Native and Pollinator Garden Guide

Franklin and Marshall College
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The Importance of Pollinators

Agriculture in Lancaster County

Lancaster’s long standing agricultural tradition is a cornerstone of our community. It draws families, businesses, and tourists; it is engrained into the culture. Life in the towns and cities of Lancaster County revolves around the county’s booming agricultural productivity. The ag industry brings upwards of 4 billion dollars into the local economy annually, making Lancaster one of the most productive agricultural centers in the nation. The success of the ag industry means the success of Lancaster’s economy and, more importantly, its culture and community. Its existence is what allowed Lancaster to become one of America's first inland cities and has allowed it to thrive for hundreds of years. For this reason, it is critical that we, as a community, work to support agriculture in Lancaster as best we can.

Pollinators and Agriculture

Attracting pollinators is a critical component of maintaining Lancaster County’s high level of agricultural productivity. Pollinators most notably include bees, butterflies, hummingbirds, as well as a plethora of other animals and insects, and these animals are responsible for transferring pollen from one flower to another for fertilization. This step allows for the development of many fruits and vegetables and supplies the seeds for the next generation of plants. Without the help of animal pollinators, much of the pollen necessary for fertilization would not be spread. Some locally grown crops such as blueberries and cherries are more than 90% dependant on animal pollinators. Even in crops that are capable of self pollination, animal pollinators increase the genetic diversity and general strength and robustness of the crop. A healthy pollinator population results in a healthier crop and increased yields.

How Pollinators Pollinate

Animal Pollinators are not actively trying to spread pollen from flower to flower. Instead, they use flower nectar and pollen as a source of food and are attracted to the flowers by their color, shape, and scent. While an animal is collecting nectar, the loose clingy pollen invariably falls onto the pollinator and is carries with it as it moves to the next flower, where it is deposited and allowed to fertilize the new flowers ovules.
The Purpose of Native Pollinator Gardens

Pollinator Populations in Danger

Recently the European honey bee, far and away the most important insect pollinator for the pollination of domesticated crops, has experienced a dramatic reduction in population due to a phenomenon known as Colony Collapse Disorder, which is thought to be the result of an excessive use of pesticides on agricultural fields. Because of the drop in honeybee populations, it is important that farmers begin looking to utilize a more diverse group of native pollinators for their crops, pollinators including native bees, butterflies, birds, and beetles. This will dissuade the cost of renting expensive non-native honey bees while helping to support native pollinator populations.

Why Grow a Native Pollinator Garden?

As we attempt to move away from the European honey Bee as our main agricultural pollinator, we need to find ways to adequately support the native pollinator populations. Native bees have a much more limited range in habitat than the honey bee, and as such, simply placing a hive near the margins of an agricultural field is not enough to ensure that the hive becomes established there and is capable of pollinating the adjacent field. In addition, with the expansion of agriculture and thus reduction of native habitat, native pollinator populations have been decimated. But this is by no means permanent. There are as many as 450 bee species native to Pennsylvania that can be utilized for agricultural use, and the best way to promote these native pollinator populations is to provide them with sufficient, native habitat. This is why developing native pollinator gardens is an important component to increasing native pollinator diversity and promoting agricultural productivity in Lancaster. Whether you are establishing a native pollinator garden in your backyard or integrating one into your agricultural fields, your efforts will help promote a large and diverse pollinator population capable filling the honey bee void.

Choosing Native Plants

While a traditional flower garden might do well to attract a few bees and butterflies, planting a garden of native plants for pollinators will attract more of the native pollinator populations and provide them with a valuable food source. The 450 bee species native to Pennsylvania have evolved for millennia to seek out the flowers native to this same region. This means that planting flowers also native to Lancaster County will more effectively attract the pollinators necessary to sustain our agricultural system.
How to Best Cultivate Your Native Pollinator Garden

Find Your Region

Naturally, the best way to attract native pollinators is with native plants, so the first step to creating your native pollinator garden is to establish which plants are native to your region. Further on is an extensive list of the native plants used in the pollinator gardens at Franklin and Marshall College to help you, but a field guide to your local environment or a simple internet search is sure to provide you with plenty of options.

