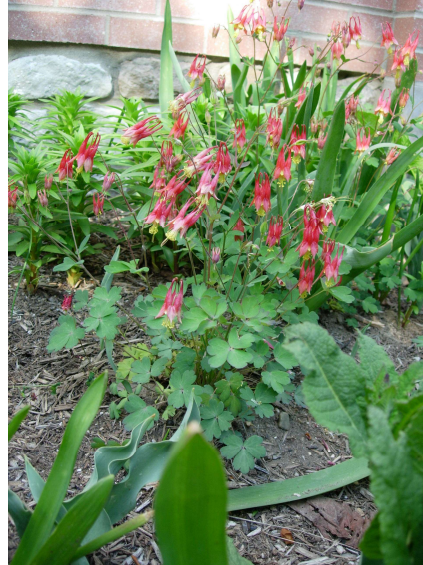
Three sessile (attached directly to base without a stalk) leaves whorl around the stem's summit.

It is typically found in rich, undisturbed woods in calcareous soils (high in calcium).

As the flowers often dangle below the leaves, they are easily missed.

Shade-loving Herbaceous Plants

Wild columbine
Aquilegia canadensis



Photos by Mary Welch-Kessey

***Aquilegia canadensis* (Wild columbine) –**

Native wild columbine works wonderfully as a garden plant.

It tolerates a large range of soil and sun types.

Wild columbine is deer-resistant and grows in pine tree areas, as well.

Its long-lasting bloom time begins in April, and hummingbirds nectar from the drooping, red flowers with yellow-limbed petals.

These flowers are among the first to provide nectar for bees, butterflies, and hummingbirds in the spring.

Producing seed readily, this plant will spread. The seeds are shiny, black, and smooth – like tiny black pearls that bounce on hard surfaces, aiding in their distribution.

If you want more Wild columbine, cut off the flower stalks once fruit capsules start to open (sign of seed maturity) and shake over the area where you want more plants.

If you do not want more, deadhead them before seeds mature.

Leaf miner often causes severe foliar damage. Although it looks bad, it doesn't harm the plant. You may remove damaged leaves, and the plant will soon grow new ones.

Interesting Notes **

The genus name comes from the Latin word for “eagle”, in reference to the flower’s five spurs that resemble an eagle’s talon.
Species name means “of Canada” or “of northeastern North America”.

Native Grasses

General care tips for ornamental grasses

- Most ornamental grasses prefer **full sun**.
- Most grasses are drought-tolerant, once established. **Avoid OVERWATERING.**
- Fertilization is usually unnecessary.
- Trim to 2-4 inches any time the grasses are dormant.
 - (Late fall until new growth begins in the spring)
- Cool-season grasses grow actively when the weather is cool.
 - spring and fall (turf grass).
- Warm-season grasses grow actively when the weather is hot.
 - (Rapid growth in summer and then enter dormancy as autumn approaches)



We have discussed sun and shade-loving herbaceous plants, and now we will discuss specific native grasses suited to landscape use. Here are some general care tips for these grasses:

Bottlebrush grass
Elymus hystrix v. hystrix



Left Photo – Seed Head by Mary Welch-Kessey

Right Photo – Leaves/stems <https://plants.ces.ncsu.edu/plants/elymus-hystrix/> by Kathleen Moore

***Elymus hystrix v. hystrix* (Bottlebrush grass) –**

Bottlebrush grass is a cool season grass: Remember, cool season grasses grow when the soil temperatures are cool – spring and fall.

This grass provides texture and visual interest in shady areas, forming loose, upright tufts.

Grass blades are medium green and narrow with a rough texture, up to 12 inches long.

Bottlebrush grass flowers are attractive, greenish and bristly, about 9-10 inches long, rising above summer foliage, hence the common plant name.

By late summer, flower heads mature to brown seed heads and remain on the plant into autumn, attracting birds. These seeds will self-sow, but the grass is not aggressive.

This native species tolerates drought, heavy shade, erosion, dry soil, and air pollution.

Bottlebrush grass is among those who can be planted near black walnut without suffering.

