



# Plant Ridge & Valley Natives



A Gardener's Guide to Virginia's  
Ridge & Valley Native Plants



Native grasses like *Schizachyrium scoparium* (Little Bluestem) provide nesting habitat for Eastern Towhees, while *Symphyotrichum laeve* (Smooth Aster) hosts the larval stage (caterpillar) of the Pearl Crescent Butterfly. Eastern Towhees eat the Aster seeds and rely on caterpillars for protein to raise their young.

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Logo design: Anne Elise Lintelman

The Plant Ridge & Valley Natives campaign is part of the Plant Virginia Natives Initiative, a collaborative network of partners engaged in statewide and regional strategies to increase the knowledge, use, and availability of native plants. The Virginia Coastal Zone Management Program, a network of state agencies and coastal localities, introduced and has been coordinating the initiative since 2009. Learn more at

**[www.plantvirginiannatives.org](http://www.plantvirginiannatives.org)**

Thank you to our partners who have financially supported the printing of this guide by preordering copies to promote and distribute:

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## Our Purpose

This guide is intended to inspire beginning and intermediate gardeners and help them find appropriate native plants for the specific conditions in their own yards, community centers, or businesses. We hope that an increased interest in native plants will encourage more and more area nurseries and garden centers to offer a greater number of Ridge and Valley native plants.

Bring this guide with you when you shop for plants in order to help you find the best plants for your local ecoregion. Our editors have chosen more than 150 species to feature for their beauty, usefulness to wildlife, and appropriateness for the specific conditions in the area you wish to landscape. If the plants you desire are not available at your local garden centers, consider asking them to increase their native plant selections in the future. In doing so, you will help to promote native plants and healthy local ecosystems.

Information in the following pages came from a variety of credible sources including the Digital Atlas of Virginia Flora, the University of North Carolina Extension, the Missouri Botanical Garden, Xerces Society, DCR Heritage, Ladybird Johnson Wildflower Center, and numerous other websites and books about native plants and wildlife. We also drew on our combined personal knowledge and experience growing and observing these plants in various conditions within the Ridge & Valley region. To the best of our knowledge, the information within these pages is accurate—but certainly not comprehensive.

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Steven David Johnson

Sweat Bee on *Asclepias tuberosa* (Butterfly Weed)

## Introduction

This book invites you to become a garden ecologist in your own backyard. What is a garden ecologist, you might ask? A garden ecologist is someone who gardens with the health of the whole ecosystem in mind. An ecosystem is a geographic area where plants, animals, and other organisms, along with factors such as weather and geology, interact.

Ecological gardening involves choosing native plants that help feed and shelter local wildlife, improve soil fertility, and protect our clean water. The web of interacting native species that thrive in an ecosystem contributes to its function, which, in turn, contributes to human well-being through services like clean air and water, productive soils, pollinators, and recreational opportunities. For many, thinking about gardening through the ecological mindset redefines their perspective of “beauty,” transitioning away from sculpted plants devoid of insect life to a garden that purposefully attracts life and functions as part of a healthy system.

Ecological gardening can be done at any scale. Anyone can participate whether they are arranging a single container garden or making a plan for many acres. You can make a difference in your own backyard through grand-design plans or simply by making small adjustments over time and adding a few plants as you learn.

Perhaps the best way to begin is with just one plant.

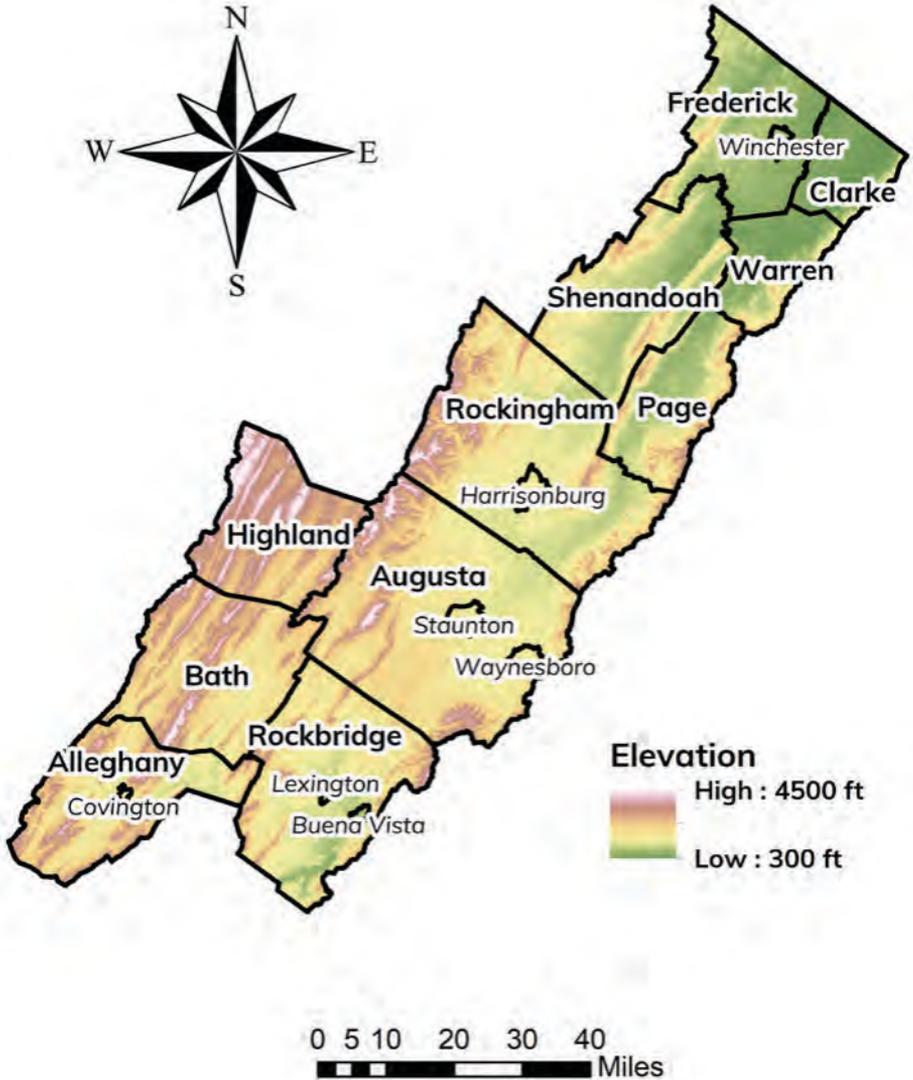
This guide features some of the plants that are vital in Virginia's Ridge & Valley ecoregion — but the plants are just the first step. We hope you will take time to enjoy the natural beauty of the plants as well as the many associated pollinators and songbirds that are drawn to them. Observe them. Be curious. We invite you to form a new relationship with the wild things of this world.

We also invite you to connect with one or more of our partner organizations to join a supportive human community as you continue your education as a garden ecologist.

*Geranium maculatum* (Wild Geranium)



# Maps of the Ridge & Valley Region

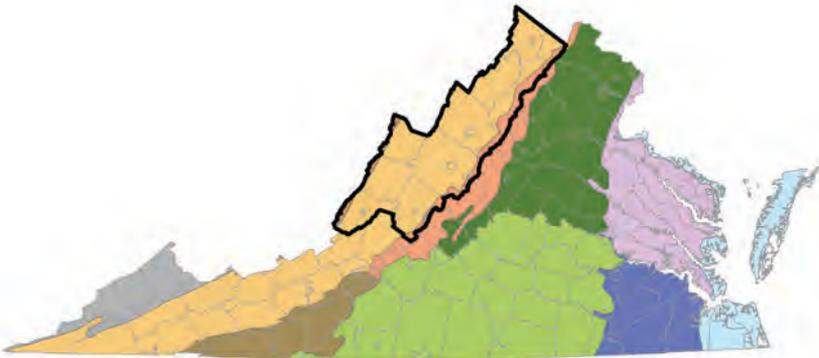


Maps by Craig Fergus  
Elevation data from United States Geological Survey (USGS.gov)

The northern Ridge & Valley includes part of the Central Appalachians and all of the Shenandoah Valley. This guide covers 11 counties along the northwestern edge of Virginia: **Frederick, Clarke, Warren, Shenandoah, Page, Rockingham, Augusta, Highland, Bath, Rockbridge, and Alleghany**. We also include the cities of **Winchester, Harrisonburg, Staunton, Waynesboro, Lexington, Buena Vista, and Covington**.

Our sister campaign, *Plant Southwest Virginia Natives*, covers the remaining Ridge & Valley counties.

The Ridge & Valley region is marked by stark contrasts in elevation, moisture, soil composition, pH, and light, making it important to pay close attention to the specific conditions each plant requires.



**All of Virginia's Ecoregions**

- |  |   |
|--|---|
|  Allegheny Mountains  |  Ridge & Valley      |
|  N. Blue Ridge        |  S. Blue Ridge       |
|  N. Piedmont          |  S. Piedmont         |
|  N. Coastal Plain     |  S. Coastal Plain    |
|  Cumberland Mountains |  Outer Coastal Plain |

 Counties Included in this Guide

## What Are Native Plants? Why Do They Matter?

Native plants provide habitat for local wildlife, including birds and pollinators. This is because for any given area, native plants have coevolved with other species for over thousands of years, resulting in relationships that contribute to a balanced ecosystem.

The species that form the logo of this guide serve as an example of these relationships. The grass *Schizachyrium scoparium* (Little Bluestem) and the flower *Symphyotrichum laeve* (Smooth Aster) can both be found in our Valley's grassland habitat. Little Bluestem provides the perfect habitat structure for Eastern Towhee birds, who feed on Aster seeds, while the Smooth Aster is host to the Pearl Crescent Butterfly, whose larvae, like all caterpillars, are important food sources for young, growing birds like the Eastern Towhee. When relationships like these are damaged due to habitat loss and degradation, native wildlife populations have difficulty persisting as well. Therefore, planting native plants is one way that you can help our native wildlife, even in your own yard!

Besides being the right choice for helping the environment, native plants require less effort to thrive in your garden because they are adapted to it. As a result, native plants can also offer lower-cost solutions for dealing with problem areas such as wet areas, runoff, and erosion.

### Considerations for Planting Native

Thanks to the work of knowledgeable and compassionate people, native plants have been growing in popularity over the past several years. Therefore, you may now be finding plants marketed as "native" in your neighborhood garden store. Now that you've found some potential sources for native plants near you, there are a few other factors to consider in selecting the most appropriate plants for *your* place.

This guide includes a curated list of plants that are native to Virginia but, more specifically, to the Ridge & Valley ecoregion. Ecoregions are areas of land that share similar climatic,



Steven David Johnson

*Heuchera americana* (Alumroot, Coral Bells) with its specialized bee, the Alumroot Cellophane Bee

geological, and ecological characteristics. Even within a state, ecoregions differ. Virginia's coastal region is quite different from the mountains!

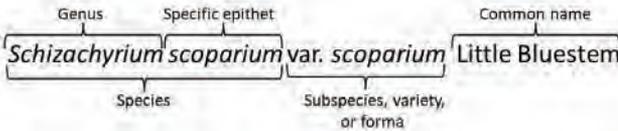
Selecting plants for your region's ecosystem is the best option for ecological gardening because the plants share the same long-term history with other species in the region and therefore contribute more effectively to the functioning of that system.

**Cultivars vs. Straight Species.** A cultivar is a plant that has been bred by humans to select for certain desirable traits such as leaf or flower color, size, and shape. Depending on the trait that is altered, cultivars may not be as useful or desirable to native wildlife, defeating our primary purpose in planting them. Because of this, we recommend planting *straight species*, that is, species that have not been altered from their wild forms. It is worth noting that some cultivars may be helpful in supporting wildlife, but more research needs to be done to identify long-term impacts.

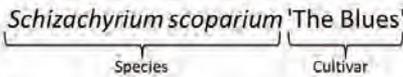
You can recognize a cultivar by how its name appears on the tag. In addition to a genus and species name, there will be a cultivar name in quotation marks. Some plants have a naturally occurring variety or subspecies as well (as shown below). This guide includes only the genus and species names for simplicity.

## Anatomy of a plant species name

Species names are two words and include the genus and specific epithet. Sometimes recognized natural varieties or subspecies are included. Common names are included, but they are not italicized like the species name.



Horticultural varieties will be designated by a cultivar name in quotation marks.



**Diversity.** Diverse gardens create diverse food webs, supporting a higher number of native pollinators, birds, and other desirable native wildlife. Diverse gardens are also more resilient to diseases, changes in climate, and other disturbances.

There are many kinds of diversity to incorporate into your garden:

- (1) Incorporate a variety of different species to increase **species diversity**.
- (2) Combine plants of different heights and shapes (trees, shrubs, flowers, grasses, and groundcovers) to increase **structural diversity**.
- (3) Include species that together provide different types of food and shelter throughout the season, from early spring until late fall, to increase **functional diversity**. See Bloom Times, pp. 114–17.
- (4) When practical, select plants that were grown from seed instead of cuttings to increase **genetic diversity**.

## What to Do

(1) Carry this guide with you when you shop.

(2) If the plant you are planning to buy is not in this guide, refer to the Flora of Virginia plant app or the Digital Atlas of Virginia Flora (<http://www.vaplantatlas.org>) to check whether it is native to the Ridge & Valley or a nearby county, particularly one west of the Blue Ridge. **This guide is not comprehensive**, so there are many wonderful plants appropriate for our region that did not fit into the pages of this book.

(3) Consult with local experts in your area who are often available at nurseries that specialize in native plants. See p. 143 of this guide for recommended resources.





Steven David Johnson



Steven David Johnson

## Key to Symbols

### Wildlife Benefits



Bees and Other Pollinators



Birds



Butterflies and Moths

### Moisture



Dry: prefers to dry out completely between waterings



Moist: medium moisture



Wet: constant moisture

### Light



Full sun: 6 hours or more



Part shade: 2–6 hours of sun



Full shade: 2 hours or less of sun

**R** indicates plants that are native to the higher elevations of the Ridge & Valley. Most of these plants are likely to do best in acidic soils.

**V** indicates plants that are native to the lower elevations, such as the heavy-clay Shenandoah Valley floor. Most of these plants are likely to grow better in basic/alkaline soils.

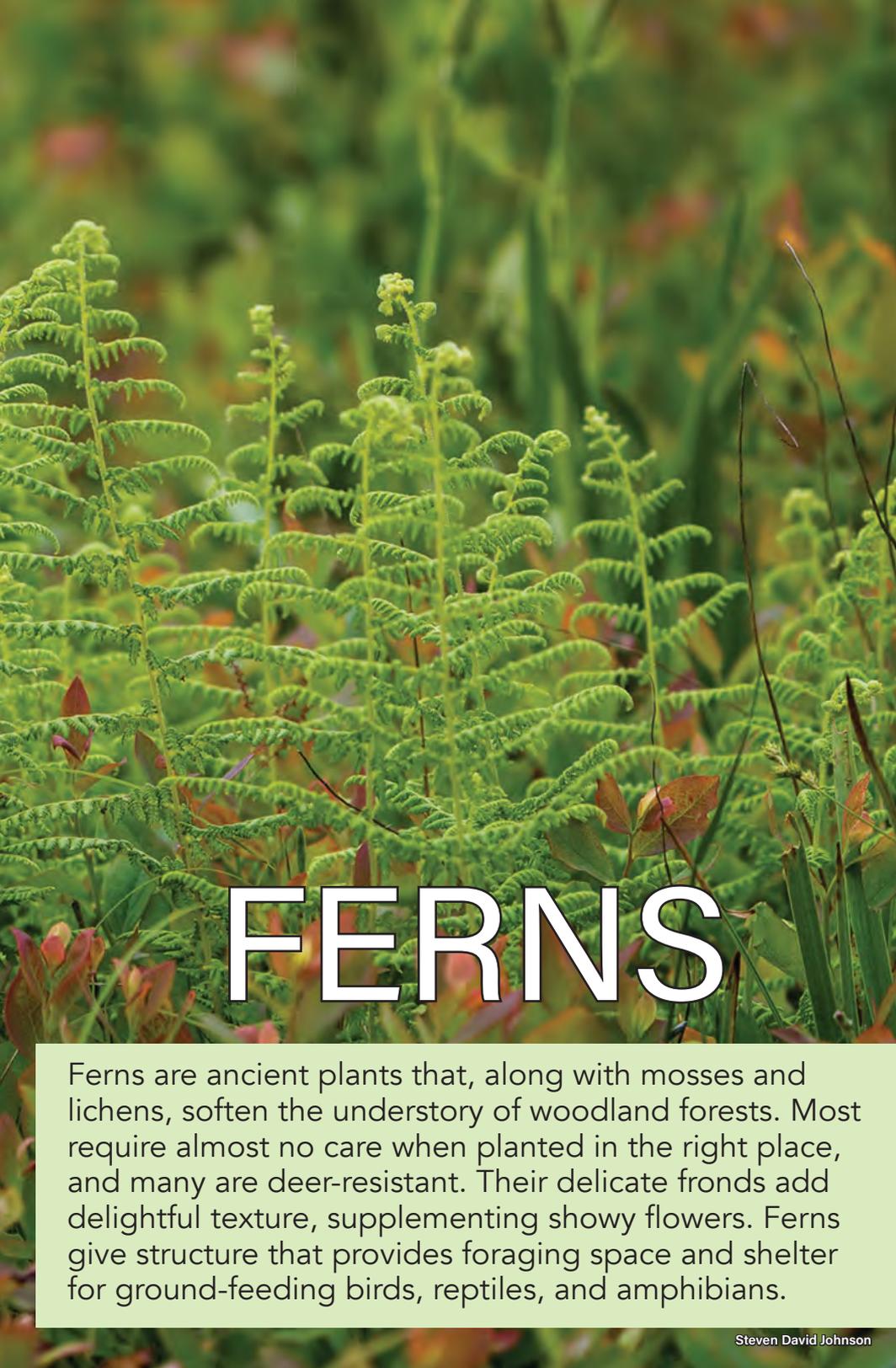
**Note about bloom times:** We refer to seasons instead of months since the timing will vary dramatically based on elevation, microclimate, weather, and other factors. As the climate changes, many plants are blooming earlier than in previous years.

Spring (typically ranges from March–May)

Summer (typically ranges from June–August)

Fall (typically ranges from September–November)





# FERNS

Ferns are ancient plants that, along with mosses and lichens, soften the understory of woodland forests. Most require almost no care when planted in the right place, and many are deer-resistant. Their delicate fronds add delightful texture, supplementing showy flowers. Ferns give structure that provides foraging space and shelter for ground-feeding birds, reptiles, and amphibians.

# FERNS



Barbara Brothers

## *Adiantum pedatum*

Northern Maidenhair Fern



**NATURAL HABITAT:** Base-rich soils of cove forests, dry or well-drained floodplain forests; boulder fields

**HEIGHT & SPREAD:** 1–2.5 ft tall and wide in a circle

**FRONDS:** Deciduous; no flowers; reproduces by spores

**SOIL:** Acidic, alkaline, neutral; well-drained; rich

**WILDLIFE BENEFITS:** Parts are used in bird-nest construction. Two aphid species suck juices from the foliage.

**NOTES:** Excellent groundcover in optimal conditions, and when protected from wind. Unique fanlike shape. Deer-resistant.



Lonnie Murray

## *Asplenium trichomanes*

Maidenhair Spleenwort



**NATURAL HABITAT:** Grows from crevices in shaded rock outcrops and under overhangs on a variety of rock types

**HEIGHT & SPREAD:** 4–7 in tall; 8 in–1 ft wide

**FRONDS:** Evergreen; no flowers; reproduces by spores

**SOIL:** Acidic, alkaline, neutral; well-drained; shallow rocky, high in organic matter

**WILDLIFE BENEFITS:** Host plant for the Fern Smut Moth.

**NOTES:** Has small, dense rosettes with creeping or ascending rhizomes. Does best in areas protected from cold winds. Deer-resistant.

# FERNS

## *Claytosmunda claytoniana*

Interrupted Fern



**NATURAL HABITAT:** A variety of forests and wet open areas in low and high elevations; often forms large clones in oak-hickory forests and Northern Red Oak forests

**HEIGHT & SPREAD:** 1.5–3.5 ft tall; 1–3 ft wide

**FRONDS:** Deciduous; no flowers; reproduces by spores; some fronds have a series of unique, smaller, dark leaflets in middle that contain all of the reproductive spores

**SOIL:** Acidic, neutral; well-drained

**WILDLIFE BENEFITS:** Host plant for caterpillars of the Osmunda Borer Moth and some Tortricid Moths.

**NOTES:** Requires consistently moist conditions if planted in full sun.



Richard Stromberg

## *Dennstaedtia punctilobula*

Eastern Hay-Scented Fern



**NATURAL HABITAT:** Forests and woodlands, rock outcrops, pastures, clearings, road banks; most abundant in mountains at middle to higher elevations, particularly in Northern Red Oak forests

**HEIGHT & SPREAD:** 1–3 ft tall; up to 3 ft wide

**FRONDS:** Deciduous; no flowers; reproduces by spores; scent like new-mown hay or grass

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy

**NOTES:** Easy to grow and spreads as a groundcover when planted in acidic sites. Deer- and rabbit-resistant. Drought- and salt-spray-tolerant.



Sharon Snyder

# FERNS



Bert Harris

## *Dryopteris intermedia*

Intermediate Fern



**NATURAL HABITAT:** Northern hardwood, cove, and other cool, sheltered forests

**HEIGHT & SPREAD:** 1.5–3 ft tall and wide

**FRONDS:** Evergreen to semievergreen; no flowers; reproduces by spores

**SOIL:** Acidic; well-drained; clay, loamy, high in organic matter

**NOTES:** Showy fronds, easy to grow, does not spread. Named for its tendency to hybridize with other ferns, therefore making it intermediate. Deer-resistant.



Bert Harris

## *Onoclea sensibilis*

Sensitive Fern



**NATURAL HABITAT:** Floodplain forests, swamps, marshes

**HEIGHT & SPREAD:** Infertile fronds up to 2.5 ft long (fertile fronds shorter); 2–3 ft wide

**FRONDS:** Deciduous, hypersensitive to first frost

**SOIL:** Well-drained; organically rich

**WILDLIFE BENEFITS:** Used by leaf miners. Provides shelter to small wildlife.

**NOTES:** Spreads easily via rhizomes. Great fern for rain or shaded container garden. Needs consistent moisture to thrive. Grows taller in wet soil. Can be robust in optimum conditions. Use dried fronds in floral arrangements.

# FERNS

## *Osmunda spectabilis*

Royal Fern



**NATURAL HABITAT:** Forested and open wetlands, marshes

**HEIGHT & SPREAD:** 2–3 ft tall (or, with constant moisture, up to 6 ft): 2–3 ft wide

**FRONDS:** Deciduous; no flowers; reproduces by spores found in clusters at the tips

**SOIL:** Acidic; best in rich humus but adaptable

**WILDLIFE BENEFITS:** Serves as shelter for small animals

**NOTES:** Spreads slowly by rhizomes. Great fern for rain or shaded garden. Used for erosion control. Commonly referred to as the “flowering fern” due to the pink leaflets that unfurl.



Richard Stromberg

## *Polystichum acrostichoides*

Christmas Fern



**NATURAL HABITAT:** Forests and rich, rocky woods, stream banks, thickets

**HEIGHT & SPREAD:** 1.5–2 ft tall and wide

**FRONDS:** Remain green throughout holiday season; no flowers; reproduces by spores

**SOIL:** Acidic; well-drained; rich, cool, best if rocky or sandy (not clay)

**WILDLIFE BENEFITS:** Supports Ruffed Grouse diets during fall and winter. Overwintered fronds are used by a few bird species, such as Ovenbirds and Veery, as nest sites in spring. Larval host for the Serpentine Webworm.

**NOTES:** Great evergreen accent for woodland or shade gardens. Fronds lay flat during winter months until new growth emerges in spring.



Richard Stromberg



# WILDFLOWERS



# WILDFLOWERS

Wildflowers are arguably the most popular group of native plants—and for good reason, as our region’s flowering plants add an incredible assortment of color and scent to our gardens. Notably, flowering plants provide pollinators with nectar and pollen food sources through their attractive blooms, while the leaves of many species also serve as host to hundreds of larval insects. Seed heads feed birds through the winter and, if left standing, hollow stems serve as winter homes for native bees. Flowering plants are an essential component of an ecological garden and, in a well-designed plan, can provide beauty and functionality throughout the entire growing season.



Sharon Snyder

## *Achillea borealis*

American Yarrow



**NATURAL HABITAT:** Fields, meadows, roadsides, clearings, upland forests

**HEIGHT & SPREAD:** 6 in–4 ft tall; up to 1 ft wide

**BLOOM/FRUIT:** White or pink flowers in midspring–late fall

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy, rocky, poor

**WILDLIFE BENEFITS:** Nectar and habitat for lady beetles (ladybugs) and butterflies. Special value to native bees, predatory, and parasitoid insects.

**NOTES:** Easy-to-grow, mat-forming perennial that blooms on and off for many months. Semievergreen leaves. Can be grown in a container garden. Can be robust without adequate competition. Deer- and rabbit-resistant.

# WILDFLOWERS

## *Actaea racemosa*

Black Cohosh



RV

**NATURAL HABITAT:** Forests, usually in base-rich soils; rich cove forests and rich montane oak-hickory forests

**HEIGHT & SPREAD:** 4–7 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** White, showy racemes in late spring–midsummer; seedpods in late summer–midfall

**SOIL:** Well-drained; high in organic matter

**WILDLIFE BENEFITS:** Host plant for Spring Azure, Holly Blue, and Appalachian Azure Butterfly larvae.

**NOTES:** Use in woodland, butterfly, pollinator, or cottage gardens, in border or mass plantings. Will not grow well in poor soils.