Establish Your Soil Type

Native plants will be more likely to be adapted to your soil type, but test your soil for its acidity, nutrient content, and drainage in order to ensure you are selecting plants that with thrive your soil. You can do this using a soil testing kit from a hardware store.

Variety is Key

Because there are such a diverse number of pollinators out there, it is best to grow a large variety of plants to attract as many as possible. Choose plants of different sizes, shapes, colors, and scents as to ensure that your garden contains plants that are attractive and accessible to as many pollinator species as possible.

Go Organic

Growing an organic pollinator garden is especially important as many pesticides can be harmful to pollinators, and bees in particular. Pesticides are thought to be the main culprit in causing colony collapse disorder in honey bee hives. In addition, many of the important pollinator species are insects that will be repelled by generic pesticides.

Use Host Plants

One way to ensure you are attracting pollinators is to use the native host plants for pollinator larvae. For example, the swamp milkweed host to Monarch and Queen butterflies. Though bare in mind that the larvae will be eating the foliage of these plants.

Additional Resources

Include old dead wood or pieces of lumber with holes drilled inside to provide a nesting area for native bees. Providing overripe or rotting fruits will help in attracting butterflies, and supplying sugar water in a hummingbird feeder will bring hummingbirds to your garden in droves.
Pollinator Plant Guide of Franklin and Marshall College

Alumroot - *Heuchera Americana*

Attracted Pollinators: Bees  
Duration: Perennial  
Native: yes  
Size: 12-36” high  
Growing Conditions:  
- Light Exposure: shade - partial shade  
- Water Use: low - medium  
- Soil: mildly acidic (>6.8), moist, humus rich, tolerant of nutrient poor soil

The alumroot is a plant native to the eastern United States and specially attracts bees for pollination. It grows to be between 1 and 3 feet in height, with a leafless, hairy, sticky stalk containing slender clusters of pale, cup-shaped flowers protruding from a cluster of leaves at its base. Its leaves a fuzzy and lobed and can vary in color depending on the season. It is valued as groundcover in many pollinator gardens.

Aster ‘Alert’ - *Aster Novi-belgii*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: yes  
Size: 10-12” high; 12-18” spread  
Growing Conditions:  
- Light Exposure: Full Sun  
- Water Use: moderate  
- Soil: neutral to alkaline pH, medium/moist, sandy or clay soil, nutrient rich

Aster ‘alert’ a plant is native to much of North America. Its vibrant red and purple flowers, blooming beginning in late summer until early fall, attracts butterflies for pollination. They have dark, narrow leaves and generally grow in large, wide bushes which should be divided every few years to maintain their health. Asters require fertile soil and lots of sunlight.
**Autumn Cheer Azalea - *Rhododendron ‘Autumn Cheer’***

Attracted Pollinators: Bees and Butterflies  
Duration: Perennial  
Native: no, interspecific hybrid  
Size: 24-36” high; 36-48” spread  
Growing Conditions:  
  - Light Exposure: Dappled, slightly shaded  
  - Water Use: moderate - avoid excessive watering  
  - Soil: mildly acidic (>6.8), moist, nutrient rich, humus rich

The autumn cheer azalia is an interspecific hybrid between the rhododendron and the azalia. As the name implies, it flowers in the fall as well as the spring. Its brightly colored, trumpet-shaped flowers are ideal for attracting bees and butterflies. Growing in large, dense bushes, it requires relatively little maintenance and is long-lived (up to 40 years), though its soil conditions must be carefully maintained.

**Black-Eyed Susan - *Rudbeckia Speciosa***

Attracted Pollinators: Butterflies and Songbirds  
Duration: Perennial  
Native: yes  
Size: 24-36” high; 18-24” spread  
Growing Conditions:  
  - Light Exposure: Full Sun to light shade  
  - Water Use: low to moderate  
  - Soil: thrives in a broad range of pHs, well drained, not excessively rich or moist

Black-eyed susans moderate sized flowering bushes native to eastern and central North America. Their large, open, bright-yellow blossoms attract butterflies and the distinctive large dark-colored seed heads attract songbirds as the flower’s main sources of pollination. These hardy plants do well soil that is well drained and not overly rich. They continue to blossom from midsummer through Autumn.
Blue Woodland Phlox - *Phlox Stolonifera*