Interesting Notes **

The genus name derives from the Greek word *elymos*, a grain term.

The species name *hystrix* refers to a porcupine, based on the seed head's somewhat

porcupine quill resemblance.

Switchgrass
Panicum virgatum

Native Grasses



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Photo by Mary Welch-Kessey

***Panicum virgatum* (Switchgrass) –**

Switchgrass is a vigorous perennial, warm season grass that spreads by rhizomes, growing 3 to 4 feet tall, but sometimes up to 7 feet. Remember, warm season grasses grow when soil is warm.

The clumping form is topped by finely-textured, pinkish, branched flower panicles (loose branching cluster of flowers) and retains its stiff, vertical shape throughout the growing season.

Flower panicles turn beige as seeds mature in the fall, and the plumes persist into winter, providing food for birds.

Foliage also changes color with the seasons: Blue/green in summer, orange-yellow in fall, turning tan-beige through winter dormancy.

Switchgrass is not phased by deer grazing, and the plant tolerates slightly saline (salty) conditions well.

Interesting Notes **

The genus name comes from a Latin word for “millet”.

The species name means “twiggy”.

Little bluestem
Schizachyrium scoparium



Native Grasses



Photos by Mary Welch-Kessey

***Schizachyrium scoparium* (Little bluestem) –**

Little bluestem is an iconic warm-season prairie grass commonly used in landscaping and habitat restoration projects, maturing to 2-4 feet tall in upright clumps of slender, flat green leaves $\frac{1}{4}$ inch wide.

Each leaf displays a tinge of blue at the base, and purplish-bronze August flowers are produced in 3-inch long racemes (flowers on short stalks) on branched stems.

Flowers are followed by clusters of fluffy, silvery-white seed heads that persist into winter, adding garden interest atop foliage that turns shades of brown, copper, and crimson after first frost.

Skipper caterpillars feed on the foliage, as do grasshoppers, Prairie Walkingsticks, the leaf-mining beetles, thrips spitterbugs, and leafhoppers. Seeds are eaten by songbirds.

Little bluestem thrives in moist or droughty soils, and its adaptability makes it one of the most widely distributed species of grass in the United States.

Alongside side-oats Grama, Little bluestem often dominates shortgrass prairies. In tallgrass prairies, companion grasses include Big bluestem, Indian grass, and Switchgrass.

Seed heads can be removed to control seedling spread, although consecutively harvesting this species for hay will likely cause it to dwindle.

This high-utility species tolerates deer browse, drought, erosion, dry soil, shallow rocky soil, air pollution, and Black Walnut presence.

Indiangrass *Sorghastrum nutans*

Native Grasses



Photos by Amy Thompson

***Sorghastrum nutans* (Indiangrass) –**

Indiangrass is a warm-season perennial native to prairies, glades, and open woods. Once one of the dominant species in Midwestern tallgrass prairies, this species grows 3 to 5 feet tall, with upright form and blue-green foliage. Foliage turns orange-yellow in fall and retains color hints into the winter. In late summer, stiff, vertical flowering stems are topped with feathery, light brown flower panicles 12 inches long. These panicles darken to bronze-chestnut as they mature in fall, fading to gray. As with many native species, Indiangrass can tolerate tough conditions like drought, erosion, rocky soil, Black Walnut, and air pollution.

Interesting Notes **

The genus name comes from the Greek language, meaning “a poor imitation of sorghum,” another plant in the grass family.

The species name *nutans* means “to nod” or “nodding”.

Prairie dropseed
Sporobolus heterolepis



Photos by Mary Welch-Kessey

***Sporobolus heterolepis* (Prairie dropseed) –**

Prairie dropseed is a delicate grass that grows in a 1.5 to 2 feet tall hummock habit, meaning “hump” or “ridge”.

Autumn foliage is often orange, as seen in **left photo**, fading to copper.

With fine foliage, Prairie dropseed might be “the most elegant and refined of the prairie grasses.”