Barbara Brothers

## *Agastache scrophulariifolia*

Purple Giant Hyssop



**NATURAL HABITAT:** Rich cove forests, montane Oak-Hickory forests, and other forests and forest edges; usually in base-rich soils

**HEIGHT & SPREAD:** 2–5 ft tall; 2 ft wide

**BLOOM:** White, pink, lavender, or purple flower spikes in midsummer–early fall

**SOIL:** Acidic, neutral; well-drained; loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts bees, skippers, fritillaries, and occasional hummingbirds.

**NOTES:** Accent plant for garden backdrops; long bloom period, and interesting seed heads persist through winter. Sensitive to competition. Deer- and rabbit-resistant.



Sharon Snyder

# WILDFLOWERS



Richard Stromberg

## *Ageratina altissima*

White Snakeroot



**NATURAL HABITAT:** Upland forests, especially cove and rich montane Oak-Hickory forests; dry forests and woodlands, well-drained wet forests, clearings, and open, disturbed habitats

**HEIGHT & SPREAD:** 2–4 ft tall and wide

**BLOOM/FRUIT:** White flowers in fall

**SOIL:** Alkaline; limestone-rich

**WILDLIFE BENEFITS:** Important fall nectar source for bumblebees, small carpenter bees, and butterflies. Host plant to fly midges and leaf miners.

**NOTES:** Great naturalizer for larger woodland gardens, woodland edges. Can be robust without adequate competition. Has a long bloom period. Toxic to livestock. Deer-resistant.



Richard Stromberg

## *Allium cernuum*

Nodding Onion



**NATURAL HABITAT:** Rock outcrops, woodlands, dry forests; at higher elevations, more tolerant of nutrient-poor substrates and can appear in forested and open habitats like meadows

**HEIGHT & SPREAD:** Scapes up to 20 in, leaves up to 10 in tall; 4–6 in wide

**BLOOM/FRUIT:** White to pink flowers in midsummer–midfall

**SOIL:** Alkaline, neutral; high in organic matter

**WILDLIFE BENEFITS:** Nectar and pollen attract primarily bees, including honeybees, bumblebees, digger bees, and sweat bees.

**NOTES:** Edible foliage. Beautiful when planted in masses or as a border plant. Unique flower structure. Relatively slow spreader. Deer- and rabbit-resistant.

# WILDFLOWERS

## *Anemone virginiana*

Thimbleweed



**NATURAL HABITAT:** Forests, rocky woodlands, barrens, old fields, clearings; base-rich soils

**HEIGHT & SPREAD:** 1–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** White flowers in early–late summer, then fluffy, cottony seed heads

**SOIL:** Clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Beneficial to native bees and other pollinators, usually seeking pollen rather than nectar.

**NOTES:** Works as accent or planted in mass within woodland gardens or edges. Interesting seed heads resembling thimbles persist through winter and are often used as nesting material. Sensitive to competition. Produces allelopathic chemicals that stunt the growth of neighboring plants.



Richard Stromberg

## *Antennaria plantaginifolia*

Plantain Pussytoes



**NATURAL HABITAT:** Dry forests, woodlands; barrens, clearings, meadows, road banks

**HEIGHT & SPREAD:** 10 in tall; 8–12 in wide

**BLOOM/FRUIT:** White flowers in early spring–early summer

**SOIL:** Acidic; well-drained; clay, sandy, shallow rocky, poor

**WILDLIFE BENEFITS:** Host for the American Lady Butterfly. Visited by many spring pollinators, including miner, sweat, and cuckoo bees.

**NOTES:** Low, mat-forming groundcover with beautiful silver foliage. Great for rock gardens or borders. Best in dappled shade. Deer- and rabbit-resistant.



Richard Stromberg

# WILDFLOWERS



Richard Stromberg

## *Aquilegia canadensis*

Wild Columbine



**NATURAL HABITAT:** Dry forests, woodlands, barrens, rock outcrops; in higher mountains, tolerates acidic soils and more varied habitats, including forests, meadows, roadsides

**HEIGHT & SPREAD:** 1–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Red and yellow flowers in spring

**SOIL TYPE:** Neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Blooms attract hummingbirds, bees, butterflies, and hawk moths. Seeds are consumed by finches and buntings.

**NOTES:** Colorful autumn foliage. Great for shady rock, cottage, and woodland gardens. Readily reseeds into open gaps in garden beds. Sensitive to competition.



Anne Elise Lintelman

## *Arisaema triphyllum*

Jack-in-the-Pulpit



**NATURAL HABITAT:** Upland forests, floodplain forests, swamp hummocks

**HEIGHT & SPREAD:** 6 in–1.5 ft; 1–1.5 ft wide

**BLOOM/FRUIT:** Green with occasional dark-red striped flowers in spring; red berries in late summer

**SOIL TYPE:** Rich in organic matter, does poorly in clay

**WILDLIFE BENEFITS:** Fruits are eaten by songbirds and Eastern Box Turtles.

**NOTES:** Striking bloom structure. Interesting accent plant for woodland gardens. Slowly spreads over time. Toxic if eaten by humans. Deer- and rabbit-resistant.

# WILDFLOWERS

## *Aruncus dioicus*

Goat's Beard



RV

**NATURAL HABITAT:** Damp, fertile woods and mountainous areas

**HEIGHT & SPREAD:** 3–6 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** Creamy-white, feathery blooms in late spring to summer

**SOIL TYPE:** Acidic, neutral; loamy, high in organic matter

**WILDLIFE BENEFITS:** Attracts pollinators such as butterflies and bees. Larval host to Dusky Azure Butterfly.

**NOTES:** Use in mass plantings in rain, cutting, and woodland gardens. Or plant along streambeds or ponds, or on slopes.



Barbara Brothers

## *Asarum canadense*

Wild Ginger



RV

**NATURAL HABITAT:** Rich upland forests and well-drained floodplain forests

**HEIGHT & SPREAD:** 6 in–1 ft tall; 4–6 in wide

**BLOOM/FRUIT:** Brownish-purple 3-lobed flower hidden underneath leaves in spring

**SOIL:** Acidic, neutral; well-drained; shallow rocky, high in organic matter

**WILDLIFE BENEFITS:** Attracts butterflies, pollinators, and songbirds. Pollinated by ants.

**NOTES:** Roots smell and taste like ginger. Flowers appear at the base of the plant, like a secret. Plant in naturalized areas, around patios, in woodlands, or as border plant. Great in butterfly, pollinator, or rain gardens. Deer-resistant.



Nancy Vehrs

# WILDFLOWERS



Isaac Matlock

## *Asclepias exaltata*

Tall Milkweed or Poke Milkweed



**NATURAL HABITAT:** Mesic to dry forests, clearings, and meadows; most common at middle to higher elevations

**HEIGHT & SPREAD:** 3–5 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Droopy white, pink, green flowers in summer

**SOIL:** Rich organic content

**WILDLIFE BENEFITS:** Special value to native bees, bumblebees, and honeybees.

**NOTES:** Beautiful, tall accent plant for rich woodland gardens, or plant along paths in upland woods. Milkweeds often endure transplant shock but will recover if conditions are right. Best when intermingled with other species.



Jack Monsted

## *Asclepias incarnata*

Swamp Milkweed



**NATURAL HABITAT:** River and stream shores, wet fields, meadows

**HEIGHT & SPREAD:** 3–4+ ft tall; 2–3 ft wide

**BLOOM/FRUIT:** Pink, rose, or mauve flowers in midsummer

**SOIL:** Well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts numerous pollinators, including hummingbirds and particularly native bees. 12 species of butterfly and moth use this plant as larval host, including the Monarch Butterfly, Milkweed Tussock Moth, and Milkweed Beetle.

**NOTES:** Great accent plant for moist, sunny rain gardens and wet meadows. Beautiful seed heads persist through winter. Deer- and rabbit-resistant.

# WILDFLOWERS

## *Asclepias syriaca*

Common Milkweed



**NATURAL HABITAT:** Fields, pastures, roadsides, and other open, disturbed habitats

**HEIGHT & SPREAD:** 3–5 ft tall, up to 8 ft in ditches and gardens; 9 in–1 ft wide

**BLOOM/FRUIT:** Fragrant white to purple flowers in summer

**SOIL:** Well-drained; clay, loamy, sandy, rocky; calcareous

**WILDLIFE BENEFITS:** Nectar for butterflies, bees, other pollinators, including hummingbirds. Larval host plant for the Monarch Butterfly, Tussock Milkweed Moth, and Milkweed Beetle.

**NOTES:** Striking sculptural plant. Beautiful seed heads persist through winter. Can be robust without adequate competition. Deer- and rabbit-resistant.



Isaac Matlock

## *Asclepias tuberosa*

Butterfly Milkweed



**NATURAL HABITAT:** Dry woodlands, clearings, fields, pastures, roadsides

**HEIGHT & SPREAD:** 1–2 ft tall and wide

**BLOOM:** Red- to yellow-orange flowers in late spring–summer

**SOIL:** Well drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Larval host for pollinators, including Monarch, Gray Hairstreak, and Queen Butterflies. Moths, long-tongued bees, and hummingbirds also visit flowers for nectar rewards.

**NOTES:** Emerges late in spring. Beautiful seed heads form in fall. Nice for sunny rock gardens. Slow to establish. Deer- and rabbit-resistant.



Richard Stromberg

# WILDFLOWERS



Jack Monsted



Richard Stromberg

## *Baptisia australis*

Blue Wild Indigo



**NATURAL HABITAT:** Flood-scoured rocky or gravelly bars and outcrops along rivers and streams

**HEIGHT & SPREAD:** 3–5 ft tall; 3 ft wide

**BLOOM/FRUIT:** Blue-purple flowers in early spring–midsummer, followed by blue, then black seedpods in fall

**SOIL:** Acidic, neutral; well-drained; clay, average, poor, tolerates lime

**WILDLIFE BENEFITS:** Used by songbirds, butterflies, bees, and other insects. Larval host plant for butterflies: Orange Sulphur, Clouded Sulphur, Frosted Elfin, Eastern Tailed Blue, Hoary Edge, and Wild Indigo Duskywing.

**NOTES:** Slow to establish in gardens. Eventually has a shrublike appearance, so is great as an accent. Seedpods persist through winter. Nitrogen-fixer. Flowers have been used to make a blue dye. Great cut flower and foliage. Deer-resistant.

## *Baptisia tinctoria*

Yellow Wild Indigo



**NATURAL HABITAT:** Dry forests, woodlands, barrens, roadsides; usually in sandy or rocky, nutrient-poor soils

**HEIGHT & SPREAD:** 2–3.5 ft tall; 2–3 ft wide

**BLOOM/FRUIT:** Cream to yellow racemes in spring–midsummer, followed by black seedpods in fall

**SOIL:** Acidic; well-drained; loamy, sandy, tolerates lime

**WILDLIFE BENEFITS:** Attracts butterflies such as Pearl Crescent. Special value to native bees.

**NOTES:** This shrublike perennial is slow to establish in gardens. Use as an accent plant near borders. Sensitive to competition. Has smaller blooms and habit than *B. australis* but a longer bloom time.

# WILDFLOWERS

## *Blephilia ciliata*

Downy Woodmint



**NATURAL HABITAT:** Dry forests and woodlands; shale, limestone, dolostone barrens

**HEIGHT & SPREAD:** 1–2 ft tall; 9 in–1.5 ft wide

**BLOOM/FRUIT:** Fragrant lavender flowers in midsummer–fall

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** The flowers attract long- and short-tongued bees, bee flies, syrphid or hover flies, butterflies, and skippers.

**NOTES:** Slow-spreading member of the mint family. Attractive pagoda-like blooms. Great border plant in shade gardens. Sensitive to competition. Deer-resistant.



Allen Bryan

## *Chrysogonum virginianum*

Green and Gold



**NATURAL HABITAT:** Upland forests and woodlands; usually in alkaline soils

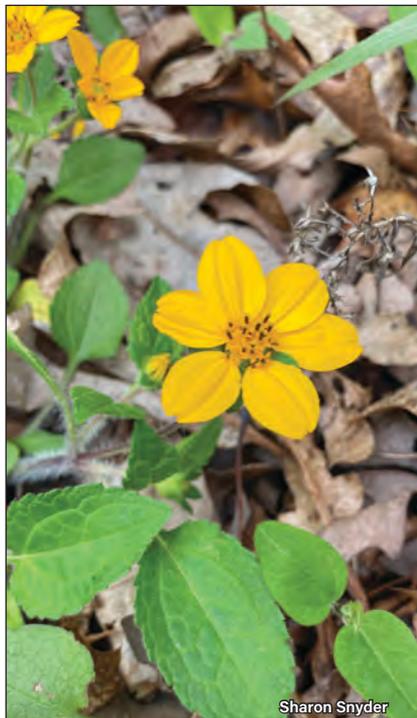
**HEIGHT & SPREAD:** up to 20 in tall; 9–12 in wide

**BLOOM/FRUIT:** Yellow flowers in late spring–fall

**SOIL:** Acidic; well-drained; high in organic matter

**WILDLIFE BENEFITS:** Flowers attract bees and butterflies. Songbirds eat the seeds.

**NOTES:** Semievergreen foliage. Great groundcover in optimal conditions. Long bloom period. Prefers woodland edges rather than fully shaded gardens.



Sharon Snyder

# WILDFLOWERS



Isaac Matlock

## *Chrysopsis mariana*

Maryland Golden Aster



**NATURAL HABITAT:** Pine woods, sandy areas

**HEIGHT & SPREAD:** 1 ft tall in flower; 1 ft wide

**BLOOM/FRUIT:** Yellow flowers in late summer–early fall

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Supports the specialized miner and fairy bees as well as other bees and butterflies.

**NOTES:** Great accent plant for meadow gardens, if allowed to reseed into gaps. Long bloom period and attractive seed heads in autumn. Sensitive to competition but will reappear when gaps are present.



Richard Stromberg

## *Conoclinium coelestinum*

Blue Mistflower



**NATURAL HABITAT:** Floodplain forests, swamps, moist to wet meadows, old fields, clearings, and other disturbed, open, or shaded sites

**HEIGHT & SPREAD:** 1–3 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Periwinkle-blue flowers in midsummer–midfall

**SOIL:** High in organic matter

**WILDLIFE BENEFITS:** Nectar used by butterflies, moths, and bees. Birds enjoy the seeds.

**NOTES:** Great naturalizer for pond borders, moist meadows, or woodland edges. Can be robust without adequate competition, especially in a container garden planting. Deer- and rabbit-resistant. Tolerates occasional flooding.

# WILDFLOWERS

## *Coreopsis verticillata*

Threadleaf Coreopsis



**NATURAL HABITAT:** Dry open forests, woodlands, barrens, clearings, road banks

**HEIGHT & SPREAD:** 2.5–3 ft tall; 1.5–2 ft wide

**BLOOM/FRUIT:** Yellow flowers in late spring–midsummer

**SOIL:** Acidic; well-drained; clay, sandy, rocky

**WILDLIFE BENEFITS:** Flowers used by butterflies and other pollinators. Songbirds eat the seeds.

**NOTES:** Clump-forming perennial with a long bloom period. Great border plant or groundcover in sunny gardens. Does not like mulch. Deer-resistant.



Bert Harris

## *Delphinium exaltatum*

Tall Larkspur



**NATURAL HABITAT:** Dry, open forests, woodlands, and clearings over rocks; on slopes

**HEIGHT & SPREAD:** 2–6 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Blue flowers in midsummer–early fall

**SOIL:** Neutral pH; well-drained; rich, high in organic matter, calcareous

**WILDLIFE BENEFITS:** Flowers attract bees, butterflies, and hummingbirds.

**NOTES:** Makes great accent or massed plant for woodland edge gardens. Does not thrive in poor soils. Will reseed in ideal conditions. Toxic if consumed by humans, cats, dogs, and horses.



Lonnie Murray

# WILDFLOWERS



Isaac Matlock

## *Dicentra cucullaria*

Dutchman's Breeches



**NATURAL HABITAT:** Rich coves and slopes; rich floodplain forests; mountains

**HEIGHT & SPREAD:** Mounds 3–6 in tall; 8 in–2 ft wide

**BLOOM/FRUIT:** Stem bears row of white pantaloan-shaped flowers in early spring

**SOIL:** Acidic, neutral; well-drained; rich, light clay, rocky

**WILDLIFE BENEFITS:** Attracts bees, butterflies, and hummingbirds.

**NOTES:** Spring ephemeral that loses its foliage by midsummer. Great early nectar source. Beautiful fernlike foliage. Great accent to rich woodland gardens. Does not thrive in poor soils. Intermix with later emerging plants such as ferns.



Richard Stromberg

## *Eurybia macrophylla*

Big-Leaved Aster



**NATURAL HABITAT:** Upland forests and woodlands

**HEIGHT & SPREAD:** 6 in–3 ft tall; 1.5–2 ft wide

**BLOOM/FRUIT:** Yellow-gold centers with white to lavender rays in summer

**SOIL:** Sandy loam

**WILDLIFE BENEFITS:** Attracts songbirds, bees, butterflies, and other pollinators.

**NOTES:** Great option for perennial border or groundcover. Foliage stays close to the ground throughout spring and summer. Bloom stalks rise above the leaves in late summer. Beautiful when planted in masses, but can also easily mix with other species.

# WILDFLOWERS

## *Euthamia graminifolia*

Grass-Leaved Goldenrod



**NATURAL HABITAT:** Fairly dry to wet disturbed forests, bottomland fields, meadows, clearings, roadsides, river banks; seasonally exposed bars, bogs, fens  
**HEIGHT & SPREAD:** 4–5 ft tall; 2–3 ft wide  
**BLOOM:** Yellow-gold flowers in late summer–early fall

**SOIL:** Sandy, loamy, clay, or gravelly

**WILDLIFE BENEFITS:** Attracts numerous bee species and parasitoid insects. Supports 8 pollen specialized bee species. Songbirds such as the American Goldfinch and the Swamp Sparrow may feed on the seeds.

**NOTES:** Easy-to-grow, clump-forming naturalizer, great for meadow gardens, butterfly gardens. Can be robust without adequate competition. Deer- and rabbit-resistant.



Erik Danielson

## *Eutrochium fistulosum*

Hollow Joe Pye Weed



**NATURAL HABITAT:** Floodplain forests, alluvial swamps, riverbanks, flood-scoured stream shores and bars, seepage swamps, fens, depression swamps, wet meadows, low pastures, ditches

**HEIGHT & SPREAD:** 4–7 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** Pinkish-rose flowers in midsummer–early fall

**SOIL:** Alkaline

**WILDLIFE BENEFITS:** Used by native long-tongued bees and butterflies. Special value to native bees. Stems and leaves host caterpillars and other insect larvae. Swamp Sparrows and other birds eat the seeds.

**NOTES:** This clump-forming perennial is a strikingly tall accent for wet meadows or rain gardens. Adorned by huge flower clusters at the end of summer. Deer- and rabbit-resistant.



Sharon Snyder

# WILDFLOWERS



Richard Stromberg

## *Eutrochium purpureum*

Sweet Joe Pye Weed



**NATURAL HABITAT:** Upland forests

**HEIGHT & SPREAD:** 5–7 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** Pinkish-rose to light-purple flowers in midsummer–early fall

**SOIL:** Acidic, alkaline, neutral; clay, loamy, sand; well-drained

**WILDLIFE BENEFITS:** Used by native long-tongued bees and butterflies. Xerces lists as of “special value to native bees.” Its stems and leaves host caterpillars and other insect larvae, and its seeds are eaten by Swamp Sparrows and other seed-eating birds.

**NOTES:** Structural accent plant for tall wet meadows or rain gardens. More suitable for part sun than *E. fistulosum*. Deer- and rabbit-resistant.



Sharon Snyder

## *Geranium maculatum*

Wild Geranium



**NATURAL HABITAT:** Medium to dry upland forests and well-drained floodplain forests; on wide range of extremely acidic to strongly basic soils

**HEIGHT & SPREAD:** 1–1.5 ft tall and wide

**BLOOM/FRUIT:** Pink to lilac flowers in midspring–early summer

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Nectar attracts butterflies, bees, and other pollinators. Songbirds eat the seeds. The genus *Geranium* supports a specialized mining bee.

**NOTES:** Mounding, clump-forming groundcover, with semievergreen foliage, for woodland gardens and shady garden borders.

# WILDFLOWERS

## *Heliopsis helianthoides*

Smooth Oxeye



**NATURAL HABITAT:** Open forests, woodlands, clearings, meadows, roadsides

**HEIGHT & SPREAD:** 4–7 ft tall; 1–3 ft wide

**BLOOM/FRUIT:** Yellow-gold flowers in midsummer–early fall

**SOIL:** Clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts bees, butterflies, and hummingbirds. Seeds may be eaten by songbirds.

**NOTES:** Profuse bloomer. Great accent plant for meadow gardens or woodland edges. Will reseed in ideal conditions. Deer- and rabbit-resistant.



Sharon Snyder

## *Heuchera americana*

American Alumroot, Coral Bells



**NATURAL HABITAT:** Dry, often rocky forests, woodlands, outcrops of various geological formations; tolerates a range of rock types and pH levels

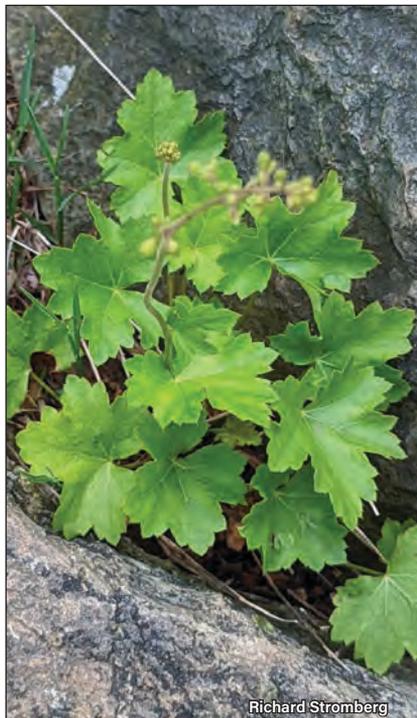
**HEIGHT & SPREAD:** 1–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Rosette of green or variegated leaves of purple, bronze, or cream, followed by tiny creamy, pink-tinted bell-shaped flowers on leafless stalks in spring–summer

**SOIL:** Slightly acidic; well-drained; loamy, high in organic matter

**WILDLIFE BENEFITS:** Supports a specialized cellophane bee and a mining bee. The flowers of the genus *Heuchera* provide nectar to other pollinating insects.

**NOTES:** Tough, mound-forming perennial with evergreen foliage. Use in shady rock gardens and borders. Deer- and rabbit-resistant.



Richard Stromberg

# WILDFLOWERS



Isaac Matlock

## *Iris verna* Upland Dwarf Iris



**NATURAL HABITAT:** Dry, rocky or sandy forests, pine-oak/heath woodlands, clearings

**HEIGHT & SPREAD:** 4–6 in tall; 6–10 in wide

**BLOOM/FRUIT:** Fragrant blue-purple, rarely white, flowers in spring

**SOIL:** Acidic; well-drained; rich, gravelly, rocky

**WILDLIFE BENEFITS:** A pollinator favorite.

**NOTES:** Plant as an ornamental accent. Beautiful in rock, woodland, or shade garden. Colonizing. Deer-resistant.



Richard Stromberg

## *Iris versicolor* Northern Blue Flag



**NATURAL HABITAT:** Calcareous (calcium-rich) fens and marshes, wet meadows, and swamps

**HEIGHT & SPREAD:** 1.5 –2.5 ft tall and wide

**BLOOM/FRUIT:** Violet to lavender, rarely white, flowers in late spring–midsummer

**SOIL:** Acidic; rich loamy; in water

**WILDLIFE BENEFITS:** The Eastern Swallowtail Butterfly uses the nectar, but it is pollinated by long-tongued bees, such as bumblebees. Several beetle species have also been observed on the flowers.

**NOTES:** This is a clump-forming iris with lovely spring blooms, which make good cut flowers. Its foliage adds nice texture to rain gardens or wet meadows. Deer- and rabbit-resistant. Tolerates standing water.

# WILDFLOWERS

## *Jeffersonia diphylla*

Twinleaf



**NATURAL HABITAT:** Rich, well-drained floodplain or slope forests, low-elevation coves, and dry, rocky forests; under tree canopies, in moist and nutrient-rich forests

**HEIGHT & SPREAD:** 9 in–2.5 ft tall; 1.5 ft wide

**BLOOM/FRUIT:** White, cup-shaped flowers; yellow pods with brown seeds in midspring

**SOIL:** Well-drained; nutrient-rich, calcium-rich

**WILDLIFE BENEFITS:** Used by bees, specialized bees such as sweat bees, butterflies, and hummingbirds. Ants and other animals disperse seeds through consumption.

**NOTES:** Blooms at the same time as many spring ephemerals but keeps its unique foliage through the summer. Lovely spring accent to shade gardens. Will not thrive in poor soils.



Barbara Brothers

## *Liatris scariosa*

Eastern Blazing Star



**NATURAL HABITAT:** Dry rocky woodlands, barrens, outcrops, road banks

**HEIGHT & SPREAD:** 6 in–5 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Pink to purple flowers in late summer–midfall

**SOIL:** Well-drained; loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts butterflies, bees, hummingbirds, and other pollinators. Larval forms of the Liatris Flower Moth feed on the flowers and seeds, and the Liatris Borer Moth larvae eat the stems. Goldfinches eat the seeds.

**NOTES:** Its long bloom period makes it a great accent plant for rock or drought-tolerant gardens. The plant may be short-lived if not allowed to reseed, as its corms are a food source for rodents.



Isaac Matlock

# WILDFLOWERS



David L. Govoni

## *Liatris spicata*

Dense Blazing Star



RV

**NATURAL HABITAT:** Moist to wet meadows, clearings, riverside prairies, seeps, and outcrop barrens with periodic seepage

**HEIGHT & SPREAD:** 3–6 ft; 3 in–1.5 ft

**BLOOM/FRUIT:** Pinkish-purple flower spikes in summer

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Attracts bees, specialized bees, butterflies, moths, hummingbirds, and songbirds.

**NOTES:** The flowers bloom from the top of the spike down and are showy and very attractive in mass plantings in a pollinator, rain, or cottage garden, or in a perennial border.