Attracted Pollinators: Butterflies and Hummingbirds  
Duration: Perennial  
Native: yes  
Size: 6-10" high; 24" spread  
Growing Conditions:  
- Light Exposure: Shaded  
- Water Use: Moderate  
- Soil: thrives in broad pH range, moist & well drained, nutrient rich

The blue woodland phlox is a low-lying plant native to Pennsylvania and Ohio. Once well established, they can be very drought tolerant and thrive well in shaded areas. As the name implies, they have powder-blue, fragrant flowers, which bloom from early spring through early summer, providing a valuable nectar source for hummingbirds and butterflies. What the blue woodland phlox lack in height, it makes up for in spread, making it a highly effective plant for extensive ground cover.

Butterfly Weed - *Asclepias Tuberosa*

Attracted Pollinators: Butterflies and Bees  
Duration: Perennial  
Native: yes  
Size: 12-30" high; 12-18" spread  
Growing Conditions:  
- Light Exposure: full sun  
- Water Use: dry to moderate  
- Soil: mildly acidic pH (>6.8), moderate to dry soil, thrives in nutrient poor soil

Butterfly weed is native to the arid plains of North America. Its large tap root make it highly drought resistant and allows it to thrive in soils lacking carbon and nitrogen. The native bush has small, fragrant, bright-orange flowers that form tight bunches on the terminus of its stems and effectively attract a variety of pollinators (butterflies in particular), and bloom starting in late spring and lasting throughout summer. It also acts as a host plant to Monarch and Queen butterfly larvae.
Calico Aster - *Aster Lateriflorum*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: yes  
Size: 36-48" high; 36" spread  
Growing Conditions:  
- Light Exposure: full sun or partial shade  
- Water Use: low to moderate  
- Soil: acidic (>6.5), moderate to moist soil, adapts to most soil types

The calico aster is a large plant native to eastern and central North America. These plants are fairly hardy, capable of withstanding drought and tolerant to a range of soil nutrient content. The thin hairy stems go from green to deep red as the season progresses. The small, purple-white flowers with yellow or red centers attract butterflies for pollination. The calico aster also serves as a butterfly host plant to certain caterpillars.

Common Witchhazel - *Hamamelis Virginiana*

Attracted Pollinators: Birds  
Duration: Perennial  
Native: yes  
Size: 15-20 feet high; 15-20 feet spread  
Growing Conditions:  
- Light Exposure: full sun to partial shade  
- Water Use: moderate  
- Soil: acidic (>6.8), moist, well-drained, organically rich soil

The common witchhazel is a small tree or shrub native to the central United States at forest margins. It blooms narrow, wrinkled, yellow-orange flowers through the late fall. Fertilized flowers form greenish fruits that mature through the winter and on through the next year. These seed capsules eventually become woody and split open in late fall, expelling the small seeds up to 30 feet. These fruits and seeds then attract birds for pollination of the newly bloomed flowers.
Culver’s Root - *Veronicastrum Viriginicum*

Attracted Pollinators: Butterflies, Bees  
Duration: Perennial  
Native: yes  
Size: 48-84” high; 24-48” spread  
Growing Conditions:  
- Light Exposure: full sun  
- Water Use: moderate to wet  
- Soil: Thrives in broad pH range, slightly moist to wet, well drained  

Culver’s root is a large shrub native to the northeastern United States. It’s most notable characteristic are the tall flowering spindles which bloom clong clusters of oval-shaped flowers from late spring through late summer. The blossoms can range in color from pale blue to white. Because of their need for high soil moisture and a significant amount of water, culver’s root is an ideal choice for native rain gardens.