A slow grower, it does not readily self-seed and is hardy warm-season grass to Zone 4

Serviceberry *Amelanchier arborea*

Native Shrubs and Small Trees



Photos by Amy Thompson & Todd Stevenson
Photo Credit – Purdue Arboretum

***Amelanchier arborea* (Serviceberry) –**

Serviceberry is a deciduous tree (loses leaves each season), growing 15 to 25 feet tall in a narrow, rounded form.

In the wild, this species can reach heights of 40 feet.

Its multi-stemmed form consists of trunks 6 inches in diameter.

If root suckers (shoots springing from the root of a plant) are not removed, it will be more shrub-like.

Spring brings white, fragrant, five-petaled flowers, followed by finely-toothed leaves with hairy undersides.

Young bark is smooth, with vertical splits and furrows as the tree ages.

Red-purple berries, resembling the appearance of blueberries, ripen in summer and are a food source for songbirds, including the cedar waxwing.

Bees, beetles, and flies are attracted to this plant, and it tolerates clay soil and air pollution.

Insects that might be considered pests of this species include leafminer, pear sawfly, spider mites, aphids, peach borer, and scales.

It is susceptible to cedar apple rust, glomerella leaf spot (fungus that leads to premature defoliation), fruit rot, fire blight, powdery mildew, and witch's broom (clusters of weak shoots).

Witchhazel
Hamamelis virginia



Photos by Mary Welch-Kessey

Developer's note: "Not in POL-6 but included it for winter interest."

***Hamamelis virginia* (Witchhazel) –**

Common witchhazel is a fall-blooming, deciduous shrub or small tree that is attractive to birds and tolerates deer, erosion, and clay soils.

Native to North American woodlands, forest margins, and stream banks, it typically grows 15 to 20 feet tall and wide in cultivated settings, but can reach 30 feet in native habitat.

Clusters of fragrant, bright yellow flowers hug the stem from October to December, usually after leaf drop.

Flowers each boast four crinkly, ribbon-shaped petals, and in winter, fertilized flowers will form greenish seed capsules that become woody and brown with age.

Each seed capsule splits open in the next fall, exploding 1-2 black seeds up to 30 feet away. Medium dark, oval to obovate 6-inch leaves with wavy margins turn yellow in fall.

Interesting Notes **

The genus name comes from the Greek words *hama*, meaning "at same time," and *melon*, meaning "apple" or "fruit," in reference to the occurrence of both fruit and flowers at the

same time on this shrub.
The species name means “from Virginia”.

Smooth hydrangea
Hydrangea arborescens



Photos by Mary Welch-Kessey & Purdue Arboretum

Developer's note: "Not in POL-6 but included because easy to grow shrub"

***Hydrangea arborescens* (Smooth hydrangea)** – Common name: Wild hydrangea

Smooth hydrangea, a drought-intolerant native, can be found on moist or rocky wooded slopes, ravines, streambanks, and bluff bases.

Its gray-brown stems support 2 to 6-inch, broad, egg-shaped/rounded, sharply-toothed green leaves that turn yellow in fall.

Tiny, white fertile flowers bloom from May through July in flattened, hairy clusters. A few larger, sterile flowers usually appear closer to the cluster margins (as see in **Left photo**).

Blooms form on the current year's new woody growth. To encourage this new growth and increased flowering, you should prune Smooth hydrangea to near ground-level in late winter.

Flowers give way to dehiscent seed capsules (capsules that split open) beginning in October.

Several cultivars (a plant produced by selective breeding) have sterile flowers that form ball-shaped blooms, and others have been bred for pink flowers.

Unlike other hydrangeas, smooth hydrangea flower color is not altered by soil pH changes.

Interesting Notes **

The genus name *Hydrangea* comes from *hydor*, meaning “water” and *aggeion*, meaning “vessel,” referring to the cup-like capsular fruit.

The species name comes from *arbor*, meaning “tree,” as this shrub looks like a small tree.

Buttonbush
Cephalanthus occidentalis



Left Photo by Mary Welch-Kessey - shrub with water

Right Photo by Amy Thompson – Tiger swallowtail

***Cephalanthus occidentalis* (Buttonbush) –**

Native to most of the lower 48 states (excluding the Pacific Northwest and some western states), Buttonbush is a deciduous relative in the Coffee family, *Rubiaceae* (*Roo-be-ay-see-i*).