Steven David Johnson

## *Lobelia cardinalis*

Cardinal Flower



RV

**NATURAL HABITAT:** Floodplain forests, swamps, marshes, wet meadows, ditches, low roadsides

**HEIGHT & SPREAD:** 2–4 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Scarlet-red flowers in midsummer to midfall

**SOIL:** Loamy, sandy

**WILDLIFE BENEFITS:** Flowers attract the Ruby-Throated Hummingbird, various Swallowtail Butterflies, and larger bumblebees. Halictid bees sometimes gather pollen, but they are ineffective at pollination. Host plant for the polyphagous fly and the Pink-Washed Looper Moth.

**NOTES:** Beautiful when planted as an accent or in mass in wet meadows, rain gardens, or at pond edges. Considered a short-lived perennial but will reseed prolifically if allowed. Makes good cut flowers. Deer-resistant.

# WILDFLOWERS

## *Lobelia siphilitica*

Great Blue Lobelia



RV

**NATURAL HABITAT:** Floodplain forests, cove and slope forests; fens, seeps, stream banks and bars; moist clearings, wet meadows, low roadsides

**HEIGHT & SPREAD:** 2–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Blue flowers in late summer to midfall

**SOIL:** Rich in organic matter

**WILDLIFE BENEFITS:** Pollinated by bumblebees. Digger bees collect nectar from the flowers, while yellow-faced bees, green sweat bees, and small carpenter bees use both pollen and nectar. Pink-Washed Looper Moth larvae eat the leaves. Weevils feed on the seeds.

**NOTES:** Plant in wet meadows, rain gardens, or at pond edges. This short-lived perennial will reseed prolifically if allowed. Do not mulch! Makes a good cut flower. Deer-resistant.



Jack Monsted

## *Maianthemum canadense*

Canada Mayflower



**NATURAL HABITAT:** Deciduous or mixed woods, bog edges; Red Spruce forests

**HEIGHT & SPREAD:** 3–5 in tall; 1–3 ft wide

**BLOOM/FRUIT:** Small white raceme flowers in spring; red berries in fall

**SOIL:** Acidic, neutral

**WILDLIFE BENEFITS:** Berries attract birds, small mammals, bees, and other pollinators.

**NOTES:** A low-growing groundcover for higher-elevation shade gardens.



Jack Monsted

# WILDFLOWERS



Isaac Matlock

## *Mertensia virginica*

Virginia Bluebells



**NATURAL HABITAT:** Rich soils of well-drained floodplain forests, low-elevation cove forests, mesic slope forests

**HEIGHT & SPREAD:** 1–2 tall; 1–1.5 wide

**BLOOM/FRUIT:** Blue flowers in early spring to midspring

**SOIL:** Loamy, rich

**WILDLIFE BENEFITS:** The flowers attract pollinators such as bumblebees, long-tongued bees, butterflies, skippers, moths, and hummingbirds.

**NOTES:** These spring ephemerals are great for floodplains, and they beautify woodland, cottage, pollinator, and rock gardens. They can spread quickly if allowed to reseed into gaps. They do not thrive in poor soils. They tolerate Black Walnut trees. All foliage disappears by midsummer. Rabbit-resistant.



Sharon Snyder

## *Mimulus ringens*

Allegheny Monkeyflower



**NATURAL HABITAT:** Most characteristic of seasonally flooded soils that lower during the growing season

**HEIGHT & SPREAD:** 6 in–4 ft tall; 9 in–1 ft wide

**BLOOM/FRUIT:** Lavender to blue or pink in midsummer–late fall

**SOIL:** Acidic, alkaline, neutral; well-drained; loamy, rich

**WILDLIFE BENEFITS:** The nectar attracts bumblebees. The plant supports caterpillars of the Chalcedony Midget Moth and the Common Buckeye Butterfly.

**NOTES:** A bushy perennial great for wet meadows, pond edges, or rain gardens. Does not tolerate long periods of drought. Deer-resistant.

# WILDFLOWERS

## *Monarda clinopodia*

White Bergamot



**NATURAL HABITAT:** Mesic to fairly dry upland forests, preferring base-rich soils; most numerous in rich cove or rich montane Oak-Hickory forests

**HEIGHT & SPREAD:** Up to 3.25 ft tall and wide

**BLOOM/FRUIT:** Whitish to greenish or yellowish-pink flowers with purple-spotted lips in late spring–midfall; nutlets in midsummer–midfall

**SOIL:** Well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts bees, bumblebees, butterflies, and hummingbirds for nectar and pollination.

**NOTES:** Grows best in moist woodland settings with dappled light. Makes a sweet cut flower. Deer-resistant.



Bert Harris

## *Monarda fistulosa*

Wild Bergamot



**NATURAL HABITAT:** Upland forests, rocky woodlands, clearings, old fields, forest edges, meadows, roadsides; usually on base-rich soils

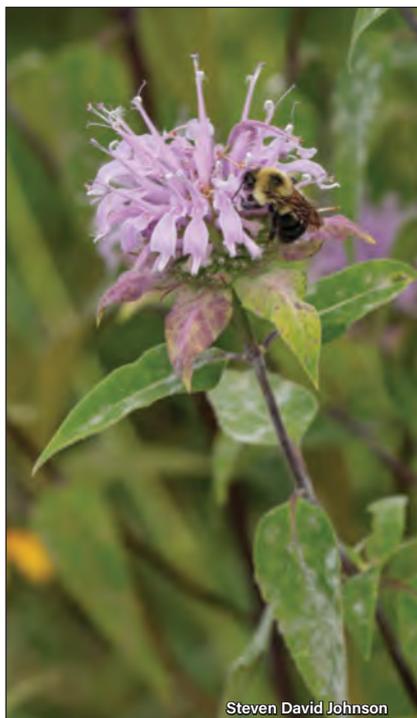
**HEIGHT & SPREAD:** 4 ft tall; 2–3 ft wide

**BLOOM/FRUIT:** Lavender flowers in early summer–early fall

**SOIL:** Neutral, alkaline; well-drained; clay, shallow rocky

**WILDLIFE BENEFITS:** Attracts bees. Ruby-throated hummingbirds and butterflies use nectar from the blooms. *Monarda* spp. support several specialized bees.

**NOTES:** Clump-forming upright perennial. Works well in pollinator, butterfly, and cottage gardens. Interesting seed heads persist through winter. Can be robust without adequate competition. Can develop a harmless mildew on its leaves without adequate circulation.



Steven David Johnson

# WILDFLOWERS



Sharon Snyder

## *Oenothera fruticosa*

Narrowleaf Sundrops



**NATURAL HABITAT:** Mesic to dry forests and woodlands; barrens, outcrops, clearings; peaty swales, ditches, fields, roadsides

**HEIGHT & SPREAD:** 1.3–1.5 ft tall; 1–3 ft wide

**BLOOM/FRUIT:** Gold-yellow flowers in midspring to late summer

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Hummingbirds use the nectar, and songbirds eat the seeds. Supports other pollinators and specialized bees.

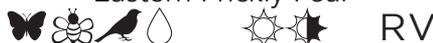
**NOTES:** Plant in meadows, naturalized areas, or along slopes or banks. Beautiful in cottage, pollinator, or rock gardens. Makes a great border feature. Can be robust without adequate competition. Deer-resistant.



Jack Monsted

## *Opuntia humifusa*

Eastern Prickly Pear



**NATURAL HABITAT:** Dry sandy or rocky habitats, including dry pastures and road banks; granite flatrocks and exposed outcrops; occasionally on shale barrens or in rocky limestone woodlands

**HEIGHT & SPREAD:** 1 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Bright-yellow flowers in early summer; red fruits follow in late summer

**SOIL:** Well-drained; sandy

**WILDLIFE BENEFITS:** Bees, ants, and wasps constitute the richest assemblage of visitors to Prickly Pear flowers, followed by beetles, birds, moths, and butterflies.

**NOTES:** Beautiful accent to a dry, sunny rock garden; plant appears shriveled in winter; use thick gloves or kitchen tongs when handling this prickly plant.

# WILDFLOWERS

## *Orontium aquaticum*

Golden Club



**NATURAL HABITAT:** Acidic to basic wetlands

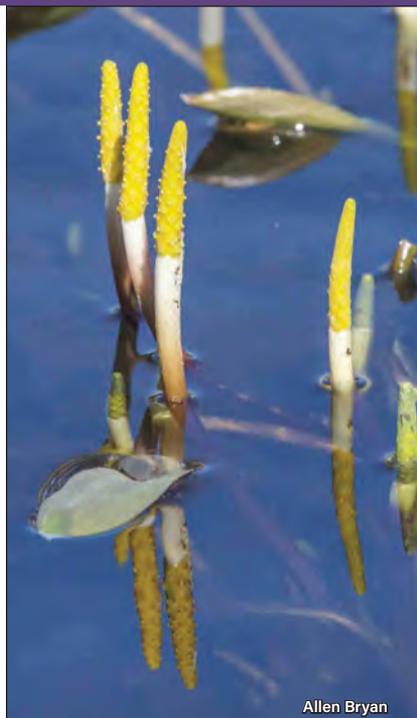
**HEIGHT & SPREAD:** 9 in–1.25 ft tall and wide

**BLOOM/FRUIT:** Golden-yellow flowers in early–late spring

**SOIL:** Acidic; loamy; in water

**WILDLIFE BENEFITS:** Rhizomatous roots provide useful shelter for tiny fish, frogs, and other wildlife.

**NOTES:** Aquatic plant with unique spiked blooms. Clump-forming and easy to divide. Looks best in full sun. Great for bog gardens, ponds, or very slow streams.



Allen Bryan

## *Packera aurea*

Golden Ragwort



**NATURAL HABITAT:** Floodplain or upland forests, seepage swamps, fens, seeps, stream banks, and moist meadows; base-rich soils

**HEIGHT & SPREAD:** 2–4 ft tall; 6 in–1.5 ft wide

**BLOOM/FRUIT:** Yellow-gold flowers in mid- to late spring

**SOIL:** Acidic, neutral, alkaline; well-drained

**WILDLIFE BENEFITS:** Great nectar source for sweat, cuckoo, carpenter and halictid bees, syrphid and tachinid flies, fireflies, and 20 species of butterflies. Larval host plant for 17 species of butterflies and moths, including the Northern Metalmark Butterfly.

**NOTES:** A robust, mat-forming groundcover. Beautiful when massed in shady rain or pollinator gardens, in borders, along moist woodland edges, or in riparian buffer zones. Great choice for a shaded container garden.



Richard Stromberg

# WILDFLOWERS



Sharon Snyder

## *Parthenium integrifolium*

Wild Quinine



**NATURAL HABITAT:** Dry, open forests, woodlands, barrens, and clearings; mostly on acidic to moderately basic soils

**HEIGHT & SPREAD:** 1–4 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** White flowers in late spring–late summer

**SOIL:** Acidic, neutral, moderately alkaline; well-drained

**WILDLIFE BENEFITS:** The flowers attract halictine bees, wasps, flies, beetles, and plant bugs. The beetles usually feed on pollen, while the other insects seek nectar primarily.

**NOTES:** Tough, clump-forming perennial that works well in pollinator and cottage gardens or meadow plantings. Does not thrive in poor soil. Difficult to transplant due to its taproot. Makes a beautiful cut flower. Drought-tolerant once established. Deer- and rabbit-resistant.



Bert Harris

## *Penstemon canescens*

Gray Beardtongue



**NATURAL HABITAT:** Dry upland forests, rocky woodlands, barrens, dry clearings, and roadsides; tolerates a range of soil and rock types, thrives on both acidic and calcareous substrates

**HEIGHT & SPREAD:** 1–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Pale-pink to violet flowers in late spring–early summer

**SOIL:** Well-drained; average

**WILDLIFE BENEFITS:** Host plant for the Common Buckeye Butterfly. Attracts hummingbirds, butterflies, and other pollinators and supports a specialized mason bee.

**NOTES:** Beautiful as an accent or mass planting in a meadow or in a cottage, hummingbird, or pollinator garden. Easy to divide and transplant. Do not overmulch.

# WILDFLOWERS

## *Penstemon laevigatus*

Smooth Beardtongue



**NATURAL HABITAT:** Moist, low fields, meadows, roadsides, and clearings

**HEIGHT & SPREAD:** 1–5 ft tall; 1 ft wide

**BLOOM/FRUIT:** Outer violet-purple to inner pale-whitish flowers in late spring–early summer, followed by small teardrop-shaped pods full of tiny seeds in late summer

**SOIL:** Well-drained; high in organic matter

**WILDLIFE BENEFITS:** Bees, butterflies, and hummingbirds are attracted to its blooms. Host plant for the Common Buckeye Butterfly.

**NOTES:** Beautiful as an accent or mass planting in a meadow or in a cottage, rock, pollinator, or butterfly garden. Easy to divide and transplant. Do not overmulch. Deer-resistant. More shade-tolerant than *P. canescens*.



Andrea Meisse

## *Phlox divaricata*

Woodland Phlox



**NATURAL HABITAT:** Rich, well-drained floodplain forests, rich mesic cove and slope forests; occasionally in drier, calcareous forests

**HEIGHT & SPREAD:** 9 in–1 ft tall; 1 ft wide

**BLOOM/FRUIT:** Rose, lavender, to blue flowers in spring

**SOIL:** Acidic, neutral, alkaline; well-drained; rich

**WILDLIFE BENEFITS:** Pollinated by bumblebees and long-tongued insects, including butterflies (especially Tiger Swallowtails), skippers, Hummingbird Clearwing and Sphinx Moths.

**NOTES:** Fragrant, spring-blooming perennial. Fairly long bloom period. Clump-forming, but mingles well with other plants. Lovely for woodland and pollinator gardens and in borders and mass plantings. Easy to divide and transplant.



Richard Stromberg

# WILDFLOWERS



Scott Namestnik

## *Phlox maculata*

Meadow Phlox



RV

**NATURAL HABITAT:** Wet meadows and clearings, stream banks, calcareous fens, bogs, seepage swamps

**HEIGHT & SPREAD:** 2–3 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Purple flowers in late summer–midfall

**SOIL:** Well-drained; silty, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Flowers attract butterflies, moths, and hummingbirds. Songbirds eat the seeds.

**NOTES:** Tall, upright, clump-forming perennial. Beautiful accent in cottage, meadow, or rain gardens. Can develop a harmless mildew on its leaves if it does not have enough circulation. Does not tolerate long periods of drought. Makes a good cut flower.



Scott Namestnik

## *Phlox ovata*

Mountain Phlox



RV

**NATURAL HABITAT:** Mesic to dry forest, woodlands, and clearings; occasionally on shale barrens; acidic and calcareous soils

**HEIGHT:** 1–1.5 ft wide; 1–2 ft tall

**BLOOM/FRUIT:** Rose-pink flowers in late spring

**SOIL:** Rocky; poor to average

**WILDLIFE BENEFITS:** Hummingbird favorite.

**NOTES:** Was formerly called *Phlox latifolia*. This small plant flowers before other Phlox species and is well suited to a rock garden. It doesn't like to be crowded, so plant in an open space. As its common name suggests, it enjoys high elevations.

# WILDFLOWERS

## *Phlox paniculata*

Garden Phlox



RV

**NATURAL HABITAT:** Well-drained floodplain, cove, and upland forests, streambanks, wet meadows, clearings, roadsides; rich mesic upland forests, stream banks, wet meadows, clearings, low roadsides

**HEIGHT & SPREAD:** 2–4 ft tall; 2–3 ft wide

**BLOOM/FRUIT:** Fragrant pink to purple to white in midsummer–early fall

**SOIL:** Well-drained; fertile

**WILDLIFE BENEFITS:** Attracts hummingbirds and butterflies.

**NOTES:** Makes a lovely addition to cottage or pollinator gardens. Can develop a harmless mildew. Tolerates Black Walnut.



Richard Stromberg

## *Phlox subulata*

Moss Phlox



RV

**NATURAL HABITAT:** Dry rocky woodlands, barrens, exposed outcrops

**HEIGHT & SPREAD:** 4–6 in tall; 1–2 ft wide

**BLOOM/FRUIT:** Pink to purple flowers in late winter to midspring

**SOIL:** Well-drained; sandy, gravelly

**WILDLIFE BENEFITS:** Flowers attract hummingbirds, butterflies, skippers, and bees.

**NOTES:** Mat-forming, evergreen groundcover. Long bloom period. Great on sunny pathways or on sunny slopes to prevent erosion. Beautiful when allowed to flow over rock walls or outcroppings, in rock gardens, or as edging.



Richard Stromberg

# WILDFLOWERS



## *Pycnanthemum incanum*

Hoary Mountain Mint



**NATURAL HABITAT:** Medium to dry upland forests and rocky woodlands, shale barrens, mafic outcrop barrens, forest borders, clearings, and roadsides

**HEIGHT & SPREAD:** 1.25–6.5 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** Fragrant white to pinkish-purple flowers in early summer–early fall

**SOIL:** Well-drained; clay, sandy, loamy, gravelly

**WILDLIFE BENEFITS:** Host plant for Wavy-Lined Emerald Moth larvae. Flowers attract butterflies, especially smaller species like hairstreaks. Popular with native bees, wasps, and other beneficial insects.

**NOTES:** Clump-forming perennial. Great naturalizer for meadow gardens. Deeper-purple blooms than other *Pycnanthemum* species. Highly deer-resistant.



## *Pycnanthemum tenuifolium*

Narrowleaf Mountain Mint



**NATURAL HABITAT:** Dry meadows, fields, thickets, open woods, upland prairies, along roadsides

**HEIGHT & SPREAD:** 2–4 ft tall; 2–3 ft wide

**BLOOM/FRUIT:** White with pinkish-tinged flowers in early summer to fall

**SOIL:** Well-drained; loamy

**WILDLIFE BENEFITS:** Attracts bees, butterflies, and other pollinators, including native sweat bees.

**NOTES:** Clump-forming perennial with fine, needlelike foliage. Great naturalizer for meadow gardens or sunny woodland edges. Can be robust without adequate competition.

# WILDFLOWERS

## *Pycnanthemum virginianum*

Virginia Mountain Mint



**NATURAL HABITAT:** Fens, spring marshes, seeps, wet meadows, clearings, open alluvial habitats

**HEIGHT & SPREAD:** 9 in–3.25 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** White flowers, often with magenta-purple spots, in early summer–fall

**SOIL:** Fertile soil over limestone

**WILDLIFE BENEFITS:** Enjoyed by native short-tongued bees and wasps, as well as beneficial insects.

**NOTES:** Clump-forming perennial with long bloom period. Great in rain gardens or as a naturalizer for moist meadow gardens or ditches. Can be robust without adequate competition.



Richard Stromberg

## *Rudbeckia hirta*

Black-Eyed Susan



**NATURAL HABITAT:** Fields, roadsides, clearings

**HEIGHT & SPREAD:** 2–4 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Yellow-gold flower rays with brown centers in late spring–midsummer

**SOIL:** Neutral pH; well-drained; adaptable, rich

**WILDLIFE BENEFITS:** Attracts native bees, butterflies, pollinators. Host to native caterpillars including Common Sulphur and Silvery Checkerspot.

**NOTES:** Drought-tolerant once established. Beautiful in bouquets.



Ed Lickey

# WILDFLOWERS



Sharon Snyder

## *Rudbeckia triloba*

Brown-Eyed Susan



**NATURAL HABITAT:** Dry woodlands, barrens

**HEIGHT & SPREAD:** 2–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Yellow-gold flower rays with brown centers in midsummer–midfall

**SOIL:** Calcareous

**WILDLIFE BENEFITS:** Attracts bees, butterflies, and other pollinators with nectar and pollen in the blooms. Is the larval host plant for the Silvery Checkerspot Butterfly and supports Wavy-Lined Emerald Moth larvae. Songbirds, especially American Goldfinches, eat the seeds in the fall.

**NOTES:** Tall, bushy biennial with a long bloom period. Thrives in open meadows. Good colonizer for newly disturbed soils. Pretty seed heads. Can easily reseed into gaps if allowed. Beautiful cut flower. Can be grown in a container garden.



Isaac Matlock

## *Salvia lyrata*

Lyreleaf Sage



**NATURAL HABITAT:** Forests and woodlands, well-drained floodplain forests, limestone and dolostone barrens, fields, roadsides, clearings, lawns

**HEIGHT & SPREAD:** 6 in–2.5 ft tall; 6 in–1 ft wide

**BLOOM/FRUIT:** Bluish-purple, rarely white, flowers in spring

**SOIL:** Acidic, neutral; well-drained; clay, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts hummingbirds, butterflies, and pollinators.

**NOTES:** Adaptable, easy-to-grow groundcover. A pretty addition to rock gardens or native “lawns.” Also great in butterfly, pollinator, or drought-tolerant gardens. Can reseed prolifically if given space; can be outcompeted by taller plants but mingles well with other short species. Will tolerate a rain garden.

# WILDFLOWERS

## *Sanguinaria canadensis*

Bloodroot



**NATURAL HABITAT:** Dry, rocky slopes, upland forests, woodlands

**HEIGHT & SPREAD:** 6–10 in tall; 4–6 in wide

**BLOOM/FRUIT:** White flowers in early spring

**SOIL:** Acidic; well-drained; nutrient-rich

**WILDLIFE BENEFITS:** Mining bees and sweat bees collect pollen. Ants collect and disperse seeds.

**NOTES:** Beautiful flowers bloom for a short period, followed by unique foliage that lasts until midsummer. Great in woodland and part-shade gardens or on slopes; deciduous shade is best. Will not thrive in heavy clay or poor soils. Reddish-orange sap once used by Native Americans for dyes. Deer- and rabbit-resistant.



Isaac Matlock

## *Scutellaria integrifolia*

Hyssop Skullcap



**NATURAL HABITAT:** Floodplain forests, swamps, ponds, wet flatwoods, moist to wet meadows, low and disturbed habitats

**HEIGHT & SPREAD:** 1–1.5 ft tall; 9 in–1 ft wide

**BLOOM/FRUIT:** Blue-violet flowers in late spring–summer

**SOIL:** Acidic, neutral; average, clay, loamy

**WILDLIFE BENEFITS:** Flowers visited by long-tongued bees and butterflies.

**NOTES:** A colorful midsummer accent for sunny woodland edges, shorter meadows, or rock gardens. Grows taller with more moisture, especially in rain, bog, or pond gardens. Can reseed if allowed.



Sharon Snyder

# WILDFLOWERS



Ed Lickey

## *Sedum ternatum*

Wild Stonecrop



**NATURAL HABITAT:** Well-drained floodplain forests, shaded ledges, outcrops; usually in base-rich soils  
**HEIGHT AND SPREAD:** 2–6 in tall; 6 in–1 ft wide

**BLOOM/FRUIT:** White flowers in spring  
**SOIL:** Alkaline, neutral; well-drained; clay, sandy, rocky

**WILDLIFE BENEFITS:** Attracts butterflies and other pollinators.

**NOTES:** This evergreen succulent groundcover with unique clusters of blooms makes a great border for shady paths, patio edges, or woodland rock gardens. Works well in butterfly or pollinator gardens, or on slopes, banks, or rocks. Usually grows well where moss is present. Tolerates drought and poor soil. Deer-resistant.



Bert Harris

## *Silene caroliniana*

Wild Pink



**NATURAL HABITAT:** Dry rocky or sandy forests, woodlands, barrens, outcrops; tolerates a range of soils and pH levels  
**HEIGHT & SPREAD:** 1.5–8 in tall and wide  
**BLOOM/FRUIT:** White to dark pink flowers in spring

**SOIL:** Acidic, neutral; well-drained  
**WILDLIFE BENEFITS:** Attracts butterflies and hummingbirds.

**NOTES:** Small, clump-forming perennial that works well as a groundcover on slopes as well as in rock, cottage, and pollinator gardens. Beautiful when massed. A great option for drought-tolerant gardens. Can be outcompeted by taller plants. Does not transplant easily.

# WILDFLOWERS

## *Silene virginica*

Fire Pink



**NATURAL HABITAT:** Dry to occasionally mesic forests, rocky woodlands, barrens, rock outcrops, road banks; tolerates a range of soil and pH levels

**HEIGHT & SPREAD:** 6 in–2 ft tall; 10 in–2 ft wide

**BLOOM/FRUIT:** Bright red flowers in spring–summer

**SOIL:** Well-drained; sandy, light loamy, rocky

**WILDLIFE BENEFITS:** Attracts songbirds, butterflies, pollinators, and hummingbirds.

**NOTES:** Small, clump-forming perennial that works well along borders, in butterfly, cottage, and rock gardens, as well as in meadows, woodlands, and naturalized area. Beautiful when massed. A great option for partly shaded, drought-tolerant gardens. Does not transplant easily. Can be outcompeted by taller plants.



Sharon Snyder

## *Sisyrinchium angustifolium*

Blue-Eyed Grass



**NATURAL HABITAT:** Upland forests, woodlands, fields, meadows, floodplain forests

**HEIGHT & SPREAD:** 6 in–1.5 ft tall; 6 in–1 ft wide

**BLOOM/FRUIT:** Blue, rarely white, flowers in spring–summer

**SOIL:** Acidic, neutral; well-drained; rich in organic matter

**WILDLIFE BENEFITS:** Attracts songbirds and many pollinators, including sweat bees, bumblebees, bee flies, syrphid flies, and spring butterflies like Blue Azures.

**NOTES:** Tough, clump-forming member of the Iris family—not truly a grass. Flowers open in day and close at night. Unique grasslike foliage is beautiful when massed. Handles competition well. Great in rock, rain, and pollinator gardens, or along borders and pond edges.



Richard Stromberg

# WILDFLOWERS



Steven David Johnson

## *Solidago caesia*

Wreath or Blue-Stemmed Goldenrod



**NATURAL HABITAT:** Upland forests, woodlands, clearings; mostly below 3,000 ft elevation

**HEIGHT & SPREAD:** 1.5–3 ft tall and wide

**BLOOM:** Yellow flowers in late summer–midfall

**SOIL:** Acidic, neutral; well-drained; average to poor

**WILDLIFE BENEFITS:** Special value to native bees, honeybees, and predatory and parasitoid insects, which are good biological controls in a garden.