Eastern Redbud - *Cercis Canadensis*

Attracted Pollinators: Butterflies, Song Birds  
Duration: Perennial  
Native: yes  
Size: 20-30 feet high; 25-35 feet spread  
Growing Conditions:  
- Light Exposure: full sun to partial shaded  
- Water Use: moderate  
- Soil: neutral pH, medium moisture, well drained, moderate nutrient concentrations  

Native to eastern and central North America, this small, multi-trunked tree proliferates along forest margins and in woodland thickets. It produces vivid, pink-purple, flowers which aggregate all along the bare branches. These small, round blossoms bloom prior to the tree’s leaves in vary early spring, and is often seen as an indicator of spring’s arrival. The flowers provide a valuable source of nectar for butterflies, and the subsequent seed pods often attract songbirds.
False Indigo - *Baptisia Australis*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: yes  
Size: 36-48” high; 36-38” spread  
Growing Conditions:  
- Light Exposure: full sun to partial shade  
- Water Use: dry to moderate  
- Soil: neutral pH, dry to moderate moisture, well drained, tolerant to drought and poor soil

The false indigo is native to the easternmost United States, proliferating in rich woods from Pennsylvania to Tennessee. This upright bush produces bluish-purple, lupin-like flowers along tall stems that extend upward from the rest of the foliage. These flowers have a fairly short lifespan, lasting only through the months of May and June, and ultimately producing long, thin black seed pods that rattle when ripe.

Field Goldenrod - *Solidago Nemorosa*

Attracted Pollinators: Birds, Bees, and Butterflies  
Duration: Perennial  
Native: yes  
Size: 18-24” high, 6-24” spread  
Growing Conditions:  
- Light Exposure: full sun  
- Water Use: dry to moderate  
- Soil: Slightly acidic (>6.8), dry, well drained, tolerant of drought and poor soil

The field goldenrod is a wildflower native to much of the US and Canada east of the Rockies. These exceptionally hardy plants grow well in poor, dry, sandy, rocky soils. They proliferate using rhizomes as well as seeds, and tend to dominate their surrounding environment. Field goldenrods bloom small, bright, yellow flowers clustered on one side of the arching grey-green stems beginning in late summer and continuing throughout the fall. These flowers are highly attractive to an assortment of pollinators.
Foxglove Beardtongue - *Penstemon Digitalis*

Attracted Pollinators: Hummingbirds, Bees, Butterflies  
Duration: Perennial  
Native: yes  
Size: 36-60” high; 18-24” spread  
Growing Conditions:  
- Light Exposure: full sun  
- Water Use: Dry to Moderate  
- Soil: neutral pH, dry, very well drained

Foxglove beardtongue is a tall flowering plant native to the eastern and southern United States. It colonizes in open fields or prairies and along woodland margins. Clustered at the tops of their dark, rigid stems are trumpet shaped, pinkish-white, two-lipped flowers. This long narrow flower shape is ideal for attracting hummingbirds and long-tongued bees such as honey bees and bumblebees as pollinators. The blossoms, blooming from mid to late spring, contain 4 fertile stamen and one infertile stamen, hence “penstemon.”

Garden Phlox - *Phlox Paniculata ‘Jeana’*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: yes  
Size: 24-48” high; 18-36” spread  
Growing Conditions:  
- Light Exposure: full sun to partial shade  
- Water Use: Moderate  
- Soil: neutral pH, moderately moist, well drained, moderate fertility

The garden phlox ‘jeana’ is a flower native to the eastern united states, though has been naturalized in the west as well. It has dense, round clusters of small pink flowers at the terminus of its stems. The flowers themselves possess a conical tube surrounded by five flat round petals. These flowers bloom from mid to late summer and are extremely fragrant, making them highly attractive to butterflies in particular.
Golden Ragwort - *Packera Aurea*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: yes  
Size: 6-30” high; 6-18” spread  
Growing Conditions:  
- Light Exposure: full sun to shade  
- Water Use: moderate to wet  
- Soil: neutral pH, moist to wet (maintain moisture), well drained  

The golden ragwort is a wildflower native to the eastern United States and Texas. Its thin narrow stems rise from a fairly dense collection of leaves at its base, and ends in a flat cluster or bright yellow, daisy-esque flowers. The flowers have sparse, this petals surrounding a round, yellow head. This wildflower can thrive even in substantial shade, but the plant required fairly high and consistent soil moisture to survive.