It naturally grows in USDA zones 4 through 9 and requires full sun to part shade and medium to wet soils, tolerating temporary flooding and standing water.

In the wild, it is found in thickets, low woods, swamps, and stream margins, making it ideal as a rain garden or wetland restoration specimen.

Tiny, tubular white flowers are produced as dense, fragrant, spherical heads in early to mid-summer, attracting hummingbirds, butterflies, flies, and wasps.

Long, projecting styles (structures that develop the pollen tube for reproduction) give the flowers a pincushion-like appearance.

Maturing into hard, rounded fruits filled with nutlets, these fruiting heads persist throughout winter.

Buttonbush leaves emerge in late spring, 6 inches long with ovate shape and glossy bright green color, arranged in pairs or whorls.

Interesting Note **

The genus name derives from the Greek *kephale*, meaning “head” and *anthos*, meaning “flower.”

Gray dogwood
Cornus racemosa



Photo by Amy Thompson

***Cornus racemose* (Gray dogwood) –**

Gray dogwood is a deciduous shrub found naturally in moist or rocky soils along streams, ponds, wet meadows, glade and prairie margins, thickets, and rocky bluffs.

Growing 10-15 feet tall, this native produces white flowers in terminal racemes on red terminal stems in late spring (hence, the species name), attracting bees.

The summer azure butterfly uses this plant as its host, as well as New Jersey tea.

Foliage emerges gray-green, elliptic to lance-shaped and often turns dusky purple-red in fall.

Gray dogwood produces small white berries after flowering, providing an eye-catching contrast to the landscape.

Interesting Notes **

The genus name comes from the Latin word *cornus*, meaning “horn,” probably referencing the strength and density of the plant’s wood.

The species name refers to the flowers being produced in racemes (cluster of flowers on stalk).

Winterberry
Ilex verticillata



Right Photo by Amy Thompson - berries

Left Photo by Jim Roberts <https://plants.ces.ncsu.edu/plants/ilex-verticillata/>
flowers/foliage

***Ilex verticillata* (Winterberry)** – Common name: Winterberry holly

Winterberry, a native deciduous holly, is notable for its bright red berries that remain on the plant into winter.

Beyond adding landscape color and interest, the berries feed winter birds when other food can be scarce.

This species thrives near lake, pond, or marsh edges and in swamps, preferring full sun to part shade and mesic to wet soils, developing yellowed leaves in high pH or neutral soils. It prefers full sun to part shade and mesic to wet soils. It is a great plant for lake, pond or marsh edges. It also grows in swamps and at the edges of upland forests where the water table approaches the surface.

Typically reaching heights of 6 to 10 feet, with a rounded habit winterberry spreads slowly by root suckering.

Its dark green leaves are toothed and elliptic, occasionally turning attractive shades of maroon in autumn, although color is usually not notable.

Inconspicuous green-white flowers appear in the leaf axils in late spring and will produce a

crop of ¼ inch, bright red, showy berries in late summer to fall, persisting through winter and early spring.

Flowers are attractive to bees, and winterberry is the host plant of the summer azure butterfly larvae.

This species is dioecious, meaning that male and female flowers are produced on separate plants. A plant with male flowers must be within 50 feet of a female plant for pollination.

Interesting Note **

The genus name comes from the Latin name *Quercus ilex*, for “holm oak,” due to the similarities between the two plants’ foliage.

Ninebark
Physocarpus opulifolius



Center Photo by Amy Thompson – purple cultivar close-up

Right Photo by F.D. Richards <https://plants.ces.ncsu.edu/plants/physocarpus-opulifolius/> - 'Diablo' cultivar

Left Photo by Dan Mullen <https://plants.ces.ncsu.edu/plants/physocarpus-opulifolius/> - Green leaves/flowers

***Physocarpus opulifolius* (Ninebark) –**

Ninebark is a native shrub in the Rose family, reaching heights of 5 to 9 feet and almost as wide.