**NOTES:** This Goldenrod has a unique branching habit, with beautiful bluish foliage and stems and a long bloom time. Can be grown in containers.



Richard Stromberg

## *Solidago flexicaulis*

Zigzag Goldenrod



**NATURAL HABITAT:** Fairly dry upland and well-drained floodplain forests, seepage swamp hummocks, rocky woodlands, and sheltered cliffs and outcrops

**HEIGHT & SPREAD:** 1–3 ft tall and wide

**BLOOM:** Yellow flowers in late summer–midfall

**SOIL:** Acidic, neutral, alkaline; well-drained; clay, loamy, rich

**WILDLIFE BENEFITS:** Its flowers attract long- and small-tongued bees, wasps, flies, and butterflies. Seeds attract Swamp Sparrows, Pine Siskins, and meadow mice. It is the host plant for many moth caterpillars, which are, in turn, a source of food for songbirds.

**NOTES:** Tough and adaptable perennial for naturalizing woodlands. Long bloom period. Most shade-tolerant Goldenrod. Can be robust without adequate competition.

# WILDFLOWERS

## *Solidago nemoralis*

Gray Goldenrod



**NATURAL HABITAT:** Open forests, woodlands; barrens, clearings, old fields, rocky banks

**HEIGHT & SPREAD:** 6 in–4.25 ft tall; 6 in–2 ft wide

**BLOOM/FRUIT:** Yellow flowers in late summer–midfall

**SOIL:** Slightly acidic; well-drained; sandy, rocky, high in organic matter

**WILDLIFE BENEFITS:** This plant supports Wavy-Lined Emerald Moth larvae. Attracts butterflies, native bees, honeybees, and other pollinators. Songbirds eat the seeds.

**NOTES:** Tough and adaptable perennial for naturalized areas. Grows taller with more moisture. Can be robust in ideal conditions without adequate competition. Good cut flower.



Bert Harris

## *Solidago odora*

Sweet Goldenrod



**NATURAL HABITAT:** Dry, often sandy open forests, woodlands, sandstone barrens, clearings, old fields, roadsides; strictly in acidic, nutrient-poor soils

**HEIGHT & SPREAD:** 1–5 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Yellow flowers in midsummer–midfall

**SOIL:** Well-drained; average to poor

**WILDLIFE BENEFITS:** Attracts butterflies, native bees, honeybees, and other pollinators. Songbirds eat the seeds.

**NOTES:** Tough and adaptable clump-forming perennial for large meadow gardens. Anise-scented blooms and leaves. Long bloom period. Good cut flower. Can be made into a mild anise-flavored tea.



Ken Lawless

# WILDFLOWERS



## *Symphyotrichum cordifolium* Blue Wood or Heart-Leaved Aster



**NATURAL HABITAT:** Upland forests, woodlands, shaded road banks; tolerates a range of pH levels

**HEIGHT & SPREAD:** 2–4 ft tall; 1.5–2 ft wide

**BLOOM/FRUIT:** Violet to purple rays with yellow centers in mid- to late fall

**SOIL:** Well-drained; average

**WILDLIFE BENEFITS:** Host plant for the Pearl Crescent Butterfly. Flowers are attractive to bees and butterflies. Songbirds and small mammals eat the seeds. Asters support specialized bees.

**NOTES:** A tough Aster with a long bloom period. Beautiful in shade gardens, especially in drifts. Readily reseeds, but easy to limit spreading via deadheading if desired. Good cut flower. Drought-, shade-, and sun-tolerant.

Sharon Snyder



## *Symphyotrichum laeve*

Smooth Aster



**NATURAL HABITAT:** Upland forests, woodlands, barrens, clearings

**HEIGHT & SPREAD:** 2–4 ft tall; 1–2 ft wide

**BLOOM/FRUIT:** Violet-purple flowers with yellow centers in mid- to late fall

**SOIL:** Well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Host plant for the Pearl Crescent Butterfly. Flowers attract bees and butterflies. Songbirds and small mammals eat the seeds. Asters support specialized bees.

**NOTES:** Makes a sturdy, upright accent plant for meadow or cottage gardens and is a long-lived perennial that behaves well with other plants. Less dense than *S. novae-angliae* (New England Aster), this plant is best placed near species that will not overshadow it, such as *Schizachyrium scoparium* (Little Bluestem) or *Asclepias tuberosa* (Butterfly Milkweed).

Bert Harris

# WILDFLOWERS

## *Symphotrichum novae-angliae*

New England Aster



**NATURAL HABITAT:** Calcium-rich fens, spring marshes, wet meadows, wet fields  
**HEIGHT & SPREAD:** 3–6 ft tall; 2–3 ft wide  
**BLOOM:** Pinkish-purple flowers with yellow centers in mid- to late fall  
**SOIL:** Well-drained; clay, high in organic matter  
**WILDLIFE BENEFITS:** Host plant for Pearl Crescent caterpillars. Flower nectar attracts bees, hover flies, and migrating Monarch Butterflies. Songbirds and small mammals eat the seeds. Asters support more than one genus of specialized bee.  
**NOTES:** Tall, upright perennial that is great for large meadow gardens, pond edges, or ditches. Reseeds prolifically in ideal conditions; often outcompetes non-natives. Can be cut in half during summer to encourage bushier habit. Often loses its bottom leaves while blooming.



## *Symphotrichum oblongifolium*

Aromatic or Shale Barrens Aster



**NATURAL HABITAT:** Dry rocky woodlands, barrens, cliffs, outcrops over calcium-rich rocks  
**HEIGHT & SPREAD:** 3 in–3.25 ft tall; 1–3 ft wide  
**BLOOM/FRUIT:** Violet-purple, sometimes pink, flowers in fall  
**SOIL:** Well-drained; clay, loamy, sandy  
**WILDLIFE BENEFITS:** Asters support both specialized bees and many generalist bees.  
**NOTES:** One of the showiest Asters throughout its long bloom period. A mounding and shrublike perennial, it is wonderful in hot, dry, rocky areas or when used as a great accent in cottage gardens. Deer-resistant because of aromatic foliage.



# WILDFLOWERS



Sharon Snyder

## *Thalictrium thalictroides*

Rue Anemone



**NATURAL HABITAT:** Upland forests

**HEIGHT & SPREAD:** 4–8 in tall and wide

**BLOOM/FRUIT:** White, purple, or pink-tinged flowers in spring

**SOIL:** Well-drained; rich

**WILDLIFE BENEFITS:** Supports butterflies, moths, and bees.

**NOTES:** Spring ephemeral that is beautiful when planted in mass. Great for woodland, butterfly, or rock gardens, along woodland paths, or on slopes. Slow to establish. Will not thrive in poor soils. May sometimes be listed as *Anemonella thalictroides*.



Barbara Brothers

## *Tiarella cordifolia*

Foamflower



**NATURAL HABITAT:** Cove forests, slope forests, well-drained moist forests, crevices of shaded rock outcrops; favors alkaline soils

**HEIGHT & SPREAD:** 6–12 in tall and wide

**BLOOM/FRUIT:** Small spears of white-to-pink flowers in spring

**SOIL:** Well-drained; loamy, rich

**WILDLIFE BENEFITS:** Attracts bees, butterflies, and other pollinators.

**NOTES:** Mounded, clump-forming perennial with unique foliage. Can become a groundcover in ideal conditions. Great in woodland or shady rock gardens and along woodland paths. Pairs well with *Phlox divaricata*. Will not tolerate soggy winters.

# WILDFLOWERS

## *Tradescantia virginiana*

Virginia Spiderwort



**NATURAL HABITAT:** Well-drained floodplain forests, upland forest and rocky woodlands around outcrops; usually in alkaline soils

**HEIGHT & SPREAD:** 1–3 ft tall; 1–1.5 ft wide

**BLOOM/FRUIT:** Blue, purple, sometimes rose or white flowers in spring–summer

**SOIL:** Well-drained; clay, loamy, sandy, rich

**WILDLIFE BENEFITS:** Attracts bees, butterflies, and other pollinators.

**NOTES:** Clump-forming, adaptable perennial. Each bloom lasts one day. Nice border to meadow, cottage, pollinator, rain, and woodland gardens. May need a midsummer chop to keep it tidy; can reseed aggressively without adequate competition, so interplant with other robust species. Edible flowers.



Bert Harris

## *Trillium erectum*

Red Trillium



**NATURAL HABITAT:** Drier habitats on acidic soils in open, rich woods; mid- to high elevations

**HEIGHT & SPREAD:** 8 in–1.5 ft tall; 1–1.5 ft wide

**BLOOM:** Showy, starlike, red to maroon flowers in spring; 6 parted berrylike seed capsules in summer

**SOIL:** Acidic; well-drained; humus-rich

**WILDLIFE BENEFITS:** Attracts bees and other pollinators. Larval host for moths.

**NOTES:** Use in pollinator and shade gardens, for mass or small plantings. Sensitive to heat.



Isaac Matlock

# WILDFLOWERS



Barbara Brothers

## *Trillium grandiflorum*

Large-Flowered Trillium, Great White Trillium



**NATURAL HABITAT:** Cove, slope, northern hardwood, and Northern Red Oak forests; seepage swamp hummocks, often in alkaline soils

**HEIGHT & SPREAD:** 1–1.5 ft tall; 9 in–1 ft wide

**BLOOM/FRUIT:** White flowers fading to pink in spring

**SOIL:** Acidic, neutral, alkaline; well-drained; rich

**WILDLIFE BENEFITS:** Bees and other pollinating insects enjoy the nectar from the flowers. Moths use this plant as a larval host. Small mammals enjoy the berries as a food source.

**NOTES:** Early spring addition to rich woodland gardens. Benefits from leaf mulch. Slow to spread but worth the wait. Does not tolerate drought.



Bert Harris

## *Vernonia glauca*

Upland Ironweed



**NATURAL HABITAT:** Dry upland forests, woodlands, clearings

**HEIGHT & SPREAD:** 2–6.5 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** Pinkish-purple flowers in late summer–early fall

**SOIL:** Acidic, neutral, alkaline; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Excellent source of nectar and is often visited by native bees, butterflies, and occasionally hummingbirds. It is a host plant for the American Lady Butterfly.

**NOTES:** This upright perennial makes a great accent in meadow or cottage gardens or naturalized along sunny woodland edges. Shorter and more drought-tolerant than *V. noveboracensis*.

# WILDFLOWERS

## *Vernonia noveboracensis*

New York Ironweed



**NATURAL HABITAT:** Floodplain forests, swamps, riverbanks and bars, riverside prairies, fens, spring marshes, wet meadows, low fields, clearings, pastures, occasionally in upland forests

**HEIGHT & SPREAD:** 4–6 ft tall; 3–4 ft wide

**BLOOM/FRUIT:** Magenta to deep-purple flower clusters in midsummer–early fall

**SOIL:** Acidic, neutral; clay, loamy, rich

**WILDLIFE BENEFITS:** Flowers attract butterflies, bees, including a specialized bee, and other pollinators. Songbirds eat the seeds.

**NOTES:** Robust, upright perennial; interesting seed heads. Great accent in rain gardens or moist meadows. Place at the back of a border garden or along a fence because it gets tall. Beautiful when massed with goldenrods in low areas. Good cut flower. Deer-resistant.



Sharon Snyder

## *Veronicastrum virginicum*

Culver's Root



**NATURAL HABITAT:** Dry woodlands, moist meadows, prairies, riverside

**HEIGHT & SPREAD:** 4–7 ft tall; 2–4 ft wide

**BLOOM/FRUIT:** White to pale-lavender flower spikes in summer

**SOIL:** Acidic; clay, loamy, high in organic matter

**WILDLIFE BENEFITS:** Both long- and short-tongued bees collect its pollen and nectar: honeybees, bumblebees, mason bees, green metallic bees, and masked bees. Other insect visitors include sphecid wasps, butterflies, moths, and syrphid flies.

**NOTES:** This tall, robust perennial makes a dramatic accent in moist meadows or rain gardens and is also wonderful in butterfly, cottage, pollinator, or cutting gardens. It can form bold clumps in ideal conditions. Has a long bloom period. Makes a striking cut flower. Deer- and rabbit-resistant.



Rae Kasdan

# WILDFLOWERS



Isaac Matlock

## *Viola canadensis*

Canada Violet



**NATURAL HABITAT:** Rich, well-drained floodplain, rich cove and slope, and montane forests

**HEIGHT & SPREAD:** 8 in–1.5 ft tall and wide

**BLOOM/FRUIT:** White flowers or white with yellow eye, purple or purple-tinted on back, in spring–fall

**SOIL:** Neutral pH; well-drained; rich clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts songbirds, moths, bees, butterflies including the Fritillary Butterfly and several specialized bees. Provides wildlife cover and is a food source and larval host.

**NOTES:** Mounding, clump-forming perennial. Reseeds prolifically in ideal conditions. Great for pond edges, moist meadows, ditches, or large rain gardens. Tolerates Black Walnut. Deer-resistant.



Sharon Snyder

## *Viola pedata*

Bird's Foot Violet



**NATURAL HABITAT:** Dry rocky or sandy forests, woodlands, barrens, clearings, road banks

**HEIGHT & SPREAD:** 3 in tall; 4–6 in wide

**BLOOM/FRUIT:** Lilac-purple flowers in spring–early summer

**SOIL:** Acidic, neutral; well-drained; sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts bees, butterflies, moths, songbirds, and specialized bees.

**NOTES:** Has unique foliage and aromatic blooms. Works well in woodland, butterfly, pollinator, and rock gardens and on slopes. It is difficult to establish and sensitive to competition, but will reseed in ideal conditions. Deer-resistant.

# WILDFLOWERS

## *Zizia aptera*

Heart-Leaved Alexander



**NATURAL HABITAT:** Forests, rocky woodlands, clearings; typically on calcium-rich rocks

**HEIGHT & SPREAD:** 1–3 ft tall; 1–1.5 ft wide

**Bloom/fruit:** Gold-yellow flowers in spring

**SOIL:** Neutral; clay, loam, shallow rocky

**WILDLIFE BENEFITS:** Attracts butterflies, bees, and songbirds, and supports Black Swallowtail Butterfly larvae.

**NOTES:** This species is similar to *Z. aurea*, but is more tolerant of dry conditions and has simple rounded basal leaves rather than compound basal leaves.



Richard Stromberg

## *Zizia aurea*

Golden Alexander



**NATURAL HABITAT:** Floodplain forests, swamps, fens, and seeps, rocky flood-scoured shores, riverside prairies, moist or wet clearings; sometimes ranging into drier habitats, especially on alkaline soils

**HEIGHT & SPREAD:** 1.5–2 ft tall; 1.5 ft wide

**BLOOM:** Yellow flowers in spring–early summer

**MOISTURE:** Well-drained; clay, loamy, high in organic matter

**WILDLIFE BENEFITS:** Attracts butterflies and specialized bees.

**NOTES:** Adaptable, long-blooming, but short-lived perennial; persists in gardens via reseeding. Great in cottage or woodland gardens, or as an accent or border in butterfly, cottage, and pollinator gardens. Can naturalize areas in ideal conditions. Good cut flower.



Richard Stromberg

# GRASSES, RUSHES, & SEDGES

Grasses are an underrated component of an ecological garden. Not only do they provide yearlong interest, with delicate and flowing bunches of stems that age into hues of auburn, rust, and gold in the winter, they are also invaluable to our local wildlife. Native grasses provide shelter and are essential food sources for native birds, especially in the cold winter months. Paired with our native flowering plants, grasses increase a pollinator garden's lasting beauty and function. About one-third of all plant species in Virginia are sedges!





# GRASSES, RUSHES & SEDGES



## *Andropogon gerardii*

Big Bluestem



**NATURAL HABITAT:** Dry woodlands, barrens, and rock outcrops, such as limestone, shales, and sandstones; riverside prairies and outcrops, rocky and gravelly river shores and bars, clearings, fens, wet meadows, and fields

**HEIGHT & SPREAD:** 3–9 ft tall; 2–3 ft wide

**INFLORESCENCE:** Red-blue-brown flowers that darken with age in midsummer–winter

**SOIL:** Well-drained; clay, sandy, but tolerates wide range, including poor

**WILDLIFE BENEFITS:** Provides shelter and habitat for wildlife.

**NOTES:** Large, clump-forming perennial grass; best suited for large meadow gardens or hedgerows. Very deep root system. Provides winter interest. Can become heavily dominant in dry, upland meadow plantings.



## *Andropogon virginicus*

Broomsedge



**NATURAL HABITAT:** Old fields, pastures, roadsides, and clearings; occurs more sparingly in natural habitats, especially dry woodlands, granitic flatrocks, dune scrub, woodlands, and maritime forests

**HEIGHT & SPREAD:** 2–4 ft tall; 1–2 ft wide

**INFLORESCENCE:** Orange flowers in fall

**SOIL:** Sandy; disturbed

**WILDLIFE BENEFITS:** Attracts butterflies and pollinators and supports Common Wood Nymph Butterfly larvae.

**NOTES:** Upright, clump-forming warm-season grass. Great accent in cottage gardens. Attractive when planted in masses. Beautiful bronze foliage in winter. Common early colonizing grass of abandoned agricultural fields and pastures.

# GRASSES, RUSHES & SEDGES

## *Bouteloua curtipendula*

Sideoats Grama



**NATURAL HABITAT:** Dry, rocky open woodlands and barrens over limestone, dolomite, and sometimes shale  
**HEIGHT & SPREAD:** 1.5–2.5 ft tall; 1.5–2 ft wide

**INFLORESCENCE:** Purplish-tan flowers in midsummer–early fall

**SOIL:** Acidic; average, clay, poor

**WILDLIFE BENEFITS:** Provides food, nesting material, and cover for birds, and structure for native bees. Larval host for the Green Skipper and Dotted Skipper Butterflies.

**NOTES:** Petite, clump-forming warm-season grass. Looks best when mingled with short wildflowers. Unique orange inflorescence.



## *Carex appalachica*

Appalachian Sedge



**NATURAL HABITAT:** Montane forests, shaded rock outcrops, and seepage-swamp hummocks

**HEIGHT & SPREAD:** 6–12 in tall and wide

**INFLORESCENCE:** Inconspicuous light-green flower spikes in spring

**SOIL:** Acidic; well-drained; average, clay, poor

**WILDLIFE BENEFITS:** Provides nectar to native insects and seed to turtles and birds in summer. Host plant to the Skipper and Satyr Caterpillars.

**NOTES:** Fine-textured sedge that can be seeded as a groundcover or planted as a border. Great for dry woodland and rock gardens. Beautiful planted in masses.



# GRASSES, RUSHES & SEDGES



Sharon Snyder

## *Carex pensylvanica*

Pennsylvania Sedge



**NATURAL HABITAT:** Dry forests, woodlands, barrens, grassy balds, clearings; rocky woodlands, shale, rock outcrops; acidic to calcareous (alkaline)

**HEIGHT & SPREAD:** 2 in–1.3 ft tall and wide

**INFLORESCENCE:** Green with reddish-purple spikelets above purplish-black and green flowers in midspring–early summer

**SOIL:** Acidic, neutral, alkaline; well-drained; sandy, high in organic matter

**WILDLIFE BENEFITS:** Supports various Satyr Butterfly larvae and dozens of butterfly and moth species. Host plant to 36 species of caterpillar. Provides shelter, cover, and nesting material in the wild.

**NOTES:** Tuft-forming sedge can be seeded as a groundcover or planted as a border. Plant in woodland, shade garden, or at the base of trees. Grows best in moist shade. Mingles well with short wildflowers.



Isaac Matlock

## *Carex platyphylla*

Broad-Leaved Sedge



**NATURAL HABITAT:** Upland forests; often abundant on thin soils of bluffs and shaded outcrops; tolerates acidic to alkaline soils

**HEIGHT & SPREAD:** 1 in–1 ft tall; 6–10 in wide

**INFLORESCENCE:** Blooms in midspring–summer

**SOIL:** Acidic, neutral, alkaline; high in organic matter

**WILDLIFE BENEFITS:** Attracts bees, pollinators, songbirds, small mammals. Supports various Satyr larvae.

**NOTES:** Broad-leaved, tuft-forming sedge. Great accent for moist woodland gardens. Makes a nice border along shady walkways. Can be planted in masses on embankments for erosion control.

# GRASSES, RUSHES & SEDGES

## *Carex vulpinoidea*

Fox Sedge



RV

**NATURAL HABITAT:** Moist to wet, usually disturbed habitat, such as low fields, ditches, meadows, clearings, beaver wetlands

**SPREAD:** 9 in–3 ft tall; 1–2 ft wide

**INFLORESCENCE:** Green blooms in summer

**SOIL:** Acidic, neutral, alkaline; loamy, clay, sandy

**WILDLIFE BENEFITS:** Host plant for several skipper and moth species, the Eyed Brown Butterfly, and the Sordid Wainscot Moth. Provides food and habitat for beneficial insects. Wetland birds feed on the seeds, including ducks, swans, rails, sparrows, and sandpipers.

**NOTES:** Robust, mounding sedge. Adaptable and great for colonizing mucky, disturbed sites. Great for wetland restoration sites. Beautiful in rain gardens with adequate competition. Deer-resistant.



Bert Harris

## *Chasmanthium latifolium*

River Oats



RV

**NATURAL HABITAT:** Well-drained floodplain forests, hummocks of swamps, rocky or sandy river shores and bars, riverside prairies; seepage areas, upland forests near streams or rivers

**HEIGHT & SPREAD:** 1.5–4.5 ft tall; 1–2.5 ft wide

**INFLORESCENCE:** Seed heads resembling oats emerge green in spring, turn tan in summer, purplish in fall; bamboo-like leaves turn yellow-gold in midsummer–midfall

**SOIL:** Well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts butterflies, pollinators, and songbirds.

**NOTES:** Clump-forming, adaptable warm-season grass. Works well in mass plantings, as accent plants, especially in containers, or along borders. Unique seed heads are great in dried arrangements or provide winter interest if uncut. Can be robust.



Ed Lickey

# GRASSES, RUSHES & SEDGES



Erik Danielson

## *Danthonia spicata*

Poverty Oatgrass



**NATURAL HABITAT:** Rocky, shallow, or compacted soils in dry upland forests, woodlands, pastures, old fields, clearings, roadsides

**HEIGHT & SPREAD:** 1–2 ft tall; 1 ft wide

**INFLORESCENCE:** A narrow panicle of light green spikelets on a short slender stalk; spikelets are few in number

**SOIL:** Poor, sandy, gravelly, rocky

**WILDLIFE BENEFITS:** The caterpillars of various skippers, such as Leonard's Skipper and Indian Skipper, as well as grasshoppers feed on the foliage of this low-growing grass.

**NOTES:** Petite cool season grass with unique curly foliage. Very drought-tolerant. Can be outcompeted by taller plants. Thrives in poor soils in sunny sites.



Richard Stromberg

## *Elymus hystrix*

Bottlebrush Grass



**NATURAL HABITAT:** Forests, woodlands, barrens, clearings; well-drained riverine forests; Oak-Hickory forests and rocky woodlands over alkaline rock

**HEIGHT & SPREAD:** 2–6 ft tall; 1–2 ft wide

**INFLORESCENCE:** Green flowers in early summer turning coppery-brown in fall

**SOIL:** Well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts butterflies, moths, and songbirds.

**NOTES:** Clump-forming cool-season grass. Works well in a riparian buffer and for erosion control. Great accent plant for woodland borders or shady cottage gardens. Unique seed heads. Tolerates Black Walnut, drought, and shade. Deer-resistant.

# GRASSES, RUSHES & SEDGES

## *Eragrostis spectabilis*

Purple Lovegrass



**NATURAL HABITAT:** Scrub, woodlands; river shores and bars, riverside prairies, dry woodlands and barrens, clearings, fields, roadsides, other open and disturbed areas  
**HEIGHT & SPREAD:** 2 in–1.6 ft tall; 1–1.5 ft wide

**INFLORESCENCE:** Reddish-purple flowers in late summer turning brown in midfall

**SOIL:** Well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Larval host for the Paradoxical Grass Moth and supports numerous insect herbivores such as leafhoppers. Birds use the dry panicles for nesting.

**NOTES:** Petite warm-season grass. Beautiful when planted in mass. Can reseed prolifically; thrives in poor soils on sunny sites; good for robust erosion control on roadsides and hillsides. Tolerates Black Walnut.



Lucy Ivey

## *Juncus effusus*

Soft Rush



**NATURAL HABITAT:** In wide range of open and forested wet habitats, natural and disturbed

**HEIGHT & SPREAD:** 1–6.5 ft tall; 2–3 ft wide

**INFLORESCENCE:** Green flowers in early summer, turning coppery-brown in midfall

**SOIL:** Mucky; moist, wet, standing water

**WILDLIFE BENEFITS:** Songbirds, waterfowl, muskrats, quail, gophers, and rabbits eat the seeds. It provides cover for all kinds of wildlife, from waterfowl to amphibians.

**NOTES:** Evergreen, clump-forming perennial; its vertical structure makes a great accent in rain gardens or at pond edges. Without adequate competition, it can be robust in newly disturbed sites. Suitable for container gardening. Deer-resistant.



Isaac Matlock

# GRASSES, RUSHES & SEDGES



Erik Danielson

## *Juncus dudleyi*

Dudley's Rush



RV

**NATURAL HABITAT:** Various open to partly shaded, moist habitats

**HEIGHT & SPREAD:** 1.5–2.5 ft tall; 1–1.5 ft wide

**INFLORESCENCE:** Insignificant greenish flowers in late spring to midsummer; reddish-brown seedheads

**SOIL:** Heavy; adapts to a variety of soils as long as they are consistently moist or wet

**WILDLIFE BENEFITS:** It is a food source for insects, moths, birds, and other wildlife. It provides wetland habitat for birds and amphibians.