Rough Goldenrod - *Solidago Rugosa*

Attracted Pollinators: Bees, Butterflies  
Duration: Perennial  
Native: yes  
Size: 30-36” high; 30-36” spread  
Growing Conditions:  
- Light Exposure: full sun  
- Water Use: Moderate to wet  
- Soil: neutral to slightly acidic, moist, well drained, tolerant to poor soil  

The rough goldenrod, very similar in appearance to its cousin the field goldenrod, is a native of eastern North America, stretching further west down south. The stalky bush blooms tiny, vivid yellow flowers with short narrow petals in the early fall, from September to October. The small blossoms aggregate along the upward facing sides of the stems, causing them to arch downward in a pattern resembling fireworks. It has been wrongly accused as the flower responsible for hay fever.
Lady Fern - *Athyrium Felix-femina*

Attracted Pollinators: none  
Duration: Perennial  
Native: yes  
Size: 12-36” high; 12-30” spread  
Growing Conditions:  
- Light Exposure: partial to full shade  
- Water Use: Moderate  
- Soil: slightly acidic (>6.8), well moistened, well drained, humus and nutrient rich  

The lady fern is a very common fern that proliferate throughout nearly all temperate regions of the Northern Hemisphere. Its characteristic lacy cut, fractal fronds contain between twenty and thirty leaflets (pinnae) each cut into sub-leaflets (pinnules). Ferns are seedless, with spore capsules located on the backsides of its fronds. Lady ferns are typically a light green, though they change to varying colors of greenish-yellow with the onset of fall.

Meadowsweet - *Spirea Latifolia*

Attracted Pollinators: Bees, Butterflies  
Duration: Perennial  
Native: yes  
Size: 24-48” high; 24-48” spread  
Growing Conditions:  
- Light Exposure: full sun to partial shade  
- Water Use: Wet to Moderate  
- Soil: neutral pH, well moistened, well drained, tolerant to poor nutrient content  

The meadowsweet is a wildflower native to the northeast of North America. It’s small, light pink, five petal flowers aggregate at the top of the branching stems in conically shaped clusters. The fragrant meadowsweet flowers bloom from mid to late summer and are highly attractive to pollinators such as bees, songbirds, and butterflies. The azur butterflies that inhabit woodland edges use the meadowsweet as a host plant for its caterpillars.
Mountain Laurel - *Kalmia Latifolia*

Attracted Pollinators: Bees  
Duration: Perennial  
Native: yes  
Size: 5-15 feet high; 5-15 feet spread  
Growing Conditions:  
  - Light Exposure: Partial Shade  
  - Water Use: Moderate  
  - Soil: acidic (>6.5), moist, cool, well drained  

The mountain laurel is a dense, evergreen shrub native to the eastern United States and proliferates in a variety of habitats. Its dense clusters of light pink, cup-shaped flowers bloom in mid to late spring, giving was to small brown fried persisting into the winter.. Given adequate space and time, the mountain laurel can even grow to become a small tree of up to 30’ in height. Its oblong, pointed leaves are two toned: evergreen on top and yellow beneath.

Mountain Mint - *Pycnanthemum Muticum*

Attracted Pollinators: Butterflies and Bees  
Duration: Perennial  
Native: yes  
Size: 12-36” high; 12-36” spread  
Growing Conditions:  
  - Light Exposure: full sun to partial shade  
  - Water Use: Moderate  
  - Soil: neutral pH, moderately moist, drought tolerant, fertile and nutrient rich  

Mountain mint is an herbaceous plant native to eastern North America. It thrives along woodland margins and can spread using rhizomes. Its broad, heart-shaped, green leaves posses a strong minty aroma when crushed. It’s two-lipped, tubular flowers are white and pink in color and bloom in dense, irregular clusters at the terminus of stems and are highly attractive to bees and butterflies. Mountain mint is also fairly tolerant to drought.
Pennsylvania Sedge - *Carex Pensylvanica*

Attracted Pollinators: None
Duration: Perennial
Native: yes
Size: 6-12” high, 6-12” spread
Growing Conditions:
- Light Exposure: partial to full shade
- Water Use: dry to moderate
- Soil: neutral pH, dry to lightly moistened, well drained, drought tolerant

Pennsylvania sedge is a clumpy grass native throughout much of the eastern United States and Canada. Growing in loose colonies, it is composed of a tight aggregations of thin, arching, blades and taller, more rigid flowering stems known as culms. These flowers are typically dull in color or brown. The characteristic individual clumps rise from a colonizing rhizome of a neighboring individual. The pennsylvania sedge thrives as groundcover in shaded areas and is fairly hardy and drought tolerant.