Older plants may be pruned to the ground in winter to maintain a smaller appearance.

It is noted for the exfoliating bark on mature branches, which peels in strips to reveal layers of reddish inner bark (hence the common name, Ninebark).

While the bark is hidden during the growing season, it provides striking visual interest in the winter.

Featuring small pink or white, five petaled June flowers, this plant goes on to develop clusters of reddish inflated seed capsules.

Spring foliage is dull green, made of ovate to rounded 3 to 5-lobed leaves, and this plant provides excellent cover for birds, with its numerous arching stems.

Ninebark is susceptible to fire blight and leaf spot, but no serious insect or disease issues

can be expected.

This plant works well as a shrub border mass, hedge, screen, or for erosion control on banks. Single specimens do nicely in native plant gardens, even in harsh conditions.

Interesting Notes **

The genus name comes from the Greek *physa*, meaning “bladder,” and *karpos*, meaning “fruit.”

The species name refers to resemblance between the leaves of Ninebark and those of *Viburnum opulus*

Fragrant sumac
Rhus aromatica



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Photos are courtesy of *Purdue Arboretum*

***Rhus aromatica* (Fragrant sumac) –**

Fragrant sumac is a dense, rambling, low-growing deciduous shrub that spreads by root suckers to form thickets in the wild.

Typically growing up to 4 feet tall and 10 feet wide, Fragrant sumac produces medium green trifoliate leaves that change to orange, red, and purple in autumn, resembling those of poison ivy.

Fragrant sumac, however, is *not* poisonous in any way.

When bruised, leaves and twigs are aromatic, and tiny yellow female flowers bloom at the twig tips in early spring, prior to foliage emergence.

Female flowers give way to small clusters of hairy, red berries in late summer, feeding wildlife through the winter.

In addition to female flowers, fragrant sumac also produces catkins (male flowers) in late summer that persist into winter, blooming in the spring.

Ninebark exhibits some susceptibility to leaf spot, rust, scale, aphids, and mites. Nipple galls are somewhat common on foliage, but they generally pose only a cosmetic concern.

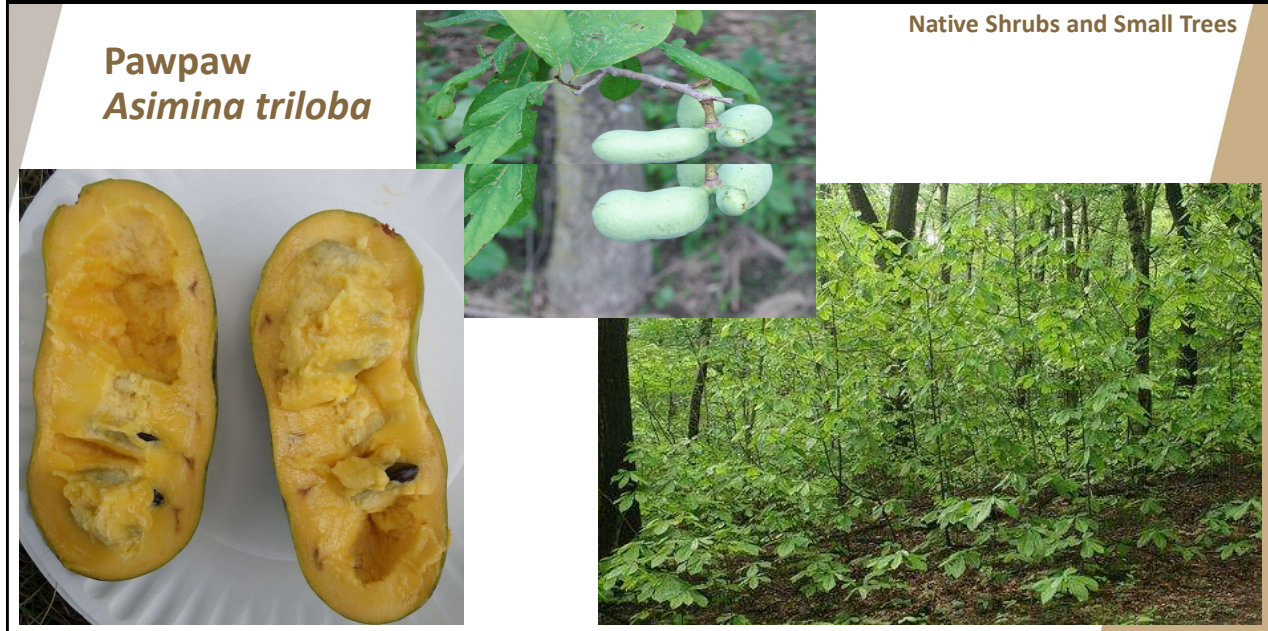
This native is ideal for stabilizing embankments and hard-to-cover areas with