**NOTES:** Tough, easy-to-grow perennial that needs consistent moisture; tolerates heavy soils; can be robust in ideal conditions; beautiful when massed with robust flowers in wet meadows, ditches, rain gardens, or wetlands.



Isaac Matlock

## *Schizachyrium scoparium*

Little Bluestem



RV

**NATURAL HABITAT:** Open forests, woodlands, barrens, outcrops, riverside prairies, dry clearings, fields, meadows, roadsides

**HEIGHT & SPREAD:** 2–4 ft; 1–3 ft

**INFLORESCENCE:** Purple-bronze racemes in late summer–fall

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Provides excellent cover year-round. Larval host plant for various skipper larvae and Common Wood-Nymph. Adult Common Wood-Nymph Butterflies feed on rotting fruit and flower nectar. Seeds are eaten by songbirds and small mammals.

**NOTES:** Mounding warm-season grass. Beautiful accent or massed in meadow or cottage gardens. Striking winter foliage. Adaptable to disturbed sites.

# GRASSES, RUSHES & SEDGES

## *Sorghastrum nutans*

Indian Grass



**NATURAL HABITAT:** Dry woodlands and barrens, riverside prairies, clearings, fields, roadsides; tolerates a range of pH levels

**HEIGHT & SPREAD:** 1.5–8.5 ft tall; 1–2 ft wide

**INFLORESCENCE:** Yellow-orange flower panicles in fall

**SOIL:** Well-drained; clay, poor, shallow rocky

**WILDLIFE BENEFITS:** Larval host for the Pepper-and-Salt Skipper Butterfly. Birds enjoy its seeds and use it as nesting material.

**NOTES:** Clump-forming warm-season grass. Interesting seed heads. Can become tall in ideal conditions. Great backdrop in meadow and cottage gardens. Beautiful when mixed with tall wildflowers. Adds winter interest. Deer- and drought-resistant.



Isaac Matlock

## *Tridens flavus*

Purpletop



**NATURAL HABITAT:** Fields, pastures, roadsides, clearings; open, disturbed habitats; natural woodlands and barrens

**HEIGHT & SPREAD:** 2–6 ft tall; 2–3 ft wide

**INFLORESCENCE:** Purple panicles from midsummer–midfall

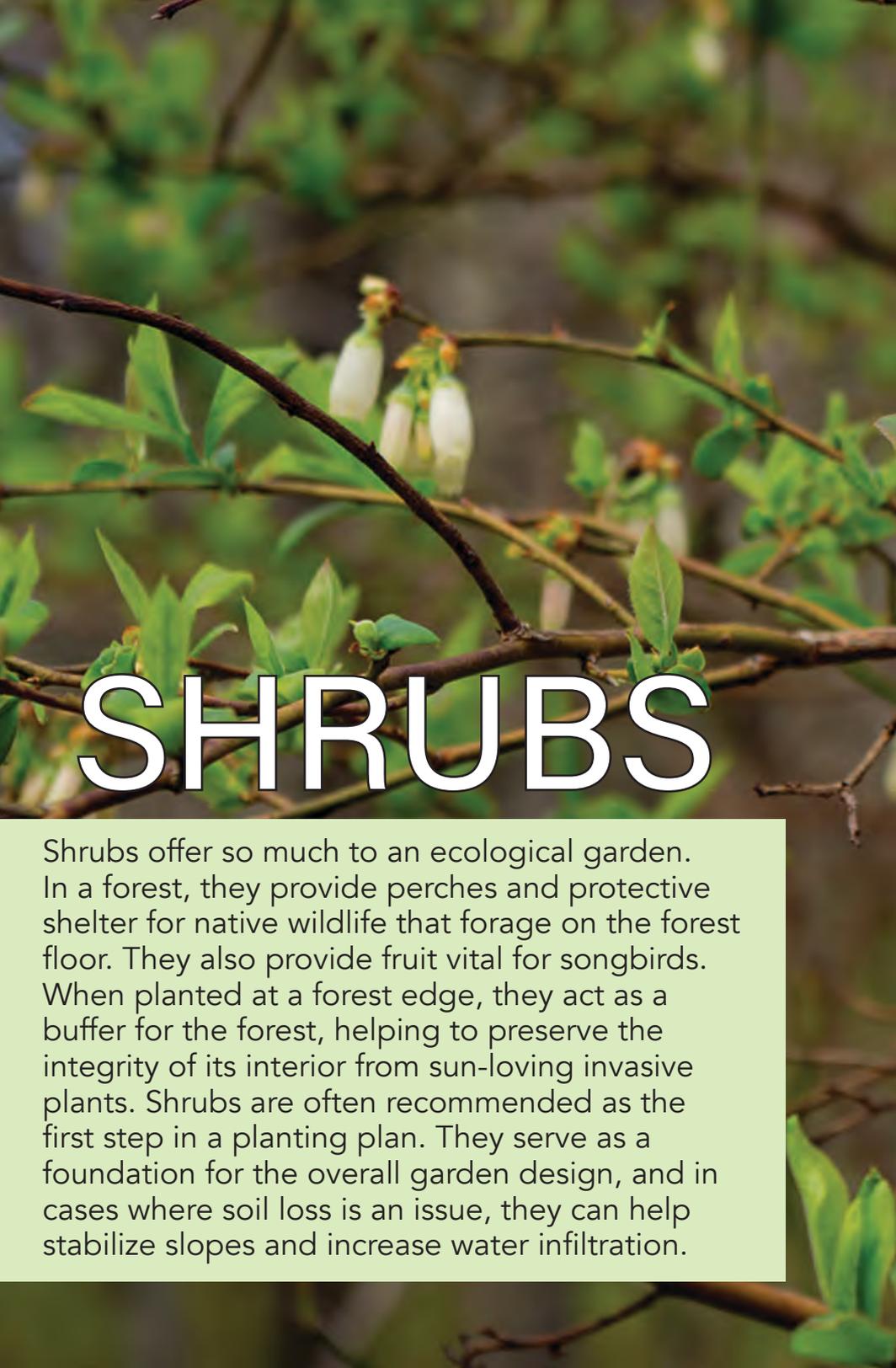
**SOIL:** Well-drained; clay, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Provides excellent cover year-round. Seed heads are a food source for birds and mammals. Larval host plant for a number of butterflies and moths, including the Common Wood Nymph, Crossline Skipper, Little Glassywing, and Broad-Winged Skipper.

**NOTES:** Clump-forming warm-season grass. Adaptable; easily colonizes disturbed sites. Beautiful massed in meadow plantings, or used as an accent in cottage gardens. Salt-tolerant. Deer-resistant.



Nancy Vehrs



# SHRUBS

Shrubs offer so much to an ecological garden. In a forest, they provide perches and protective shelter for native wildlife that forage on the forest floor. They also provide fruit vital for songbirds. When planted at a forest edge, they act as a buffer for the forest, helping to preserve the integrity of its interior from sun-loving invasive plants. Shrubs are often recommended as the first step in a planting plan. They serve as a foundation for the overall garden design, and in cases where soil loss is an issue, they can help stabilize slopes and increase water infiltration.



# SHRUBS



## *Aronia arbutifolia*

Red Chokeberry



**NATURAL HABITAT:** Bogs, fens, seeps, swamps, wet flatwoods, and borders of depression ponds; upland forests

**HEIGHT & SPREAD:** 6–10 ft tall; 3–6 ft wide

**BLOOM/FRUIT:** White flowers in spring; red berries in late summer–winter

**SOIL:** Clay, loam

**WILDLIFE BENEFITS:** Spring flowers provide nectar and pollen to butterflies and native bees, including mason and miner bees and bumblebees, and even the little-known but diverse flower flies. Winter berries are eaten by mammals and birds.

**NOTES:** Plant along ponds, as a riparian buffer, or in rain gardens, meadow gardens, mixed borders, hedges, or as specimen plantings. Berries adds winter interest. Clip suckers to prevent clonal spread.



## *Aronia melanocarpa*

Black Chokeberry



**NATURAL HABITAT:** Rocky, open woodlands, barrens, exposed outcrops; shrub balds; bogs, fens, seeps, seepage swamps, depression ponds; upland forests

**HEIGHT & SPREAD:** 3–6 ft tall and wide

**BLOOM/FRUIT:** White blooms in spring; black berries in late summer–winter

**SOIL:** Acidic, neutral; well-drained to dry; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Provides nectar and pollen to butterflies, flower flies, and bees, including mason, miner, bumblebees. Host for several species of moths and hairstreak butterflies, providing critical food for caterpillars. Showy, astringent fruits feed overwintering songbirds.

**NOTES:** Plant as a rain-garden accent or foundation planting. Great in edible gardens, mixed borders, hedges, or mass plantings. Fruits best in full sun. Clip suckers to prevent clonal spread.

# SHRUBS

## *Ceanothus americanus*

New Jersey Tea



**NATURAL HABITAT:** Dry open forests, woodlands, barrens, clearings; shallow, rocky, or sandy soils

**HEIGHT & SPREAD:** 3–4 ft tall; 3–5 ft wide

**BLOOM/FRUIT:** Cream to gray-white blooms in late spring; drupes nearly black in mid- to late summer

**SOIL:** Alkaline

**WILDLIFE BENEFITS:** Flower nectar is highly attractive to butterflies, bees, moths, predatory wasps, and other insects. Seeds are eaten by songbirds. Members of the genus *Ceanothus* support specialized bees, including the Poor Mining Bee. Larval host plant for the Mottled Duskywing, Spring Azure, and Summer Azure Butterflies.

**NOTES:** Use in meadow and drought-tolerant gardens, small group and foundation plantings, naturalized areas, sunny borders, and urban landscapes. Difficult to transplant. Leaves can be used to make tea.



Richard Stromberg

## *Cephalanthus occidentalis*

Buttonbush



**NATURAL HABITAT:** Marshes, open swamps, floodplain pools, depression ponds, artificial and disturbed wetlands, usually in seasonally or semipermanently flooded habitats

**HEIGHT & SPREAD:** 6–12 ft tall; 4–8 ft wide

**BLOOM/FRUIT:** Fragrant round, white clusters in late summer; reddish fruit in fall–winter

**SOIL:** Acidic; in water to moist

**WILDLIFE BENEFITS:** Attracts hummingbirds, butterflies, including Eastern Tiger Swallowtails, bees, songbirds, and waterfowl. It is an important adult food source for two large sphinx moths, the Titan and the Hydrangea Sphinx.

**NOTES:** Great for rain gardens, in wet meadows, around ponds, on stream or river banks, or as specimen plantings. Deer-resistant.



Jack Monsted

# SHRUBS



Jack Monsted

## *Cornus amomum*

Silky Dogwood



V

**NATURAL HABITAT:** Floodplain forests, swamps, rocky and sandy river shores, stream banks, wet meadows, old fields

**HEIGHT & SPREAD:** 6–12 ft tall and wide

**BLOOM/FRUIT:** Creamy-white flowers in spring; blue drupes in late summer

**SOIL:** Acidic or neutral; well-drained; sandy, loamy, high in organic matter

**WILDLIFE BENEFITS:** Is the host plant for the Azure Butterfly, and many butterflies use its nectar. Its fruits are eaten by songbirds, Ruffed Grouse, quail, turkey, and various mammals. Supports specialized mining bees.

**NOTES:** Plant along pond edges, in rain gardens, hedges, mass and small group plantings. *Cornus racemosa* (Gray Dogwood) is a similar option for higher elevations.



Bert Harris

## *Corylus americana*

American Hazelnut



R V

**NATURAL HABITAT:** Upland and well-drained floodplain forests, rocky woodlands, old fields

**HEIGHT & SPREAD:** 9–12 ft tall; 8–12 ft wide

**BLOOM/FRUIT:** Yellowish catkins in late winter; light-green husks surround fruits in late summer–early fall

**SOIL:** Acidic, neutral; well-drained to dry; clay, loamy, sandy

**WILDLIFE BENEFITS:** Nuts are eaten by songbirds, Ruffed Grouse, quail, Wild Turkeys, chipmunks, black bears, foxes, white-tailed deer, skunks, and squirrels. Host plant for caterpillars including the Luna, Rosy Maple, and Imperial Moths.

**NOTES:** Great as a riparian buffer, in borders, hedges, or screens; in woodland and edible gardens; or in mass plantings. Clip or remove suckers to prevent clonal spread. *Corylus cornuta* (Beaked Hazelnut) is a similar option for higher elevations.

# SHRUBS

## *Diervilla lonicera*

Northern Bush Honeysuckle



**NATURAL HABITAT:** Open forests, boulder fields, shrub balds, rock outcrops, generally at high elevations

**HEIGHT & SPREAD:** 2–4 ft tall and wide

**BLOOM/FRUIT:** Yellow blooms in summer; brown seed capsules in late summer–fall

**SOIL:** Acidic, neutral; clay, loamy, sandy, rocky

**WILDLIFE BENEFITS:** Attracts bumblebees and other pollinators. Offers cover for grouse and other wildlife. Is the host plant of Snowberry Clearwing Moths, such as the Bumblebee Moth and the Hummingbird Moth.

**NOTES:** Works well in small hedges or in borders or naturalized areas, as foundation plantings, or on embankments. Plants are self-sterile. Has a tasty, honeylike nectar. Deer-resistant.



Isaac Matlock

## *Euonymus atropurpureus*

Eastern Wahoo



**NATIVE HABITAT:** Rich forests and riverbanks; upland forests, woodlands, boulder fields

**HEIGHT & SPREAD:** 12–20 ft tall and wide

**BLOOM:** Small purple flowers in late spring to early summer; purple-pink seed capsules (best feature) and red leaves in fall

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Good songbird food.

**NOTES:** Makes a great riparian buffer, or plant in woodland gardens, naturalized woodlands, or mixed hedges. Is poisonous to cats, dogs, and horses, and is low-severity poisonous to humans if ingested.



Nicole Engel

# SHRUBS



Richard Stromberg

## *Hydrangea arborescens*

Wild or Smooth Hydrangea



**NATURAL HABITAT:** Rocky forests, boulder fields, stream banks, cliffs, outcrops

**HEIGHT & SPREAD:** 3–5 ft tall and wide

**BLOOM/FRUIT:** White blooms in late spring–early summer; brown seed heads in late fall–winter

**SOIL:** Acidic, neutral; well-drained; adaptable to clay, high organic matter, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts butterflies, other pollinators, and songbirds. It is the host plant of the Hydrangea Sphinx Moth.

**NOTES:** Plant as specimen or in borders, in mass, in rain or shade gardens, or along stream banks for erosion control. Is salt-tolerant. The growth form of the species is highly variable; will not look like cultivars.



Sharon Snyder

## *Ilex verticillata*

Winterberry



**NATURAL HABITAT:** Swamps, bogs, ponds; occasionally in well-drained floodplain and upland forests

**HEIGHT & SPREAD:** 5–12 ft tall; 3–12 ft wide

**BLOOM/FRUIT:** Small white blooms in spring; bright red drupes in fall–winter

**SOIL:** Acidic; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Host plant for Henry's Elfin Butterfly. Its fruit is eaten by 48 bird species, including Cedar Waxwings; supports pollinators and specialized bees.

**NOTES:** Is dioecious (male and female needed). Use for riparian plantings or around ponds, in rain or bird gardens, in hedge, border, or mass plantings. Provides winter interest. Salt-tolerant. *Ilex montana* (Mountain Holly) is a similar option for higher elevations. Do not eat.

# SHRUBS

## *Kalmia latifolia*

Mountain Laurel



**NATURAL HABITAT:** Acidic forests, woodlands, shrub balds; often in sandy, rocky, or organic rich soils; bogs and seepage wetlands

**HEIGHT & SPREAD:** 5–10 ft tall and wide; occasionally reaches 25 ft on slopes

**BLOOM/FRUIT:** Pink to white blooms in late spring; small brown fruits in fall

**SOIL:** Acidic, not alkaline (avoid planting near limestone); well-drained

**WILDLIFE BENEFITS:** Attracts bees.

**NOTES:** Evergreen, rounded shrub with showy flowers. Plant in shredded pine bark. Keep mulched if planted in full sun. Great in accent or mass plantings, woodland gardens, or woodland borders. Is high-severity poisonous to humans if ingested. Do not eat honey produced from mountain laurel. Deer-resistant.



Isaac Matlock

## *Lindera benzoin*

Spicebush



**NATURAL HABITAT:** Upland forests, well-drained floodplain forests, seepage, alluvial, and tidal swamps

**HEIGHT & SPREAD:** 8–15 ft tall; 6–15 ft wide

**BLOOM/FRUIT:** Gold-yellow and green flowers in spring

**SOIL:** Alkaline, neutral, acidic; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts pollinators, supports songbird and butterfly larvae, and grows edible fruit.

**NOTES:** Its flowers carry a strong fragrance. The shrub is sensitive to heat and drought. Dioecious (requires male and female for fruit). Flowers have a spicy odor similar to allspice. Fruit matures in the fall. Plant can be used for essential oils; twigs and fruits can be used in teas.



Erik Danielson

# SHRUBS



Bert Harris

## *Physocarpus opulifolius*

Ninebark



**NATURAL HABITAT:** Dry, rocky, open woodlands; barrens, cliffs, outcrops; rocky river shores and bars; riverside prairies, stream banks, fens, seepage swamps

**HEIGHT & SPREAD:** 3–8 ft tall; 6–10 ft wide

**BLOOM/FRUIT:** White or occasionally purplish blooms in late spring; dark-red/brown seed capsules in summer–fall

**SOIL:** Slightly acidic; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Nectar used by flies, beetles, butterflies, moths, bees, and wasps. The foliage is food for aphids, beetles, plant bugs, and caterpillars of various moths.

**NOTES:** Great as a screen or hedge, or plant along embankments and woodland edges, in mass plantings, mixed borders, hedges, or meadow gardens. Prune just after blooming.



Ian Gardner

## *Prunus americana*

American Wild Plum



**NATURAL HABITAT:** Disturbed forests, old fields, shrubby clearings, fencerows

**HEIGHT & SPREAD:** 10–20 ft tall and wide

**BLOOM/FRUIT:** White blooms in late spring; red to yellow drupes in summer

**SOIL:** Acidic to neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Its thickets provide good cover for birds year-round. Many pollinators enjoy its nectar. Host plant for the Coral Hairstreak, Tiger Swallowtail, Spring Azure, Viceroy, and Red-Spotted Purple Butterflies. The fruits are eaten by songbirds, Wild Turkeys, quail, white-tailed deer, and small mammals. Attracts bees.

**NOTES:** Plant as a riparian buffer or in edible gardens, naturalized hedges, or thickets. Clip suckers to prevent clonal spread; it can be maintained as a single stem.

# SHRUBS

## *Rhododendron catawbiense*

Pink Laurel, Mountain Rosebay



**NATURAL HABITAT:** Dry forests of high sheltered slopes, rocky ridges; also shrub balds, bogs, acidic cove forests

**HEIGHT & SPREAD:** 6–10 ft tall; 6–12 ft wide (smaller when cultivated)

**BLOOM/FRUIT:** Rose-pink to lilac-purple in midspring–early summer

**SOIL:** Acidic; well-drained; rich, woodland

**WILDLIFE BENEFITS:** Provides winter cover. Nectar attracts hummingbirds, butterflies, and bees. *Rhododendron* genus supports a specialized bee.

**NOTES:** This evergreen shrub is great in specimen or mass plantings or in woodland or winter gardens. Needs good drainage; will not grow in compacted soils. *Rhododendron maximum* needs similarly moist, well-drained conditions.



Nathan Miller

## *Rhododendron periclymenoides*

Pinxter Azalea



**NATURAL HABITAT:** Acidic forests, seepage swamp hummocks, stream banks

**HEIGHT & SPREAD:** 2–8 ft tall; 3–6 ft wide

**BLOOM/FRUIT:** Fragrant pink to white flower clusters in spring

**SOIL:** Acidic; well-drained; clay, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Provides nectar for pollinators, bees, and butterflies. Hummingbirds and Swallowtail Butterflies are attracted to the blooms.

**NOTES:** Great in specimen or mass plantings, mixed borders, woodland, or aromatic gardens. Amend heavy clay with organic matter before planting.



Isaac Matlock

# SHRUBS



Richard Stromberg

## *Rhus aromatica*

Rhus aromatica



**NATURAL HABITAT:** Dry, rocky forests, woodlands, barrens, clearings

**HEIGHT & SPREAD:** 2–8 ft tall; 6–10 ft wide

**BLOOM/FRUIT:** Yellow-green flower clusters in early spring; clusters of fuzzy red drupes in late summer–fall

**SOIL:** Acidic, neutral, alkaline; well-drained; adaptable

**WILDLIFE BENEFITS:** Provides nectar for pollinators, bees, and butterflies. Blooms attract hummingbirds and Swallowtail Butterflies.

**NOTES:** Use in specimen, mass, or foundation plantings, hedges, or aromatic gardens. Good for stabilizing banks in poor soils. Provide beautiful fall foliage. Deer- and rabbit-resistant.



Richard Stromberg

## *Rosa carolina*

Carolina or Pasture Rose



**NATURAL HABITAT:** Dry upland forests, woodlands, barrens, clearings, old fields, pastures, roadsides

**HEIGHT & SPREAD:** 6 in–5 ft tall; 1–5 ft wide

**BLOOM/FRUIT:** Pink blooms in late spring–early summer; red fruit in late summer–fall

**SOIL:** Well-drained; rocky, loamy, sandy, clay

**WILDLIFE BENEFITS:** Provides excellent cover year-round. Songbirds, quail, Wild Turkey, and small mammals eat the hips. Provides pollen to long-tongued bees: bumblebees, digger bees, and green metallic bees. Syrphid flies and beetles also visit its flowers. Numerous species of moth larva feed on its leaves.

**NOTES:** Plant as a hedge or border in naturalized ditches, in bird garden, or woodland edges. Edible fruits/rosehips. Prune in late winter.

## *Rubus odoratus*

Purple-Flowering Raspberry



**NATURAL HABITAT:** Rocky upland forest, boulder fields, woodlands, shaded outcrops, clearings; usually alkaline soils

**HEIGHT & SPREAD:** 4–6 ft tall; 6–12 ft wide

**BLOOM/FRUIT:** Deep-pink to rose-purple petals in summer; pinkish or purplish fruit in late summer to midfall

**SOIL:** Alkaline, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Songbirds, game birds, and large and small mammals eat the berries. Bees use the plant for nesting material. Flowers provide nectar to butterflies and bees.

**NOTES:** Beautiful fall foliage. Plant as specimen in large gardens, as edible hedge, or in thickets. Prune after fruiting. Its suckering habit may need to be managed. In the wild, this can grow in sunny, rocky places; in cultivation, it does best in a shady, moist-to-wet location.



Sharon Snyder

## *Sambucus racemosa*

Red Elderberry



**NATURAL HABITAT:** Rocky forests, boulder fields, clearings; common at middle to high elevations in mountains

**HEIGHT & SPREAD:** 6–12 ft tall; 6–10 ft wide

**BLOOM/FRUIT:** White flowers in late spring–early summer; red/burgundy berries in late summer–fall

**SOIL:** Slightly acidic; well-drained; rich

**WILDLIFE BENEFITS:** Attracts butterflies, other pollinators, and birds.

**NOTES:** Plant along woodland edges, in shady upland rock gardens, and edible gardens. Clip suckers to prevent clonal spread. Edible when cooked; low-severity poisonous in humans when raw. *S. canadensis* is a similar option for lower elevations in moist soils.



Sharon Snyder

# SHRUBS



Lonnie Murray

## *Staphylea trifolia*

American Bladdernut



**NATURAL HABITAT:** Floodplain, slope, and boulder-field forests, rock outcrops

**HEIGHT & SPREAD:** 8–15 ft tall and wide

**BLOOM/FRUIT:** Greenish-white blooms in spring; showy brown/copper seed capsules in fall

**SOIL:** Neutral, alkaline; well-drained; clay, loamy, sandy, shallow rocky, high in organic matter; tolerates occasional flooding

**WILDLIFE BENEFITS:** Attracts native bees, butterflies, birds, and small mammals.

**NOTES:** Plant in a large rain garden, as a riparian buffer, or in a wet meadow. A fast-growing but short-lived shrub. Its seeds are edible; its seed capsules are beautiful in dried arrangements.



Sharon Snyder

## *Vaccinium angustifolium*

Northern Lowbush Blueberry



**NATURAL HABITAT:** Dry, acidic forests, woodlands, boulder fields, rock outcrops, at middle to high elevations; swamp and bog hummocks, especially under Spruce

**HEIGHT & SPREAD:** 6 in–3 ft tall and wide

**BLOOM/FRUIT:** Small white flowers in late spring–early summer; small, sweet fruit in summer

**SOIL:** Acidic, not alkaline; well-drained; clay, sandy, high in organic matter

**WILDLIFE BENEFITS:** Native bees pollinate flowers. Berries are relished by birds, such as turkeys, doves, and bluebirds, and mammals, such as bear and fox, as well as smaller mammals. Butterflies are attracted to the nectar blooms.

**NOTES:** Beautiful red fall foliage. Makes great woodland groundcover, or plant in edible or shade gardens. Plant more than one for best fruit production. Blooms on old wood.

# SHRUBS

## *Vaccinium pallidum*

Early Lowbush Blueberry



**NATURAL HABITAT:** Dry, acidic forests, woodlands, barrens, outcrops

**HEIGHT & SPREAD:** 2–3 ft tall and wide

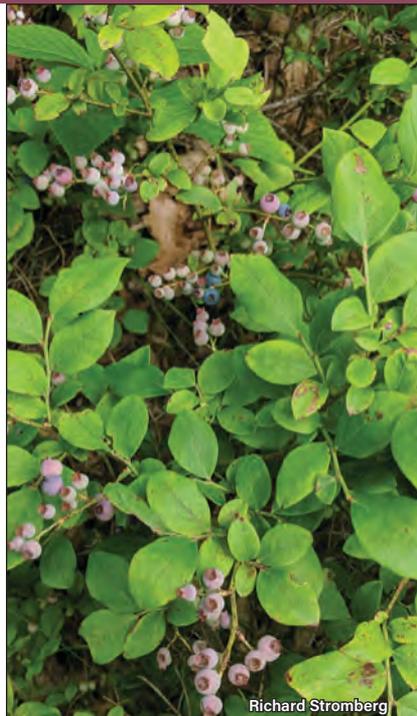
**BLOOM/FRUIT:** Small white flowers in spring; purplish-black berries early to midfall

**SOIL:** Acidic, not alkaline; well-drained; clay, sandy, high in organic matter

**WILDLIFE BENEFITS:** Native bees and butterflies pollinate flowers. Berries are relished by birds, such as Wild Turkey, doves, and bluebirds; large mammals, such as bear and fox; and smaller mammals.