Purple Coneflower - *Echinacea Purpurea*

Attracted Pollinators: Birds and Butterflies
Duration: Perennial
Native: yes
Size: 24-60” high, 18-24” tall
Growing Conditions:
- Light Exposure: full sun to partial shade
- Water Use: dry to moderate
- Soil: pH tolerant, dry to moderately moist, well drained, tolerant of poor nutrient concentration

Native to the Eastern United States, the purple coneflower is a hardy plant that thrives in fairly open habitats such as prairies, meadows, and open forest. Its vivid purple flower petals point downward from the large, spiny, reddish-orange flower head, creating a general cone-like shape. These blossoms, extending from the tops of long stiff stems, bloom throughout the summer months attracting an assortment of pollinators such as birds and butterflies.
Red Maple - *Acer Rubrum*

Attracted Pollinators: none  
Duration: Perennial  
Native: yes  
Size: 40-70 feet high; 30-50 feet spread  
Growing Conditions:
- Light Exposure: full sun to partial shade  
- Water Use: moderate to wet  
- Soil: slightly acidic (>6.8), fairly moist, well drained, cold tolerant

The red maple is a moderately sized deciduous tree native to eastern and central North America. It has a large, dense, domed canopy of broad leaves with three main pointed lobes. The leaves are initially light green in color, but with the onset of autumn, the leaves slowly turn the tree's characteristically vivid red color. The tree flowers red, droopy flowers in late winter to early spring, and, when fertilized, produces two winged samara fruit.

Red Twig Dogwood - *Cornus Sericea*

Attracted Pollinators: Birds and Butterflies  
Durations: Perennial  
Native: yes  
Size: 6-9 feet high, 8-12 feet spread  
Growing Conditions:
- Light Exposure: full sun to partial shade  
- Water Use: wet to moderate  
- Soil: neutral pH, very moist, well drained, organically rich and fertile soil

The red twig dogwood is a deciduous shrub native throughout the northern reaches of North America, thriving in wet, swampy habitats. Its oval, pointed leaves fade from green to red to purple with the onset of fall, eventually falling to expose the shrub’s quintessential red stems. The red twig dogwood produces small, fragrant, four-petaled, white flowers clustered together. When pollinated, these flowers give way to small spherical white fruit, which attracts birds.
Rosebay Rhododendron - *Rhododendron Maximum*

Attracted Pollinators: Bumble Bees and Birds  
Duration: Perennial  
Native: yes  
Size: 8-15 feet high; 8-15 feed spread  
Growing Conditions:  
  - Light Exposure: Partial Shade  
  - Water Use: Wet  
  - Soil: Slightly acidic (>6.8), cool, well moistened, well drained

The rosebay rhododendron is a large shrub native to the southeastern United States, particularly in Appalachia. The shrub blooms white to pink, five-sided, cupped flowers with rounded oblong petals which bloom from late spring to early summer. The flower’s fragrance attracts bumblebees and is a valuable source of nectar for them, however to humans, the plant is known to possess toxic chemicals that are deadly when ingested.

Swamp Milkweed - *Asclepias Incarnata*

Attracted Pollinators: Monarch Butterflies, bees  
Duration: Perennial  
Native: yes  
Size: 24-60” high; 24” spread  
Growing Conditions:  
  - Light Exposure: full sun to partial shade  
  - Water Use: wet  
  - Soil: neutral to slightly acidic, very moist, well drained, humus and nutrient rich