poorer soils.

Its tolerance of rabbits, drought, erosion, clay, rocky, and dry sites make it ideal for native natural areas.

Interesting Note **

The species name means “fragrant.”



Native Shrubs and Small Trees

Left Photo courtesy of *Purdue food link*

Center Photo <https://fff.hort.purdue.edu/article/crop-conditions-42/> - leaves and fruit

Right Photo by Dogtooth77 <https://plants.ces.ncsu.edu/plants/asimina-triloba/> - pawpaw colony

The last native species on our list is of somewhat questionable ornamental value, although interesting and valuable to wildlife.

***Asimina triloba* (Pawpaw) –**

Pawpaw is a native understory tree/large shrub that typically grows 15 to 20 feet tall, sometimes reaching 30 feet.

It occurs in low bottom woods, on wooded slopes, ravines, and along streams, often spreading by root suckers to form colonies.

Leaves are 6 to 12 inches long, with medium green color and elliptical shape. In late fall, leaves turn bright yellow.

Cup-shaped purple flowers appear in spring and, when fertilized, produce edible, oblong, yellowing green fruits that mature to brown in autumn,

The flavor and fleshy consistency of the sweet fruits is reminiscent of banana. They

are eaten raw or used in desserts, although they can produce nausea in some people. Wildlife such as raccoons, squirrels, and opossums often beat humans to the fruit harvest.

It can be grown in a shrub border or woodland margin, especially along ponds or streams.

Interesting Notes **

The genus name comes from the Latinized version of the French form of the Indian name for this North American genus.

Early Americans made a yellow dye from the pulp of the ripened fruit.

From Invasive to Native: Monroe County Courthouse



This is an example of transforming landscape from invasive to native. The NE corner of the Monroe County Courthouse featured invasive burning bush (**Left photo**), purple wintercreeper (**Right photo, vines**), and yews (**shrubs in both photos**) in 2011. The efforts of individuals, agencies, and organizations, including Indiana Native Plant Society, transformed this landscape into all native plants.



These photos were taken after the removal of invasive species to make way for a prepared mulch bed. In the **left photo**, you can see volunteers planting native shrubs and herbaceous perennials.



Purdue Extension Master Gardeners and IDNR Master Naturalists helped to establish natives in the prepared beds. The garden includes informational signage, helping viewers to identify native plants and spread the word about their importance.



The plants in this public garden attract a variety of insects to the downtown area, such as the hawkmoth (**Right photo**) on the bergamot flower. Birds are also attracted to the area. You can see a goldfinch perching on a native purple coneflower in the **Center photo**.



This table provides important information about selecting plants for establishing pollinator habitats. It is a companion piece to *Protecting Pollinators: Best Management Practices for Indiana Pollinator Habitat* (Purdue Extension publication POL-5), available from the Education Store, www.edustore.purdue.edu.

Plant Information

The table provides information about many Indiana-native plant species. Native plants are preferable because of their close partnerships with native pollinators. The **Plant Information** columns provide **Sun** and **Soil Moisture** requirements, plant **Height**, plant **Flower Color**, and plant **Bloom Time**.

If checked, the **Hard to Find** column designates a species that may be difficult to find for sale, but is both very important to pollinators and very common in remnant forests. These hard-to-find

species may already be on your land, so watch for them and conserve them if possible.