Attracts butterflies to the nectar blooms. Larval host plant.

**NOTES:** Plant in naturalized areas, woodlands, large shade gardens, or mixed borders. Red to orange fall color. Drought-tolerant once established.



Richard Stromberg

## *Vaccinium stamineum*

Deerberry



**NATURAL HABITAT:** Dry, acidic forests and woodlands

**HEIGHT & SPREAD:** 5–15 ft tall; 5–12 ft wide

**BLOOM/FRUIT:** Small white flowers in midspring–early summer; purplish-black berries early fall

**SOIL:** Acidic, not alkaline; well-drained; clay, sandy, high in organic matter

**WILDLIFE BENEFITS:** Native bees and butterflies pollinate flowers. Wild Turkey, doves, bluebirds, bear, fox, and small mammals relish the berries. Butterflies are attracted to the blooms.

**NOTES:** Plant in naturalized areas, woodlands, large shade gardens, or mixed borders. Drought-tolerant once established.



Ian Gardner

# SHRUBS



Richard Stromberg

## *Viburnum acerifolium*

Mapleleaf Viburnum



**NATURAL HABITAT:** Upland forests, floodplain forests

**HEIGHT & SPREAD:** 4–6 ft tall; 2–6 ft wide

**BLOOM/FRUIT:** Small white flower clusters in early summer; pea-sized blackish drupes in late summer–fall

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts birds and butterflies. Songbirds, grouse, Wild Turkeys, and squirrels eat the fruits. White-tailed deer browse the twigs and leaves.

**NOTES:** Has shapely, colorful fall foliage. Plant in naturalized areas, woodland gardens, hedges or screens, or foundation plantings. Needs more than one genetic strain to produce fruit.



Erik Danielson

## *Viburnum cassinoides*

Wild Raisin



**NATURAL HABITAT:** Bogs, seeps, fens, and seepage swamps at middle to high elevations

**HEIGHT & SPREAD:** 5–10 ft tall; 5–8 ft wide

**BLOOM/FRUIT:** Tan and white flowers in spring

**SOIL:** Acidic, neutral; well-drained; clay, loamy

**WILDLIFE BENEFITS:** Attracts butterflies; berries attract birds and mammals.

**NOTES:** Great accent shrub for small gardens. Makes a nice hedge or mass planting in landscapes. Beautiful spring blooms give way to color-changing berries throughout fall and into winter. Drought-tolerant once established. Showy fall foliage. Deer-resistant.

## *Viburnum dentatum*

Arrowwood Viburnum



**NATURAL HABITAT:** Upland forests, floodplain forests, wet flatwoods, seepage swamps, fens, swamps, upland depression swamps, rocky riversides

**HEIGHT & SPREAD:** 5–10 ft tall and wide

**BLOOM/FRUIT:** Small white flowers in flat-topped clusters in spring; bluish-black drupes in summer–fall

**SOIL:** Acidic, neutral, alkaline; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts Red Admiral, Eastern Comma, and Question Mark Butterflies. Host for Spring Azure Butterfly and Saddleback Camelback Moth. Migratory songbirds, grouse, Wild Turkeys, bluebirds, and other large birds eat the drupes. Provides cover and nesting sites.

**NOTES:** Great for hedges and screening, foundation plantings, pond or stream banks, bird gardens. Needs more than one genetic strain to produce fruit.



Steve Young

## *Viburnum prunifolium*

Blackhaw Viburnum



**NATURAL HABITAT:** Rocks including shales and sandstones; riverside prairies and outcrops, rocky and gravelly river shores and bars, clearings, fens, wet meadows and fields

**HEIGHT & SPREAD:** 12–20 ft tall; 6–15 ft wide

**BLOOM/FRUIT:** Clusters of small white flowers in spring; blue-black clusters of drupes in fall

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Host plant for Azure Butterflies. Songbirds and small mammals eat the fruits.

**NOTES:** Edible fruits. Can be pruned to a tree form. Good for urban landscapes, mixed borders, hedges, woodland edges, and naturalized areas. Will set better fruit with more than one plant.



Richard Stromberg

A close-up photograph of tree branches. The branches are dark and thin, with several green buds and small white flowers. The background is a soft-focus blue sky with some green foliage. The text 'SMALL TREES' is overlaid in large white letters across the middle of the image.

# SMALL TREES

Small trees provide similar functions to shrubs in the native garden. Their small stature provides additional structural diversity and interest. Many small trees are early spring bloomers, providing much needed nectar sources for pollinators at the start of the season. Small trees allow gardeners with small areas to work with, such as front yards of townhomes, to plant a tree and create lasting impact for both people and wildlife.



# SMALL TREES



Richard Stromberg

## *Amelanchier arborea*

Downy Serviceberry



RV

**NATURAL HABITAT:** Upland forests, woodlands, and barrens; alluvial forests, seepage wetlands, depression swamps; tolerates a wide range of pH levels  
**HEIGHT & SPREAD:** 15–25 ft tall; 10–15 ft wide

**BLOOM/FRUIT:** White racemes in spring; edible red, then purple-black fruits ripen in summer

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Supports Red-Spotted Purple and Viceroy Butterfly larvae. Pollinators and insects use pollen and nectar in early spring. Songbirds and mammals eat the fruits.

**NOTES:** Plant as ornamental specimen or in border, barrier, understory, or mass planting. Great in pollinator, butterfly, and rock gardens. Edible berries. Tolerates wet soil. Deer-resistant.



Bert Harris

## *Asimina triloba*

Pawpaw



RV

**NATURAL HABITAT:** Well-drained floodplain forests, upland forests, wet flatwoods, swamp hummocks; most abundant in alkaline soils but also occurs in acidic, nutrient-poor soils

**HEIGHT & SPREAD:** 15–30 ft tall and wide  
**BLOOM/FRUIT:** Maroon-brown flowers in spring; edible green fruit in late summer–fall

**SOIL:** Alkaline, neutral, acidic; well-drained  
**WILDLIFE BENEFITS:** Flies and beetles pollinate the flowers. Songbirds, Wild Turkeys, squirrels, raccoons, opossums, black bear, and foxes eat the fruit. Supports Zebra Swallowtail Butterfly.

**NOTES:** May cause contact dermatitis. Does well in naturalized, riparian, or woodland areas (tolerates heavy shade). Good in butterfly, edible, pollinator, and rain gardens. Tolerates Black Walnut trees. Deer-resistant.

# SMALL TREES

## *Castanea pumila*

Allegheny Chinquapin



**NATURAL HABITAT:** Dry forests, woodlands, old fields; usually in acidic, nutrient-poor soils

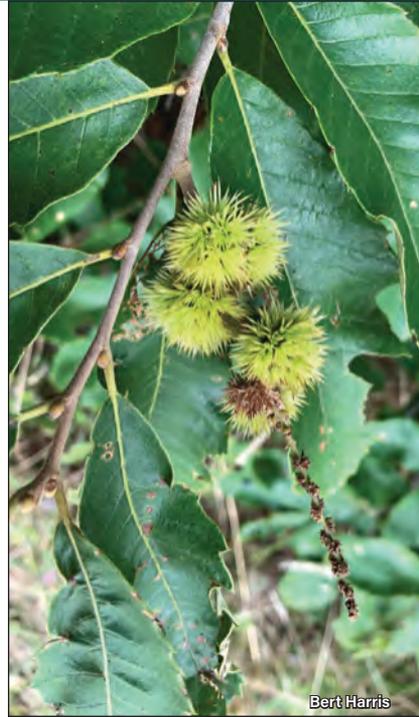
**HEIGHT & SPREAD:** 15–30 ft tall; 10–20 ft wide

**BLOOM/FRUIT:** White catkin in summer; edible nuts in fall

**SOIL:** Acidic to neutral; well-drained; nutrient-poor

**WILDLIFE BENEFITS:** Larval host for butterflies. Its nuts are eaten by woodpeckers and small mammals, Wild Turkeys, black bears, and white-tailed deer. It attracts songbirds.

**NOTES:** Typically not affected by the Chestnut blight. Nuts are small but delicious. Use in naturalized areas, on slopes or banks, in butterfly and edible gardens.



Bert Harris

## *Cercis canadensis*

Eastern Redbud



**NATURAL HABITAT:** Forests, woodlands, barrens, old fields, roadsides

**HEIGHT:** 20–30 ft tall; 25–35 ft wide

**BLOOM/FRUIT:** Pink to purple in spring; flat, oblong seed pods in fall–winter

**SOIL:** Acidic, neutral, alkaline; well-drained; high in organic matter

**WILDLIFE BENEFITS:** Important nectar source for honeybees, bumblebees, mason bees, cuckoo bees, long-horned bees, mining bees, and sweat bees. Nesting material for leafcutter and other bees. Attracts butterflies. Songbirds eat the bean-pod fruits. Henry's Elfin Butterfly and others use this tree as a larval host plant.

**NOTES:** Use as a specimen, an understory tree, in small groups or as a mass planting. Its branches tend to break, so site accordingly. Edible flowers.



Isaac Matlock

# SMALL TREES



Jack Monsted

## *Chionanthus virginicus*

Fringetree, Old Man's Beard



**NATURAL HABITAT:** Upland forests, woodlands, and barrens; not particular about rock or soil chemistry; small-stream alluvial forests and swamps, and other wetlands.

**HEIGHT & SPREAD:** 12–25 ft tall; 10–15 ft wide

**BLOOM:** Fragrant white flowers in spring; bluish-black drupes in summer

**SOIL:** Alkaline, neutral; well-drained; clay, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Songbirds and small mammals eat the fruits. Attracts bees and butterflies. Larval host plant to the Fringe-Tree Sallow Owlet Moth.

**NOTES:** A stunning specimen tree. Use in mass plantings or in small groups, in children's or pollinator gardens. Tolerates urban conditions.



Ed Lickey

## *Cornus alternifolia*

Pagoda Dogwood



**NATURAL HABITAT:** Upland forests, boulder-field forests, clearings, borders

**HEIGHT & SPREAD:** 15–25 ft tall; 20–30 ft wide

**BLOOM/FRUIT:** Creamy-white, fragrant flower clusters in late spring–early summer; bluish-black drupes in late summer–early fall

**SOIL:** Acidic; well-drained; high in organic matter

**WILDLIFE BENEFITS:** Fruits are eaten by birds and small mammals. Many species of butterflies and moths feed on Dogwoods, which also support several specialized mining bee species.

**NOTES:** Great specimen tree with unusual shape and structure and maroon fall color. Use for borders, screens, hedges, mass plantings. Use in butterfly, pollinator, and cottage gardens. Tolerates Black Walnut. Deer-resistant.

# SMALL TREES

## *Cornus florida*

Flowering Dogwood



**NATURAL HABITAT:** Upland forests, borders, woodland margins, clearings, old fields, and well-drained floodplains

**HEIGHT & SPREAD:** 15–25 ft tall; 15–30 ft wide

**BLOOM/FRUIT:** Green flowers surrounded by 4 white petal-like bracts in midspring–early summer; bright-red berries in fall

**SOIL:** Slightly acidic; well-drained; clay, loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Host plant for specialized bees and the Azure Butterfly. Many butterflies and specialized bees enjoy its nectar. Songbirds, Ruffed Grouse, quail, Wild Turkey, chipmunks, black bear, foxes, white-tailed deer, skunks, and squirrels eat the fruits.

**NOTES:** Attractive specimen tree with four-season interest. Use in butterfly, pollinator, or children's gardens, as an accent for a patio or play area, or in mass plantings.



Richard Stromberg

## *Hamamelis virginiana*

Witch Hazel



**NATURAL HABITAT:** Upland forests; in a wide range of habitats, elevations, community types

**HEIGHT & SPREAD:** 15–30 ft tall; 15–20 ft wide

**BLOOM/FRUIT:** Yellow blooms in fall; brown, woody seed capsules in late fall–winter

**SOIL:** Acidic, neutral, alkaline; well-drained; clay, high in organic matter

**WILDLIFE BENEFITS:** These unusual flowers provide a winter nectar source and are pollinated by some moths, flies, beetles, and bees. The seeds are consumed by birds and mammals.

**NOTES:** Has beautiful fall foliage and is of winter interest. Use for riparian plantings, for erosion control, or use as a specimen planting, in woodland gardens, or mixed hedges. Deer-resistant.



Sharon Snyder

# SMALL TREES



Richard Stromberg

## *Prunus pensylvanica*

Pin Cherry, Fire Cherry



**NATURAL HABITAT:** High-elevation forests, boulder-field woodlands, outcrops, balds, and old fields; restricted (or nearly so) to elevations above 3000 ft

**HEIGHT & SPREAD:** 25–50 ft tall; 18–25 ft wide

**BLOOM/FRUIT:** White flowers in spring

**SOIL:** Neutral pH; well-drained; high organic matter, clay, loamy, sandy;

**WILDLIFE BENEFITS:** Attracts songbirds and butterflies. Ruffed Grouse eat the fruits.

**NOTES:** Is a reforestation agent after fires. Grows quickly with a shallow root system. Does not tolerate shade. Showy spring bloom gives way to attractive red berries later in the season. Great option for a quick hedgerow or for naturalizing meadows. Edible, sour fruits. Do not consume the pits, which are toxic; cooking removes the harm.



Jack Monsted

## *Prunus virginiana*

Chokecherry



**NATURAL HABITAT:** Montane Oak and Oak-Hickory forests, Northern Red Oak and northern hardwood forests, boulder-field woodlands, thin soils around outcrops; middle to higher elevations

**HEIGHT & SPREAD:** 20–30 ft tall; 18–25 ft wide

**BLOOM/FRUIT:** White, fragrant, showy flowers in midspring–early summer; dark-red fruit turns black when ripe in late summer

**SOIL:** Neutral pH; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** Cherry trees rank third for the number of butterflies and moths supported on the foliage, including the Eastern Tiger Swallowtail and the Red-Spotted Purple. Birds eat the fruits and gather twigs and foliage for nesting. Small mammals eat the seeds.

**NOTES:** Often forms a dense thicket. Great as an ornamental with showy fruits; also good for erosion control; use in butterfly and pollinator gardens. Caution: new growth, wilted leaves, and damaged plants are poisonous to cattle and to humans.

# SMALL TREES

## *Rhus typhina*

Staghorn Sumac



**NATURAL HABITAT:** Roadsides, fencerows, clearings, old fields, dry rocky woodlands, rocky barrens; forms thickets in the wild  
**HEIGHT & SPREAD:** 8–25 ft tall and wide  
**BLOOM/FRUIT:** Greenish-white blooms in spring–summer; deep-red berries in early fall–winter

**SOIL:** Acidic; well-drained; shallow rocky  
**WILDLIFE BENEFITS:** Larval host for the Spring Azure Butterfly. Bees use the flowers for food and the plant for nesting material. Berries feed many birds including the Ruffed Grouse, Ring-Necked Pheasant, Wild Turkey, Eastern Phoebe, Common Crow, Northern Mockingbird, Gray Catbird, American Robin, Wood Thrush, Hermit Thrush, and Eastern Bluebird.

**NOTES:** Plant as a specimen tree for its fall color. Use in edible, nighttime, pollinator, or winter gardens, in naturalized areas, or as a hedge or screen. Tolerates drought and urban conditions, and helps prevent erosion. Can dominate in disturbed areas.



## *Salix sericea*

Silky Willow



**NATURAL HABITAT:** Bogs, fens, seeps, seepage swamps, rocky stream banks

**HEIGHT & SPREAD:** 12 ft tall; 6–12 ft wide

**BLOOM/FRUIT:** Green catkins appearing before leaves in early spring

**SOIL:** Well-drained; clay, sandy, high in organic matter

**WILDLIFE BENEFITS:** Pollinated by native and non-native honeybees. It is the larval host plant for the Acadian Hairstreak Moth and also supports the Viceroy Butterfly larvae.

**NOTES:** Plant as a riparian buffer, in swamps, and along pond edges. It grows quickly but is generally short-lived. It is easy to propagate via live stakes in late winter.





# LARGE TREES

With lifespans that far exceed that of almost all other life on Earth, large trees are the sentinels of the forest. Large trees create the uppermost canopy of a forest, sequestering carbon from the atmosphere, and sheltering the forest floor from extremes in precipitation. In life and death, large trees provide habitat for many forms of wildlife at all stages of life, from food for insect larvae, to nesting cavities for birds and mammals, and leaf litter that contributes to healthy and productive soils. Planting a large tree is one of the greatest contributions you can make to your ecologic garden.



# LARGE TREES



Richard Stromberg

## *Carya ovata*

Shagbark Hickory



**NATURAL HABITAT:** Upland forests, woodlands, barrens; in high-elevation deciduous forests and well-drained bottomland forests

**HEIGHT & SPREAD:** 70–90 ft tall; 50–70 ft wide

**BLOOM/FRUIT:** Green to yellow flowers in spring; edible, sweet nuts in fall

**SOIL:** Acid, neutral; well-drained; clay, sandy, loamy, high in organic matter

**WILDLIFE BENEFITS:** Host plant for the Banded Hairstreak Butterfly and many moths, including the Luna Moth. Squirrels, chipmunks, and black bears eat the nuts. The tree also supports Hickory Horned Devil larvae.

**NOTES:** Use as a shade or specimen tree in a large yard, meadow, or woodland, or in butterfly, edible, pollinator, or nighttime gardens. It has resistance to deer and to Black Walnut. Our region also hosts many other Hickory species, since it was once primarily Oak-Hickory forest.



Nathan Miller

## *Diospyros virginiana*

Persimmon



**NATURAL HABITAT:** Old fields, fencerows, roadsides; swamp forests, depression ponds, dune woodlands and scrub, rocky woodlands, upland forests

**HEIGHT & SPREAD:** 30–80 ft tall; 20–35 ft wide

**BLOOM/FRUIT:** Fragrant white to greenish-yellow flowers in late spring; edible fruit, green and hard while ripening, yellow to reddish when ripe (often after first frost)

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** A larval host plant for the Luna Moth and Hickory Horned Devil larvae. Birds and mammals eat the fruits. Attracts bees, butterflies, and songbirds.

**NOTES:** Persimmons have male and female trees, so you need both to get fruit. Use in lawns, meadows, naturalized areas, woodlands, or in butterfly, children's, pollinator, edible, nighttime, and rain gardens.

# LARGE TREES

## *Ilex opaca*

American Holly



RV

**NATURAL HABITAT:** Upland forests, well-drained floodplain forests, swamp hummocks

**HEIGHT & SPREAD:** 40–60 ft tall; 10–20 ft wide

**BLOOM/FRUIT:** Greenish-white flowers in spring–summer; bright-red/orange berries in fall

**SOIL:** Acidic, neutral; well-drained; clay, loamy, shallow rocky

**WILDLIFE BENEFITS:** Provides nectar for pollinators including specialized native bees and honeybees. Larval host plant for Henry's Elfin Butterflies. Fruits eaten by songbirds, Wild Turkeys, quail, white-tailed deer, squirrels, and other small mammals.

**NOTES:** Both male and female trees are needed to produce fruit. Plant as a hedge, screen, specimen, or in butterfly and pollinator gardens. Poisonous if ingested. Deer-resistant.



Erik Danielson

## *Liriodendron tulipifera*

Tulip Poplar



RV

**NATURAL HABITAT:** Upland and well-drained floodplain forests, seepage swamps, old fields

**HEIGHT & SPREAD:** 80–120 ft tall; 30–60 ft wide

**BLOOM/FRUIT:** Greenish-yellow flowers with orange at base in spring–summer; fruits cone-like samaras in early fall

**SOIL:** Slightly acidic, neutral; well-drained; loamy

**WILDLIFE BENEFITS:** A favorite nesting site for birds. Flower nectar attracts butterflies like Spicebush Swallowtail and Viceroy and birds, such as hummingbirds and Cedar Waxwings. Mammals eat the flowers, sprouts, buds, and seeds.

**NOTES:** Grows fast. Plant away from structures, as the wood is weak. Use in meadows or woodlands, or in butterfly, children's, or pollinator gardens. Tolerates Black Walnut and wet soil. Deer-resistant.



Erik Danielson

# LARGE TREES



Nathan Miller

## *Magnolia acuminata*

Cucumber Magnolia



**NATURAL HABITAT:** Montane forests, especially over rock, in moist to dry slopes  
**HEIGHT & SPREAD:** 50–80 ft tall; 35–60 ft wide

**BLOOM/FRUIT:** Greenish-yellow, tuliplike, fragrant flowers in late spring; green cucumber-shaped fruits, maturing to showy-red in late summer, releasing red-coated seeds suspended on slender threads

**SOIL:** Acidic, neutral; well-drained; loamy, high in organic matter

**WILDLIFE BENEFITS:** Towhees and small mammals eat the seeds. Grackles and blackbirds eat the young fruit.

**NOTES:** Casts dense shade. Attractive yellow-gold fall color. Use as specimen or flowering tree on lawn or in a recreational area. Use in native gardens and/or near water. Deer-resistant.



Erik Danielson

## *Pinus strobus*

Eastern White Pine



**NATURAL HABITAT:** Upland forests and woodlands, montane alluvial forests; in shale

**HEIGHT & SPREAD:** 50–80 ft tall; 20–40 ft wide

**BLOOM/FRUIT:** Gold-yellow flowers insignificant in spring; narrow, cylindrical cones, with white scales at apex, in late summer–fall

**SOIL:** Acidic; well-drained; loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Seeds and bark provide food and habitat for songbirds, white-tailed deer, and small mammals. Bald Eagles and Great Horned Owls use for nests. Supports Imperial Moth larvae and attracts butterflies and other moths.

**NOTES:** Use for hedge, screen, or shade, as specimen tree, or in butterfly, woodland, nighttime, and pollinator gardens. Deer- and rabbit-resistant.

# LARGE TREES

## *Platanus occidentalis*

American Sycamore



**NATURAL HABITAT:** Upland forests and woodlands, montane alluvial forests  
**HEIGHT & SPREAD:** 50–80 ft tall; 20–40 ft wide

**BLOOM/FRUIT:** Gold-yellow flowers in spring; narrow, cylindrical cones and white scales at apex in late summer–fall

**SOIL:** Acidic; well-drained; loamy, sandy, high in organic matter

**WILDLIFE BENEFITS:** Provides food (seeds and bark) and habitat for numerous wildlife species: songbirds, white-tailed deer, and small mammals. Bald Eagles and Great Horned Owls use for nests. Supports Imperial Moth larvae and attracts butterflies and other moths.

**NOTES:** Use for hedge, screen, or shade; plant as a specimen tree, or in butterfly, woodland, and pollinator gardens. Deer- and rabbit-resistant.



Erik Danielson

## *Quercus velutina*

Black Oak



**NATURAL HABITAT:** Dry upland forests and woodlands

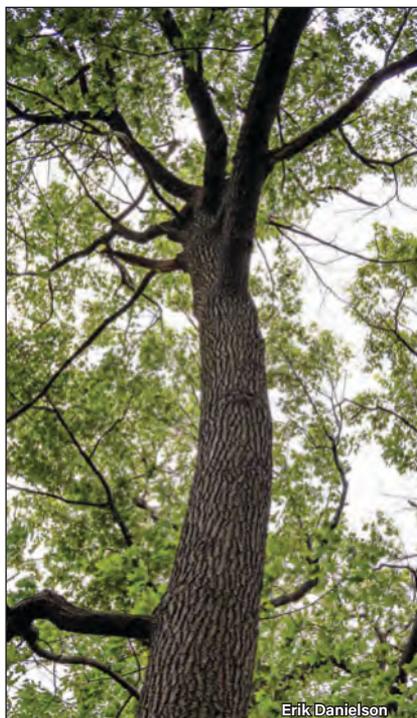
**HEIGHT & SPREAD:** 50–60 ft tall and wide

**BLOOM/FRUIT:** Yellowish green flowers in spring

**SOIL:** Acid, neutral; well-drained; high organic matter, clay, loamy, sandy

**WILDLIFE BENEFITS:** Attracts butterflies, moths, and songbirds. Birds and mammals eat acorns.

**NOTES:** Good Oak option for medium- to large-sized gardens. Grows at a medium rate, but provides nice dappled shade eventually. Tolerant of strong winds and long-lived. Edible seeds.



Erik Danielson

# LARGE TREES



Bert Harris

## *Quercus alba*

White Oak



**NATURAL HABITAT:** Dry upland forests and woodlands; dry, acidic, nutrient-poor soils; forested areas of dry slopes, valleys, ravines

**HEIGHT & SPREAD:** 50–135 ft tall; 50–80 ft wide

**BLOOM/FRUIT:** Yellowish-green male catkins, green-reddish female flowers in spring; edible acorns turn from green to tannish-brown in fall

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** The White Oak is considered one of the most valuable food sources for native caterpillars. Imperial Moths, Banded and Gray Hairstreak, Edward's Haystack, and Horace's and Juvenal's Duskywing Butterflies adorn its canopy. Acorns are an important food source for mammals, Wild Turkeys, Blue Jays, and Woodpeckers.

**NOTES:** Use as a specimen or shade tree in meadows, lawns, and naturalized and recreational areas, or use in butterfly, edible, and pollinator gardens. Tolerates Black Walnut and dry soil. Deer-resistant.