The swamp milkweed is a native to much of North America east of the Rocky Mountains and is typically found in marshes or swamps. Its small white and pink, five-sided flowers are densely clustered at the terminus of its stems and with a lengthy bloom time, stretching from June to October. Its leaves are long and narrow with pointed tips and serve as an important source of nutrients for developing monarch and queen caterpillars. The milkweed is most famously the host plant for Monarch and Queen Butterflies, though its fragrant flowers are also highly attractive to bees.
Threadleaf Coreopsis - *Coreopsis Verticillata*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: yes  
Size: 30-36: high; 18-24" spread  
Growing Conditions:  
  - Light Exposure: full sun  
  - Water Use: dry to moderate  
  - Soil: neutral pH, dry to moderate moisture, well drained, tolerant of poor, rocky soil  

The threadleaf coreopsis is a small shrub native to the eastern United States. This hardy bush is drought tolerant and thrives in poor, rocky soil. It spreads easily and rapidly through both self seeding and rhizomes. Blooming from late spring until late summer, the sunny, flat, yellow flowers are composed of eight broad, pointed petals surrounding the flower head protruding from the plant on stiff, narrow stems. Its leaves are narrow and long and forms three pronged branches.

Trumpet Honeysuckle - *Lonicera Sempervirens*

Attracted Pollinators: Hummingbird, Butterflies  
Duration: Perennial  
Native: yes  
Size: 8-15 feet high; 3-6 feet spread  
Growing Conditions:  
  - Light Exposure: full sun  
  - Water Use: moderate  
  - Soil: neutral to acidic pH, moist, well drained, nutrient rich  

The trumpet honeysuckle is a deciduous vine native to the southeastern United States, though it has become naturalized in many non-native regions. Its five-petalled flowers are typically soft red in color, sometimes tinged with orange and have very long drooping necks that open at the very end. They eventually give way to small red berries. Though they are not fragrant, this is the ideal shape for attracting pollinators such as butterflies and hummingbirds.
Wild Petunia - *Ruellia Humilis*

Attracted Pollinators: Bees and Butterflies  
Duration: Perennial  
Native: yes  
Size: 18-24” high; 18-24” spread  
Growing Conditions:  
- Light Exposure: full sun to partial shade  
- Water Use: dry to moderate  
- Soil: neutral pH, dry to moderate moisture, well drained

The wild petunia, though not in actuality a petunia, is native to the eastern and central United States. The five petalled flowers have a tubular, trumpet shape that flares broadly at the end. These wide-mouthed flowers are typically light violet or lavender in color and have an extensive bloom time, lasting from mid spring until mid autumn. The plants oblong, slightly tapered leaves as well as its rigid stems are lightly covered in fine hairs. This plant is a critical host plant to the caterpillars of the buckeye butterfly as well.

Blue Eyed Grass - *Sisyrinchium Angustifolium*

Attracted Pollinators: Bees  
Duration: Perennial  
Native: yes  
Size: 18-24” high; 6-12: spread  
Growing Conditions:  
- Light Exposure: full sun  
- Water Use: moderate  
- Soil: neutral pH, moderately but consistently moist, well drained

Though misnomered as a grass, the blue eyed grass is actually a member of the iris family and is native to the Southeastern United States. This small wildflower flourishes in damp open woods or along streams or riverbanks. It tends to grow in small clumps, though it readily self seeds. Its leaves are very long and narrow, resembling grass. It blooms small six-sided flowers, typically a soft powder blue in color starting in late spring.
Blazing Star - *Liatris Spicata*

Attracted Pollinators: Birds and Butterflies  
Duration: Perennial  
Native: yes  
Size: 24-48” high; 9-18” spread  
Growing Conditions:  
  - Light Exposure: full sun  
  - Water Use: moderate  
  - Soil: neutral pH, moist to dry soil, well drained, drought tolerant, fertile soil preferable  

Blazing star is a tall clumpy plant native to the eastern United States and thrives in moist lowland habitats. The feathery, pinkish-purple flowers have narrow crinkled and aggregate along the stems to form fuzzy looking purple pillars referred to as spikes. These also give rise the the plants alternate name: greyfeather. The flowers of the Blazing Star bloom from mid to late summer. Their stalks rise from a base of long, grass-like leaves which also coat the stems leading to the blossoms.