If checked, the **Ephemeral** column refers to species that come up each year in the spring, produce flowers and fruits, and then die-back by late May. While they are only aboveground for a few months each year, these ephemerals are particularly important to pollinators, because so few species are in bloom in early spring.

Pollinator Connection

The **Pollinator Connection** columns indicate which pollinator groups (**Bee**, **Beetle**, **Butterfly/Moth**, **Fly**, **Hummingbird**, and **Wasp**) use each plant species.

The **Special Notes** column notes whether a plant is a host for larval butterflies or moths or if it attracts specialist bees (those bees which only pollinate a few plant species).

The **Pollinator Magnets** column, if checked, indicates a plant species that attracts an abundance of pollinators, or a very high diversity of pollinators, based on literature and field experience.

Where Can You Buy These Plants?

Many of these plant species may be available from any plant retailer. Others will require you to find a business that specializes in native plants.

The Indiana Native Plant & Wildflower Society (INPAWS) certifies Grow Native businesses with a wide selection of Indiana native plants at grownativeindiana.org/buy-native. Be careful you purchase plants that have not been treated with neonicotinoid insecticides (commonly used on ornamental plants). Avoid applying insecticides in your planting, because they may kill or injure pollinators.

If you are interested in more information about native plants recommended for Indiana pollinators, please see Purdue Extension publication POL-6-W.



Brian Wood

Buy Natives Directory

- Green markers—Retail sellers
- Yellow markers—Retail sellers, limited sale dates
- Red markers—Wholesale only
- Blue markers—Landscape designers

Click on the markers nearest you and refer to the alphabetical list below for details. Plant seller names are shown in green banners, with notes on which sellers are wholesale, and which have limited sale dates (e.g., sell only a few days a year). Certified designers are shown in blue banners.



- Buy Natives Directory: <https://indiananativeplants.org/landscaping/where-to-buy/>
- Indiana Native Seed communities <https://indiananativeplants.org/a-pilot-project-indiana-native-seed-communities/#:~:text=An%20Indiana%20Native%20Seed%20Community,growing%20native%20plants%20from%20seed.>
- Invasive Plants and their Native Look-Alikes <https://canr.udel.edu/wp-content/uploads/sites/16/2018/03/12024154/Mistaken-Identity.pdf>

To acquire native plants, it is recommended to purchase from a nursery, rather than harvesting specimens from a wild area. Disturbed soils in natural areas are more prone to fostering invasive species introduction, and we want to avoid that.

If interested in purchasing natives, visit the first link on this slide. There, you will find a list of nurseries and the plants they sell. Purchasing wholesale provides cost savings.

For more information about native look-alikes to invasive plants, view the pdf at the second link.

You can also contact your local Purdue Extension Service for questions related to native and invasive species.

Resources

Plant Descriptions and Cultural Information Sources

- Recommended Indiana-native Plants for Attracting Pollinators, Pol – 6
<https://extension.entm.purdue.edu/publications/POL-6/POL-6.html>
- Missouri Botanic Garden <http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener.aspx>
- North Carolina Extension Gardener Plant Toolbox <https://plants.ces.ncsu.edu/>
- Illinois Wildflowers <https://www.illinoiswildflowers.info/>
- Indiana Native Plant Society <https://indiananativeplants.org/>
- Purdue University Arboretum <http://mlp.arboretum.purdue.edu/ecmweb/findPlant.php>



And as always: Read and Follow Pesticide Labels Carefully!

- Careful adherence to pesticide labels not only ensures that you are following the law, but it also puts you in the best position to successfully achieve your desired results.



And a friendly reminder that, if you are planning to remove invasive species and replace them with natives, it will take time, patience, and possibly the use of pesticides. When using pesticides, be sure to follow label directions and consult with a knowledgeable resource when deciding when, where, and how to apply any pesticide.

*Invasive Species Information from
Purdue University Extension*

<https://ag.purdue.edu/reportinvasive>

Questions?
Thank you!