Sharon Snyder

## *Quercus coccinea*

Scarlet Oak



**NATURAL HABITAT:** Upland forests and woodlands; dry, acidic, nutrient-poor soils

**HEIGHT & SPREAD:** 50–80 ft tall; 45–60 ft wide

**BLOOM/FRUIT:** Yellowish-green catkins in spring; brown/copper acorns occurs singly or in pairs in fall

**SOIL:** Acidic; well-drained; clay, loamy, sandy

**WILDLIFE BENEFITS:** The *Quercus* genus ranks #1 for hosting the most insect species, which, in turn, provide food for birds. Provides nesting space, cover, and shelter for wildlife. The acorns are an important food source for many large and small mammals, Blue Jays, and woodpeckers. See *Quercus alba* for listing of lepidopterans.

**NOTES:** Use as specimen, shade, or street tree with spectacular fall color for larger properties, or use in butterfly and pollinator gardens. Tolerates Black Walnut and dry soil.

# LARGETREES

## *Sassafras albidum*

Sassafras



**NATURAL HABITAT:** Forests and woodlands, old fields, fencerows, disturbed sites

**HEIGHT & SPREAD:** 30–60 ft tall; 25–40 ft wide

**BLOOM/FRUIT:** Fragrant yellow-green flower sepals in early spring, male and female flowers appear on separate trees; blue to blue-black drupes in fall

**SOIL:** Acidic, neutral; well-drained; clay, loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** A larval host plant and important food source for Eastern Bluebirds, Red-Eyed Vireos, quail, Wild Turkeys, Kingbirds, Crested Flycatchers, Mockingbirds, sapsuckers, Pileated Woodpeckers, Yellowthroat Warblers and Phoebe, and mammals. Supports Imperial Moth, Spicebush Butterflies, and other pollinators.

**NOTES:** Use in riparian buffers or as a screen in natural areas or a flowering specimen. Use in butterfly, edible, and nighttime gardens. Autumn interest. Its roots and/or leaves are used for teas, drinks, soaps, and fragrances.



Richard Stromberg

## *Thuja occidentalis*

Arborvitae, Northern White Cedar



**NATURAL HABITAT:** Limestone, rocky slopes, stream bottoms, and fens

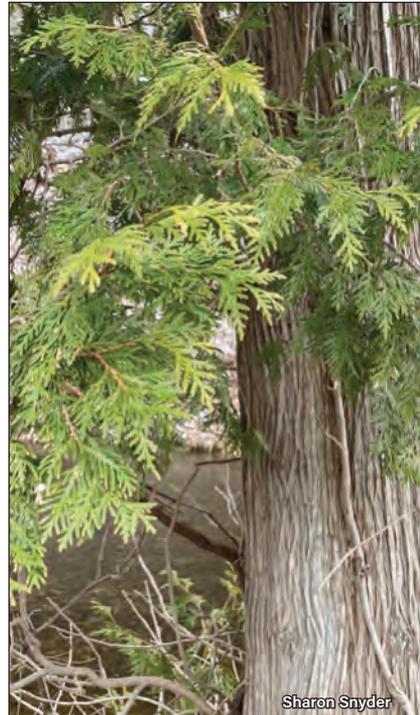
**HEIGHT & SPREAD:** 40–60 ft tall; 10–15 ft wide

**BLOOM/FRUIT:** Nonflowering; fruit is oblong light-brown cones in summer

**SOIL:** Alkaline, neutral; well-drained; clay, loamy

**WILDLIFE BENEFITS:** Provides nesting sites for songbirds. Attracts small mammals and provides cover for white-tailed deer, especially in winter.

**NOTES:** Use as a windbreak or in woodland reforestation, as specimen or accent, or in a hedge or foundation planting. Tolerates Black Walnut, pollution, and wet soil.



Sharon Snyder





# VINES

Like all native species, vines provide important food sources for native wildlife. They also offer nesting material for birds, and their tangled nature acts as excellent protective shelter against weather and predators. Twining, fast-growing, and sometimes incredibly showy, vines are an excellent option for gardeners seeking options for vegetative screening.

# VINES



Lonnie Murray

## *Apios americana*

Groundnut



**NATURAL HABITAT:** Floodplain forests, marshes, stream banks, wet fields, low meadows

**LENGTH & SPREAD:** 8–16 ft long; 1–2 ft wide

**BLOOM/FRUIT:** Fragrant maroon/reddish-brown pealike flowers in summer; edible, fleshy, dry, bean-shaped legume in summer–early fall

**SOIL:** Loamy, sandy, shallow rocky, high in organic matter

**WILDLIFE BENEFITS:** Larval host for the Silver-Spotted Skipper; attracts a variety of pollinators, songbirds, and hummingbirds, as well as small mammals.

**NOTES:** Use in butterfly, edible, and pollinator gardens. Can become weedy. Edible tubers are similar to a potato and high in protein when mature and cooked.



Richard Stromberg

## *Campsis radicans*

Trumpet Creeper, Trumpet Vine



**NATURAL HABITAT:** Floodplain forests, swamp forests, upland forests, woodlands, old fields, fencerows

**LENGTH & SPREAD:** 30–40 ft long; 4–10 ft wide

**BLOOM/FRUIT:** Orange-scarlet trumpet-shaped flowers in summer; brownish-copper 3–5 in. legumes in fall

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, sandy, high in organic matter

**WILDLIFE BENEFITS:** Attracts pollinators, especially hummingbirds, along with other songbirds and bees.

**NOTES:** Use in woodland or pollinator gardens or naturalized areas. Can grow aggressively, so plant in an area where it can be maintained. The sap may cause skin irritation, so use gloves.

# VINES

## *Clematis occidentalis*

Purple Clematis



**NATURAL HABITAT:** Rocky high-elevation forests, rock ledges and outcrops, clearings, roadsides

**LENGTH & SPREAD:** 3–12 ft long

**BLOOM/FRUIT:** Blue-violet bell-shaped flowers in mid- to late spring; fluffy, silvery seed heads in summer–fall

**SOIL:** Neutral pH; well-drained; cool, limy, humus-rich

**WILDLIFE BENEFITS:** Songbirds and hummingbirds.

**NOTES:** When grown at lower altitudes, provide more shade to this species. Regular pruning promotes stronger growth. Grow on a trellis or similar support. May cause contact dermatitis in some people, so use gloves.



Sharon Snyder

## *Clematis virginiana*

Virgin's Bower



**NATURAL HABITAT:** Upland and well-drained floodplain forests, clearings, old fields, fencerows, roadsides

**LENGTH & SPREAD:** 15–20 ft long; 3–6 ft wide

**BLOOM/FRUIT:** Fragrant white blooms in late summer–fall; light-brown, plumelike feathery seed heads in late summer–fall

**SOIL:** Well-drained; high in organic matter

**WILDLIFE BENEFITS:** Attracts bees, moths, hummingbirds, and songbirds.

**NOTES:** May cause contact dermatitis in some people, so use gloves. The male plant is more showy, while the female produces seeds. This is an aggressive grower, so plant accordingly. Use in naturalized, riparian, and woodland spaces. Tolerates Black Walnut. Deer- and rabbit-resistant.



Richard Stromberg

# VINES



Lonnie Murray

## *Clitoria mariana*

Butterfly Pea



**NATURAL HABITAT:** Dry, open forests, rocky and sandy woodlands, shale barrens, clearings, roadsides

**LENGTH & SPREAD:** 3–4 ft long; 2–3 ft wide

**BLOOM/FRUIT:** White to blue-pink flowers in spring–summer

**SOIL:** Well-drained; sandy

**WILDLIFE BENEFITS:** Attracts a variety of pollinators, including hummingbirds.

**NOTES:** Best grown from seed. Use in woodland gardens, on arbors and trellises, as a groundcover, or in informal or cottage gardens.



WickFary

## *Isotrema macrophyllum*

Dutchman's Pipe, Pipevine



**NATURAL HABITAT:** Cove forests, montane forests, especially in alkaline soils

**LENGTH & SPREAD:** 20–30 ft long; 15–20 ft wide

**BLOOM/FRUIT:** Green-burgundy pipe-shaped blooms in spring–early summer; greenish-brown fruit in late summer

**SOIL:** Neutral pH; well-drained; loamy, high in organic matter

**WILDLIFE BENEFITS:** Is the larval host for the Pipevine Swallowtail Butterfly.

**NOTES:** A high-climbing, fast-growing vine. Grow on trellis or arbors to provide shade for city, courtyard, or patio gardens. Intolerant of dry soil, so keep well-watered.

# VINES

## *Lonicera dioica*

Red Honeysuckle



**NATURAL HABITAT:** Rocky forests, woodlands, barrens, outcrops

**LENGTH & SPREAD:** 3–10 ft long; 3–6 ft wide

**BLOOM/FRUIT:** Yellow-orange-red flowers in spring; reddish-orange berries in summer–fall

**SOIL:** Neutral pH; well-drained; loamy, sandy, shallow rocky

**WILDLIFE BENEFITS:** Attracts hummingbirds and songbirds.

**NOTES:** Great in rocky limestone and greenstone areas. Use as a screen, on a trellis or arbor, or in woodland, pollinator, or patio gardens. *Lonicera sempervirens* (Coral Honeysuckle), while easier to find and purchase, is native to only 3 counties of the Ridge & Valley.



Erik Danielson

## *Parthenocissus quinquefolia*

Virginia Creeper



**NATURAL HABITAT:** Found in range of wet to dry, forested to open habitats; roots in crevasses and boulders

**LENGTH & SPREAD:** 30–50 ft long; 5–10 ft wide

**BLOOM/FRUIT:** Greenish-white insignificant flowers in late spring–early summer; blue-black berries in summer

**SOIL:** Acidic, alkaline, neutral; well-drained; clay, loamy, sandy, rocky

**WILDLIFE BENEFITS:** Fruits are eaten by songbirds and small mammals; bees, and other pollinators enjoy the flower nectar.

**NOTES:** Leaves provide vibrant-red autumn color. Use as groundcover or vertical vine on a shaded slope or bank, as a screen on a trellis or arbor, as accent in a woodland or pollinator garden. Will grow nearly anywhere except at high elevations and can be robust. Causes contact dermatitis in some people. Tolerates Black Walnut, drought, and pollution. Deer-resistant.



Sharon Snyder

# WILDFLOWERS

<b>Botanical Name</b>	<b>Common Name</b>	<b>March</b>	<b>April</b>
<i>Asclepias incarnata</i>	Swamp Milkweed		
<i>Asclepias syriaca</i>	Common Milkweed		
<i>Asclepias tuberosa</i>	Butterfly Milkweed		
<i>Baptisia australis</i>	Blue Wild Indigo		
<i>Chelone glabra</i>	White Turtlehead		
<i>Chrysopsis mariana</i>	Maryland Golden Aster		
<i>Coreopsis verticillata</i>	Threadleaf Coreopsis		
<i>Euthamia graminifolia</i>	Grass-Leaved Goldenrod		
<i>Geranium maculatum</i>	Wild Geranium		
<i>Heliopsis helianthoides</i>	Smooth Oxeye		
<i>Lobelia cardinalis</i>	Cardinal Flower		
<i>Lobelia siphilitica</i>	Great Blue Lobelia		
<i>Monarda clinopodia</i>	White Bergamot, Basil Beebalm		
<i>Monarda fistulosa</i>	Wild Bergamot		
<i>Pycnanthemum spp.</i>	Mountain Mints		
<i>Rosa carolina</i>	Carolina Rose, Pasture Rose		
<i>Rudbeckia triloba</i>	Brown-Eyed Susan		
<i>Solidago caesia</i> , <i>S. flexicaulis</i> , <i>S. nemoralis</i>	Wreath or Blue-Stemmed Goldenrod, Zigzag Goldenrod, Gray Goldenrod		
<i>Solidago odora</i>	Sweet Goldenrod		
<i>Symphyotrichum cordifolium</i> , <i>S. laeve</i> , <i>S. novae-angliae</i>	Blue Wood Aster or Heart-Leaved Aster, Smooth Aster, New England Aster		
<i>Verbena hastata</i>	Blue Vervain		
<i>Vernonia glauca</i>	Upland Ironweed		
<i>Vernonia noveboracensis</i>	New York Ironweed		

# BLOOM TIME

May	June	July	Aug	Sept	Oct	Nov
		Light Purple	Light Purple	Light Purple		
	Light Purple	Light Purple	Light Purple			
Orange	Orange	Orange	Orange			
Dark Blue						
			Light Gray	Light Gray	Light Gray	
	Yellow	Yellow	Yellow	Yellow		
Yellow	Yellow	Yellow				
			Yellow	Yellow		
Light Purple	Light Purple					
Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	
		Orange	Orange	Orange	Orange	
			Dark Blue	Dark Blue	Dark Blue	
Light Gray	Light Gray					
	Light Purple	Light Purple	Light Purple	Light Purple		
		Light Gray	Light Gray	Light Gray		
Light Purple	Light Purple					
		Yellow	Yellow	Yellow	Yellow	
			Yellow	Yellow	Yellow	
		Yellow	Yellow	Yellow	Yellow	
					Dark Blue	Dark Blue
	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	
			Light Purple	Light Purple		
		Light Purple	Light Purple	Light Purple		

# TREES & SHRUBS

Botanical Name	Common Name	March	April
<i>Amelanchier arborea</i>	Downy Serviceberry		
<i>Amelanchier laevis</i>	Smooth Serviceberry		
<i>Carya ovata</i>	Shagbark Hickory		
<i>Ceanothus americanus</i>	New Jersey Tea		
<i>Cephalonothus</i>	Buttonbush		
<i>Cercis canadensis</i>	Eastern Redbud		
<i>Cornus alternifolia</i> , <i>C. amomum</i>	Pagoda and Silky Dogwood		
<i>Cornus florida</i>	Flowering Dogwood		
<i>Cornus racemosa</i>	Gray Dogwood		
<i>Lindera benzoin</i>	Spicebush		
<i>Pinus strobus</i>	Eastern White Pine		
<i>Prunus virginiana</i>	Chokecherry		
<i>Quercus alba</i>	White Oak		
<i>Quercus coccinea</i>	Scarlet Oak		
<i>Quercus velutina</i>	Black Oak		
<i>Rhododendron periclymenoides</i>	Pinxter Azalea		
<i>Rosa palustris</i>	Swamp Rose		
<i>Salix sericea</i>	Silky Willow		
<i>Spiraea tomentosa</i>	Steeplebush		
<i>Vaccinium angustifolium</i>	Northern Lowbush Blueberry		
<i>Vaccinium stamineum</i>	Deerberry		



# GARDEN DESIGNS

## Shade-Loving Container Garden

For a shady spot that stays moist or well-watered. Use a galvanized bucket or glazed container to keep the soil from drying out. Drainage holes are recommended if the container garden will be exposed to rain.

*Packera aurea* (Golden Ragwort)—gold flowers in spring

*Onoclea sensibilis* (Sensitive Fern)—fronds from late spring until first frost

*Conoclinium coelestinum* (Blue Mistflower)—periwinkle-blue blooms from midsummer to midfall



# GARDEN DESIGNS

## Sunny Container Garden

For a sunny or partly shaded spot such as a balcony. Aim for medium moisture, but occasional dry spells are okay. Plant one of each species in a 12–14 in wide clay or ceramic pot with drainage.

*Achillea borealis* (American Yarrow)—midspring to late fall

*Rudbeckia triloba* (Brown-Eyed Susan)—midsummer to midfall

*Chasmanthium latifolium* (River Oats)—green seedheads in spring, changing color through the seasons



Container design by Dr. Iara Lacher

# GARDEN DESIGNS

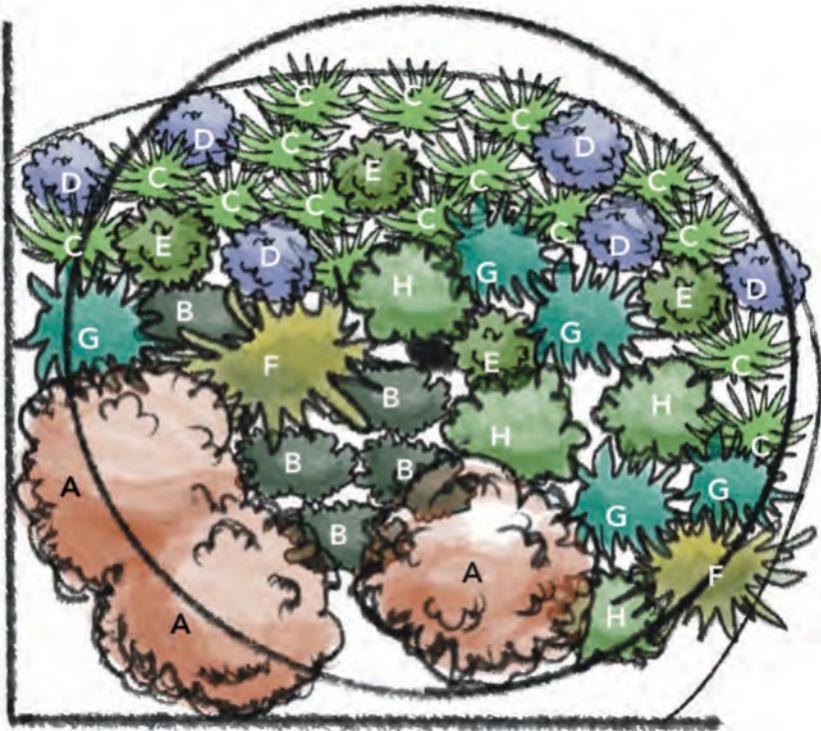
## Dry Shade Garden

Suitable for an area shaded by a tree or building

- A - *Viburnum acerifolium* (Maple-leaf Viburnum) - 3
- B - *Heuchera americana* (American Alumroot) - 5
- C - *Carex pensylvanica* (Pennsylvania Sedge) - 15
- D - *Blephilia ciliata* (Downy Woodmint) - 6
- E - *Aquilegia canadensis* (Wild Columbine) - 4
- F - *Solidago caesia* (Wreath Goldenrod) - 2
- G - *Polystichum acrostichoides* (Christmas Fern) - 5
- H - *Symphotrichum cordifolium* (Heart-Leaved Aster) - 4

\*Large circle represents the shade of a *Hamamelis virginiana* (Witch Hazel) or other small deciduous tree

\*\*Straight lines represent the corner of a fence or house

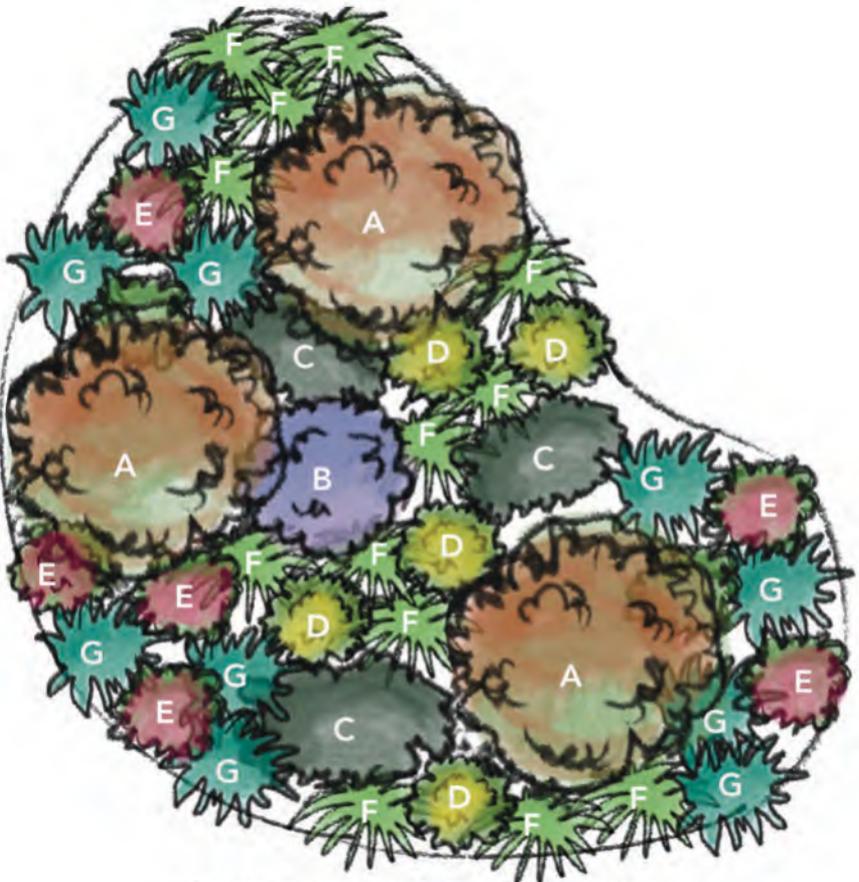


# GARDEN DESIGNS

## Rain Garden

Suitable for a frequently wet area such as near a downspout, drainage ditch, or along a pond's edge

- A - *Aronia melanocarpa* (Black Chokeberry) - 3
- B - *Eutrochium fistulosum* (Hollow Joe-Pye Weed) - 1
- C - *Veronicastrum virginianum* (Culver's Root) - 3
- D - *Packera aurea* (Golden Ragwort) - 5
- E - *Pycnanthemum virginianum* (Virginia Mountainmint) - 6
- F - *Carex vulpinoidea* (Fox Sedge) - 13
- G - *Tradescantia virginiana* (Virginia Spiderwort) - 10

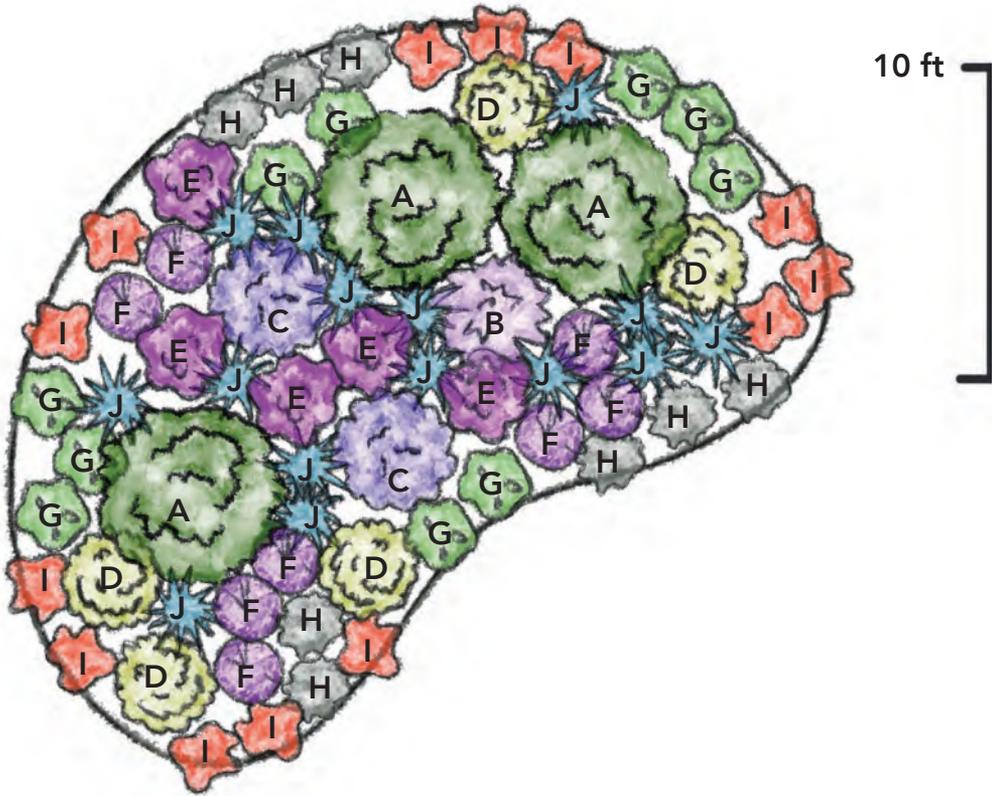


Garden design by Anne Elise Lintelman

# GARDEN DESIGNS

## Sunny Pollinator Patch

For medium to dry soil in full sun (six or more hours per day)

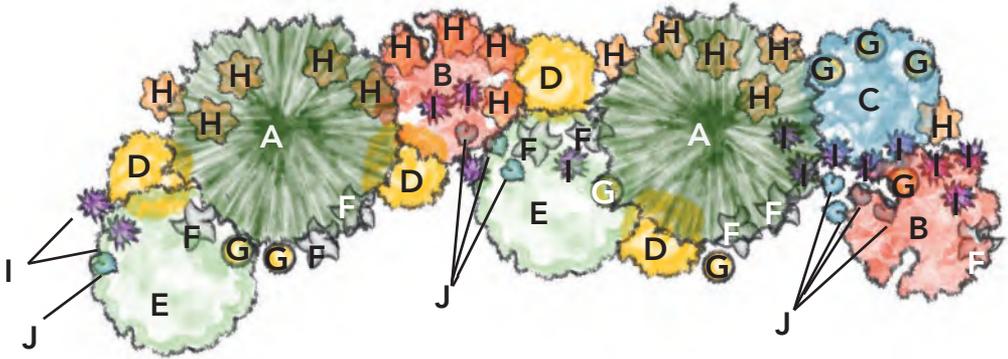


- A - *Ilex verticillata* (Winterberry) - 3
- B - *Eutrochium purpureum* (Sweet Joe Pye Weed) - 1
- C - *Symphytotrichum novae-angliae* (New England Aster) - 2
- D - *Baptisia australis* (Blue Wild Indigo) - 5
- E - *Monarda fistulosa* (Wild Bergamot) - 5
- F - *Liatrix spicata* (Dense Blazing Star) - 8
- G - *Pycnanthemum virginianum* (Virginia Mountain Mint) - 10
- H - *Achillea borealis* (American Yarrow) - 8
- I - *Asclepias tuberosa* (Butterfly Milkweed) - 13
- J - *Schizachyrium scoparium* (Little Bluestem) - 15

# GARDEN DESIGNS

## Screening Garden Edge

These plants, which can grow in part sun to full shade and prefer medium moisture, are nestled amongst each other. They are selected for their ability to fill a space to create privacy. The dogwoods provide an open structure.