Turtle Head - *Chelone Lyonii*

Attracted Pollinators: Butterflies  
Duration: Perennial  
Native: no, southeastern United States  
Size: 24-48” high; 18-30” spread  
Growing Conditions:  
  - Light Exposure: full sun to partial shade  
  - Water Use: moderate to wet  
  - Soil: neutral pH, fairly moist, well drained, rich in nutrient content and humus  

The turtle head is a tall stalky plant native to the southeastern United States, preferring the wet woodland habitats of the southern Appalachian Mountains, though it has naturalized itself in the northeast. The two-lipped, oblong flowers are typically light pink or white in color and form cone-shaped aggregations at the ends of the its thick, boxy stems. Turtle Heads tend to grow in clumps and are capable of spreading rhizomatically.
Arkansas Blue Star - *Amsonia Hubrichtii*

- Attracted Pollinators: Butterflies
- Duration: Perennial
- Native: no, southcentral United States
- Size: 24-36” high; 24-36” spread

Growing Conditions:
- Light Exposure: full sun to partial shade
- Water Use: moderate
- Soil: neutral pH, moderately moist, well drained, tolerant of poor soil content

The arkansas blue star has a fairly small natural range, existing primarily in the Ouachita Mountains in central Arkansas. Growing in large dense bushes, the Blue Star has long, thin, branching leaves with when amassed result in a feathery texture, and which eventually fade from light green to a vivid golden color with the onset of fall. The characteristic blue, star-shaped flowers bloom in loose bunches on the bush during the months of April and May.

Spiderwort - *Tradescantia Virginiana*

- Attracted Pollinators: Bees and Butterflies
- Duration: Perennial
- Native: yes
- Size: 18-36" high; 12-18" spread

Growing Conditions:
- Light Exposure: partial to full shade
- Water Use: moderate
- Soil: acidic (>6.5), moist, well drained, tolerant of low nutrient concentration

The spiderwort is a small wildflower native to the eastern United States and thrives in cool wooded areas with good soil moisture. The dark purple flowers are accented by a cluster of yellow anthers at its center, surrounded by three large round, lightly crinkled petals. Each blossom is open for only one day, but the flowers successively bloom from May until June. Elongated broad leaves bisected by a central vane, arch outward from the stems.
## Additional Native Plants of Pennsylvania

### Trees:

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
</tr>
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<tbody>
<tr>
<td>Rhus typhina</td>
<td>Staghorn Sumac</td>
</tr>
<tr>
<td>Quercus Alba</td>
<td>White Oak</td>
</tr>
<tr>
<td>Prunus serotina</td>
<td>Black Cherry</td>
</tr>
<tr>
<td>Prunus americana</td>
<td>Wild Plum</td>
</tr>
<tr>
<td>Populus tremuloides</td>
<td>Quaking Aspen</td>
</tr>
<tr>
<td>Populus deltoides</td>
<td>Eastern Poplar</td>
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<tr>
<td>Cornus alternifolia</td>
<td>Pagoda Dogwood</td>
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<tr>
<td>Cornus sericea</td>
<td>Red Osier Dogwood</td>
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<tr>
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<tr>
<td>Amelanchier arborea</td>
<td>Shadbush</td>
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<td>Aralia spinosa</td>
<td>Hercules Club</td>
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<tr>
<td>Asimina triloba</td>
<td>Pawpaw</td>
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<tr>
<td>Carpinus caroliniana</td>
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<td>Celtis occidentalis</td>
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<tr>
<td>Diospyros virginiana</td>
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<td>Gleditsia triacanthos</td>
<td>Honey Locust</td>
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<tr>
<td>Ilex opaca</td>
<td>Black Holly</td>
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<tr>
<td>Juglans nigra</td>
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<td>Juniperus virginiana</td>
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<td>Populus deltoides</td>
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<td>Rhus typhina</td>
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### Shrubs:

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### Grasses:

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<tr>
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<td>Spartina Patens</td>
<td>Panicum Shenandoah</td>
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<td>Sporobolus Heterolepis</td>
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<tr>
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<td>blush rose</td>
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<td>Rubus idaeus</td>
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<td>Vaccinium macrocarpon</td>
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<td>Vitus rupestris</td>
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<tr>
<td>Zanthoxylum americanum</td>
<td>Northern Prickly Ash</td>
</tr>
</tbody>
</table>
Works Cited


Thank You and Happy Gardening!