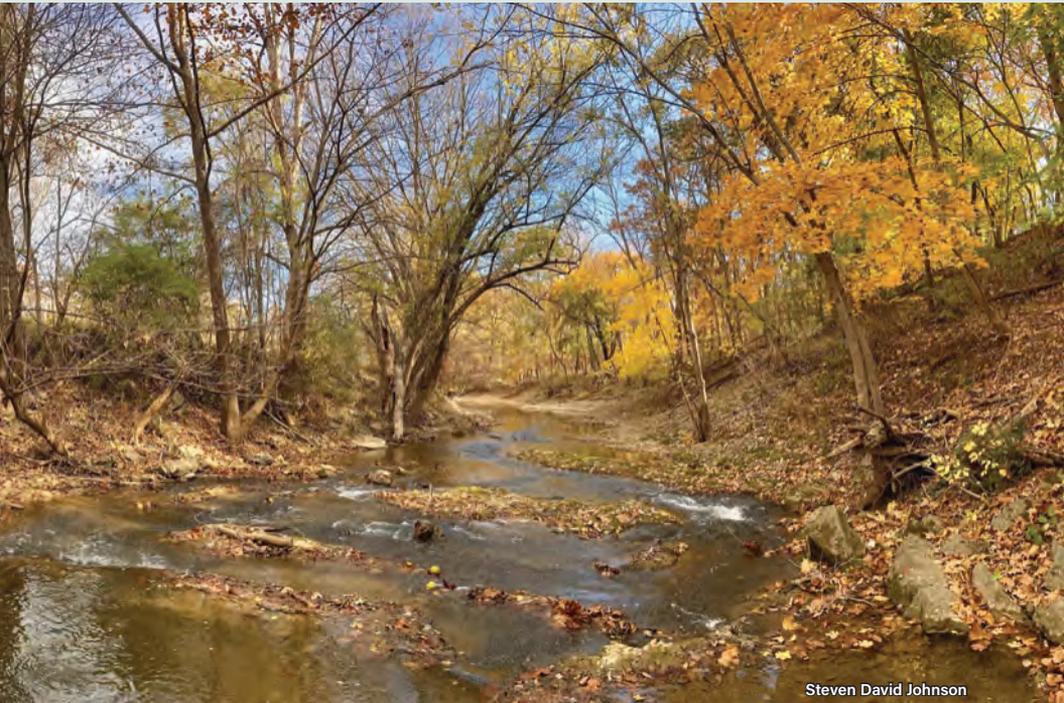


- A - *Ilex opaca* (American Holly) - 2
- B - *Viburnum dentatum* (Arrowwood Viburnum) - 2
- C - *Physocarpus opulifolius* (Ninebark) - 1
- D - *Lindera benzoin* (Northern Spicebush) - 4
- E - *Cornus alternifolia* (Pagoda Dogwood) - 2
- F - *Actaea racemosa* (Black Cohosh) - 8
- G - *Solidago flexicaulis* (Zigzag Goldenrod) - 8
- H - *Heliopsis helianthoides* (Smooth Oxeye) - 15
- I - *Tradescantia virginiana* (Virginia Spiderwort) - 14
- J - *Eurybia macrophylla* (Big-Leaved Aster) - 8

# HABITAT TYPES

## **Design Your Own Habitat-Inspired Landscapes**

As you gain confidence in your local plant knowledge, you can design your own plant groupings based on nature's patterns. Observe and learn from some of our Ridge and Valley regional habitat types to determine which plants are most likely to best suit one another. The following pages provide a primer on several of the most noteworthy habitat types in the Ridge & Valley. Read a brief overview of each along with some suggested species from that habitat that are suitable for gardening.



Steven David Johnson

Linville Creek, Rockingham County

## **RIVERS AND WETLANDS IN THE VALLEY**

Wetlands in the valley may be acidic with low nutrients—such as a bog—or alkaline with high nutrients—such as a fen. They can also be categorized based on how they formed and where they are located—think of sinkholes, rivers, or ponds. Note that many

# HABITAT TYPES

wetlands contain a mixture of different types in the same wetland. Paradoxically, some areas even have both acidic and alkaline soils in different parts of the same wetland!

## Riversides and Floodplains

Riverine areas include a wide diversity of plant species. Along the floodplains lay oxbow wetlands that support aquatic plants like *Nuphar advena* (Yellow Pond Lily). Floodplains, river bluffs, and cool mountain coves in spring are covered in swaths of *Mertensia virginica* (Virginia Bluebells), *Dicentra cucullaria* (Dutchman's Breeches), and other spring ephemerals. The rich soils also support ferns like *Adiantum pedatum* (Northern Maidenhair Fern), while gravelly riverside scoured areas include plants like *Baptisia australis* (Blue Wild Indigo). The limestone cliffs along rivers are important habitats for many rare and unusual species as well.

## Planting Ideas

Riparian buffers are wide plantings alongside a river, pond, wetland or creek that improve water quality by reducing erosion, cooling temperatures, and filtering contaminants. Riparian buffers help to deter nuisance wildlife like Canada geese while reducing toxic algae blooms and other dangerous bacteria. Wet-loving trees, shrubs, and grasses include: *Cephalanthus occidentalis* (Buttonbush), *Juncus spp.* (Rushes), *Salix sericea* (Silky Willow), *Rosa palustris* (Swamp Rose), (American Hazelnut), *Prunus americana* (American Plum), *Staphylea trifolia* (American Bladdernut), *Carex crinita* (Long-fringed Sedge), *Carex stricta* (Tussock Sedge), *Carex atlantica* (American Prickly Bog Sedge), and *Carex baileyi* (Shortbeak Sedge), *Euonymus atropureus* (American Wahoo), *Cornus amomum* (Silky Dogwood), Shingle Oak, *Platanus occidentalis* (American Sycamore), Black Walnut, Persimmon, *Alnus serrulata* (Alder), *Nyssa sylvatica* (Black Tupelo), and *Asimina triloba* (Paw Paw).



# HABITAT TYPES



Steven David Johnson

Spotted salamander egg masses nestle amongst sphagnum moss in a vernal pool in Augusta County

## Sinkhole Ponds and Vernal Pools

A sinkhole pond is a special ecosystem in the Valley that can be home to many rare plants and amphibians. A sinkhole pond is a depression caused by water eroding limestone. Sinkhole ponds are sometimes home to unique plants such as *Helenium virginicum* (Virginia Sneezeweed) and *Boltonia montana* (Valley Doll's Daisy). They can be either calcareous or acidic. They can also include more familiar species like *Hibiscus moscheutos* (Swamp Rose Mallow), *Dulichium arundinaceum* (Three-Way Sedge), *Rhexia spp.* (Meadowbeauty), and *Nelumbo lutea* (American Lotus).

# HABITAT TYPES

Some sinkhole ponds dry up in the summer and function as vernal pools, which means that they remain fish-free. This makes them ideal locations for unusual creatures like fairy shrimp and breeding tiger salamanders.

It's important to protect these delicate sinkhole ponds by maintaining a buffer of native plants, limiting recreational uses, and preventing chemicals like lawn fertilizer from contaminating them.

## Planting ideas

Similar to a sinkhole pond, a rain garden can be made by digging a hole in a place where stormwater is a problem, then filling it with an easily draining mix of sand, mulch and soil. A well-designed rain garden allows water to slowly be absorbed into the ground and is planted with species that can tolerate periodic flooding. Rain garden plants include *Lobelia cardinalis* (Cardinal Flower), *Lobelia siphilitica* (Blue Lobelia), *Iris virginica* (Blue Flag Iris), *Cephalanthus occidentalis* (Buttonbush), *Spiraea tomentosa* (Steeplebush), *Liatrix spicata* (Dense Blazing Star), *Hypericum prolificum* (Shrubby St. John's Wort), *Conoclinium coelestinum* (Blue Mistflower), *Asclepias incarnata* (Swamp Milkweed), *Eupatorium perfoliatum* (Common Boneset), *Symphotrichum novae-angliae* (New England Aster), *Pycnanthemum virginianum* (Virginia Mountain Mint), *Chelone Glabra* (White Turtlehead), *Verbena hastata* (Blue Vervain), and *Vernonia noveboracensis* (New York Ironweed).



# HABITAT TYPES



Spring Pond at Maple Flats, Augusta County

## Ponds

Aquatic plants for ponds and lakes include *Nymphaea odorata* (White Water Lily), *Orontium aquaticum* (Golden Club), *Utricularia gibba* (Common Bladderwort), and for very large ponds or a pot, *Nelumbo lutea* (American Lotus), which spreads abundantly.

Marginal plants can include, *Lobelia siphilitica* (Great Blue Lobelia), *Lobelia cardinalis* (Cardinal Flower), *Juncus effusus* (Common Rush), *Iris versicolor* (Blue Flag), *Mimulus ringens* (Allegheny Monkeyflower), *Dulichium arundinaceum* (Three-Way Sedge), *Carex crinita* (Long-Fringed Sedge), *Carex vulpinoidea* (Fox Sedge), *Justicia americana* (Common Water-Willow), *Sagittaria latifolia* (Arrowhead), *Peltandra virginica* (Arrow Arum), *Lysimachia terrestris* (Swamp Candles), *Hibiscus moscheutos* (Swamp Mallow).

# HABITAT TYPES

## Calcareous Wetlands (Fens)

Fens in the Valley occur in naturally wet, marshy areas with limestone. Plants in these areas are adapted to **calcareous** soils, which are abundantly rich in calcium because they are comprised of ancient shells and the bones of ancient sea creatures. Fens often occur at the headwaters of streams, or in river floodplains. Some sinkhole ponds contain calcareous soils, too. These tend to be slightly alkaline.

Fen plants great for gardens include *Iris versicolor* (Northern Blue Flag), *Phlox maculata* (Meadow Phlox), and *Symphyotrichum novae-angliae* (New England Aster).

## Planting Ideas

For wet, **alkaline**, nutrient-rich sites, artificial **fens** are very easy to create using a mix of composted leaves, manure, sand, oyster shell, soil, and lime. Plants for shady fens can include *Caltha palustris* (Marsh Marigold), *Veratrum viride* (False Hellebore), *Trautvetteria carolensis* (Tassel Rue), *Rubus odoratus* (Purple-Flowering Raspberry), and *Aconitum uncinatum* (Southern Blue Monkshood). Plants for sunny fens can include *Iris versicolor* (Northern Blue Flag), *Allium canadense* (Canada Onion), and *Filipendula rubra* (Queen of the Prairie).



# HABITAT TYPES



Isaac Matlock

## Mountain Bogs

As quartzite on the ridges breaks down, it flows down and creates acidic, sandy areas at the foot of the mountains similar to the soil types in the coastal area. Mountain bogs are very clean and they lack nutrients like phosphorus and nitrogen, which is why they can contain carnivorous plants that catch insects for their fertilizer. These places can have carnivorous plants like *Drosera rotundifolia* (Roundleaf Sundew), *Sphagnum spp.* (fluffy sphagnum mosses), *Vaccinium macrocarpon* (Large Cranberry), and orchids like *Calopogon tuberosus* (Grass Pink) and *Pogonia ophioglossoides* (Rose Pogonia). Bogs are also the habitat for the beautiful and federally threatened *Helonias bullata* (Swamp Pink). These areas used to be more common, but many of them have been destroyed to make room for development.

# HABITAT TYPES

Some places where you can still see wetlands in the Valley are at Abram's Creek Wetland Preserve in Winchester, Maple Flat Ponds near Waynesboro, and Augusta Springs Wetland Area.

## Planting Ideas

It's fairly easy to create a **bog garden** that mimics **acidic** habitats where you can grow native orchids, sundews, and cranberries. If you live in low-nutrient, acidic, sandy conditions, all you may need to do is dig a hole or make a wet spot using a plastic liner; otherwise, use a liner and add 50/50 peat and sand. The most important thing is to keep fertilizer and other nutrients out, and add only pure rain water, not tap water. You can then plant sphagnum moss on top and add appropriate plants, like *Vaccinium macrocarpon* (Large Cranberry), *Rhododendron viscosum* (Swamp Azalea), *Drosera rotundifolia* (Roundleaf Sundew), *Pogonia ophioglossoides* (Rose Pogonia), *Rhexia spp.* (Meadow Beauty), *Eriophorum virginicum* (Tawny Cottongrass), and *Calopogon tuberosus* (Grass Pink).



# HABITAT TYPES



Erik Danielson

## OAK-HICKORY FORESTS

As one climbs out of the Valley into the mountains, the pastoral grasslands give way to forests, including the Oak-Hickory forest. Fire exclusion and invasive, human-introduced species have caused the composition of this forest to change dramatically from those that would have greeted early settlers in the valley. Healthy forests will include both a shrub layer and a herbaceous layer, usually full of spring and fall wildflowers. Both Hickories and Oaks are very important wildlife species because they are host plants to many species of moths and butterflies. They also provide food to deer, Wild Turkey, bear, squirrels, and other wildlife.

Other tree species you'll find here include *Liriodendron tulipifera* (Tulip Tree) and *Fraxinus americana* (White Ash). Historically, there were *Castanea dentata* (American Chestnuts) in this forest, which once reached over 15 feet in diameter! Some

# HABITAT TYPES

sources also include White Pine and Hemlocks in this forest group. Smaller trees might include *Cercis canadensis* (Redbud), *Cornus spp.* (Dogwoods) and *Amelanchier spp.* (serviceberries). Shrubs include *Hamamelis virginiana* (Witch Hazel), *Corylus cornuta* (Beaked Hazelnut), *Kalmia latifolia* (Mountain Laurel), *Rubus occidentalis* (Black Raspberry), and *Vaccinium stamineum* (Deerberry). The herbaceous layer often includes *Polystichum acrostichoides* (Christmas Fern), *Carex pensylvanica* (Pennsylvania Sedge), *Danthonia spicata* (Poverty Oat Grass), and *Asclepias quadrifolia* (Fourleaf Milkweed), as well as spring wildflowers like *Cardamine concatenata* (Cutleaf Toothwort), *Hepatica spp.* (Liverwort), *Thalictrum thalictroides* (Rue Anemone), *Stellaria pubera* (Star Chickweed) and *Polygonatum biflora* (Solomon's Seal). These forests include a wide variety of native orchid species like *Aplectrum hyemale* (Putty Root) and *Goodyera pubescens* (Rattlesnake Plantain).

## Planting Ideas

Because Oak-Hickory forests are divided into acidic and basic soil types, it's important to get your soil tested before planting and to know what kind of species are appropriate. Most forests have a long history of human influences like logging and grazing, which have reduced the natural diversity and the complexity of the forest. Try to identify layers of the forest that are missing and choose plants to fill those gaps. If you are starting from scratch in a cleared area, imitate natural succession by planting first with *Pinus strobus* (White Pine), *Liriodendron tulipifera* (Tulip Poplar), and other fast-growing trees that create a canopy quickly before invasive species take hold. *Eurybia divaricata* (White Wood Aster) is a great species that spreads quickly to fill in the herbaceous layer. Ferns and violets also help to fill the understory.



# HABITAT TYPES



Lonnie Murray

*Silene caroliniana* (Wild Pink) cascading down a shale barrens

## SHALE BARRENS, CLIFFS, AND ROCK OUTCROPS

Shale barrens are south-facing slopes composed of gravelly shale that can get very hot and dry. They are the closest environment in our area to a desert, and it's not unusual to find cacti growing there. Barrens occur most frequently in the rain shadow of the mountains. They host species found nowhere else in the world, including *Clematis viticaulis* (or Millboro Leatherflower, named after Millboro, Virginia) and *Eriogonum allenii* (Shale Barren Buckwheat). Familiar plants like *Phlox subulata* (Moss Phlox) are found there too. As the name barrens suggests, this is an inhospitable place for most plants, yet plants adapted to this special ecosystem bloom with abundance in the spring and fall. They create natural rock gardens that even expert horticulturalists dream of copying with carpets of flowers cascading down the rock faces.

# HABITAT TYPES

Along limestone bluffs above rivers stand iconic trees like *Thuja occidentalis* (Northern White Cedar), which can live to be more than 400 years old—with some reaching more than 1,000! Throughout the summer, plants like *Asplenium rhizophyllum* (Walking Fern), *Asplenium trichomanes* (Maidenhair Spleenwort), *Delphinium exaltatum* (Tall Larkspur), and *Lonicera dioica* (Limber Honeysuckle) adorn the limestone cliffs, along with the rare *Paxistima canbyi* (Canby's Mountain Clover).

## Planting Ideas

Because plants from these habitats thrive in extreme conditions, many of them are perfect for urban landscapes like hell strips (parking islands, or that strip of turf between your yard, the sidewalk, and the street), green roofs, and other arid locations. Some landowners with shale or rocky slopes in the Valley complain “nothing will grow here!”—but we hope to convince you that this is an incredible opportunity to grow some of these amazing plants like *Symphyotrichum oblongifolium* (Aromatic Aster, aka Shale Barrens Aster), *Allium cernuum* (Nodding Onion), *Coreopsis verticillata* (Threadleaf Coreopsis), *Sedum glaucophyllum* (Cliff Stonecrop), *Dicentra eximia* (Wild Bleeding Heart), *Heuchera americana* (Alumroot), *Viola pedata* (Bird's Foot Violet), *Rhus aromatica* (Fragrant Sumac), *Penstemon canescens* (Gray Beardtongue), *Silene caroliniana* (Carolina Pink), *Sisyrinchium angustifolium* (Blue-Eyed Grass), *Pycnanthemum tenuifolium* (Narrowleaf Mountain Mint), *Schizachyrium scoparium* (Little Bluestem), *Asclepias tuberosa* (Butterfly Milkweed), *Phlox subulata* (Moss Phlox), *Aquilegia canadensis* (Wild Columbine), *Delphinium exaltatum* (Tall Larkspur), *Opuntia humifusa* (Prickly Pear Cactus), *Quercus ilicifolia* (Bear Oak), and *Prunus virginiana* (Chokecherry).

When constructing your rock garden, choose plants appropriate to the soil's pH and habitat. Learn more about rock gardens from the American Rock Garden Society website.



# HABITAT TYPES



Lonnie Murray

*Picea rubens* — Red Spruce forest

## RED SPRUCE FORESTS

At the end of the last Ice Age, parts of the Shenandoah Valley were covered in boreal forest (pines, spruce, and fir trees). Pollen samples from sediment in local ponds show that spruce and fir trees dominated, while the bones of Spruce Grouse show that our region's wildlife was different, too. As temperatures warmed, these plants were able to survive on cold mountain peaks where they remain as islands of boreal vegetation. Today's Red Spruce forests provide crucial habitat to salamanders and northern wildlife like snowshoe hares. Visiting such places is like traveling back in time, or like finding a little piece of Canada stranded in Virginia. These fairy tale forests have a floor covered in mosses, liverworts, and ferns. These areas have high rainfall, and are often

# HABITAT TYPES

shrouded in mist. You can see this kind of habitat at Big Meadows in Shenandoah National Park, Great North Mountain, Locust Springs, Sounding Knob and Reddish Knob.

## Planting Ideas

If you live above 2,000 ft in elevation or in Highland County, the following palette of plants may suit your terrain: trees like *Picea rubens* (Red Spruce), *Acer saccharum* (Sugar Maple), *Betula alleghaniensis* (Yellow Birch); shrubs like *Viburnum lantanooides* (Hobblebush) or *Rhododendron maximum* (Great Laurel); woodland flowers like *Uvularia grandiflora* (Large-Flowered Bellwort), *Viola canadensis* (Canada Violet), *Actaea pacheopoda* (Doll's Eyes); groundcovers like *Maianthemum canadense* (Canada Mayflower), *Dryopteris intermedia* (Evergreen Wood Fern), or *Anemone quinquefolia* (Wood Anemone). In sunnier areas, grow *Lillium philadelphicum* (Wood Lily), *Rubus idaeus var. strigosus* (American Red Raspberry), *Sorbus americana* (American Mountain Ash), *Rhododendron prinophyllum* (Rose Shell Azalea), *Vaccinium angustifolium* (Northern Lowbush Blueberry), *Dennstaedtia punctilobula* (Hay-Scented Fern), *Chamaenerion angustifolium* (Fireweed), and *Clematis occidentalis* (Western Blue Clematis).



# HABITAT TYPES



Sharon Snyder

Meadows in Monterey, Highland County

## GRASSLANDS AND MEADOWS

During his travels in western Virginia, explorer John Lederer described the Shenandoah Valley in 1670 as a "savanna," or extensive grassland. Lederer's claims are supported by pollen studies as well as the presence of meadow plants naturally occurring into the present day. Although historic claims about bison living in the Shenandoah Valley have not been scientifically proven, certainly abundant elk and deer would have grazed on the grasslands. Archaeological evidence demonstrates the presence of elk before people permanently settled the Valley.

Some of the important native grasses in the valley are *Schizachyrium scoparium* (Little Bluestem), *Sorghastrum nutans*

# HABITAT TYPES

(Indian Grass), and *Andropogon gerardii* (Big Bluestem). The fragments of old-growth grasslands that remain can be stunning, with thousands of *Liatris spicata* (Dense Blazing Star), *Castilleja coccinea* (Indian Paintbrush), and rare species like *Filipendula rubra* (Queen of the Prairie) bursting with color. Today you can still see remnant grasslands at Cowbane Prairie in Augusta County, in the meadows around Monterey (Highland County), and at Hidden Valley in Bath County.

## Planting Ideas

Thanks to popular programs like the Virginia Conservation Assistance Program and agricultural cost-share programs, wildflower meadows have become increasingly popular and can provide habitat for pollinators, birds, and wildlife. Some good choices for your meadow are *Liatris spicata* (Dense Blazing Star), *Symphyotrichum novae-angliae* (New England Aster), *Pycnanthemum tenuifolium* (Narrowleaf Mountain Mint), *Verbena hastata* (Blue Vervain), *Monarda fistulosa* (Wild Bergamot), *Rosa carolina* (Pasture Rose), and *Vernonia noveboracensis* (New York Ironweed), *Rudbeckia* spp. (Brown-eyed Susan), *Sorghastrum nutans* (Indian Grass), *Schizachyrium scoparium* (Little Bluestem), *Andropogon gerardii* (Big Bluestem), *Symphyotrichum laeve* (Smooth Blue Aster), and *Rudbeckia triloba* (Brown-Eyed Susan).



# WHAT NOT TO PLANT

## Invasive Human-Introduced Plant Species

Why it matters: Invasive plants outcompete native plants and do not support native insects, which are essential food for birds and other wildlife. Invasive plants have characteristics that give them a competitive edge over native plants, including prolific seed production, forming monocultures that shade out and displace native plants and spread rapidly, with nothing keeping them in check. Some invasive plants release self-protective chemicals that inhibit the germination of other plants. Once established over large areas, invasive plants are difficult to manage and require an immense amount of time, labor, money, patience, and diligence.

**Please do not plant invasive species!** Instead, plant species that are native to the region where you live. Although some native plants can spread quite rapidly, they are not problematic within their natural community because other plants and animals can use them and help to manage their numbers.

**Invasive:** *Pyrus calleryana* (Callery Pear)

**Ridge & Valley Native Alternatives:** *Cornus florida* (Flowering Dogwood), *Cercis canadensis* (Redbud), *Amelanchier arborea* (Downy Serviceberry), *Amelanchier laevis* (Smooth Serviceberry)

**Invasive:** *Ajuga reptans* (Bugleweed)

**Ridge & Valley Native Alternatives:** *Conoclinium coelestinum* (Blue Mistflower), *Chrysogonum virginianum* (Green and Gold), *Phlox stolonifera* (Woodland Creeping Phlox), *Carex appalachica* (Appalachian Sedge)

**Invasive:** *Microstegium vimineum* (Japanese Stiltgrass)

**Ridge and Valley Native Alternatives:** *Dennstaedtia punctilobula* (Hay-Scented Fern), *Parathelypteris noveboracensis* (New York Fern)

**Invasive:** *Euonymus alatus* (Burning Bush or Winged Euonymus)

**Ridge & Valley Native Alternatives:** *Lindera benzoin* (Spicebush), *Euonymus atropurpureus* (Eastern Wahoo), *Vaccinium angustifolium* (Northern Lowbush Blueberry)

# WHAT NOT TO PLANT

**Invasive:** *Miscanthus sinensis* (Chinese Silvergrass)

**Ridge & Valley Native Alternatives:** *Schizachyrium scoparium* (Little Bluestem), *Eragrostis spectabilis* (Purple Lovegrass)

**Invasive:** *Ligustrum sinense* (Chinese Privet)

**Ridge & Valley Native Alternatives:** *Ilex verticillata* (Winterberry), *Vaccinium stamineum* (Deerberry), *Viburnum acerifolium* (Mapleleaf Viburnum), *Staphylea trifolia* (American Bladdernut), *Physocarpus opulifolius* (Ninebark), *Sambucus racemosa* (Red Elderberry)

**Invasive:** *Hedera helix* (English Ivy) and *Vinca major* (Greater Periwinkle)

**Ridge & Valley Native Alternatives:** *Packera aurea* (Golden Ragwort), *Podophyllum peltatum* (Mayapple), *Chrysogonum virginianum* (Green and Gold), *Salvia lyrata* (Lyre Leaf Sage), *Iris cristata* (Dwarf Crested Iris)

**Invasive:** *Berberis thunbergii* (Japanese Barberry)

**Ridge & Valley Native Alternatives:** *Viburnum prunifolium* (Blackhaw Viburnum), *Viburnum acerifolium* (Mapleleaf Viburnum), *Viburnum dentatum* (Arrowwood Viburnum), *Aronia arbutifolia* (Red Chokeberry), *Menziesia pilosa* (Minniebush)

**Invasive:** *Lonicera japonica* (Japanese Honeysuckle)

**Ridge & Valley Native Alternatives:** *Lonicera sempervirens* (Trumpet Honeysuckle), *Clematis virginiana* (Virgin's Bower), *Clematis viorna* (Northern Leatherflower); see VINES

**Invasive:** *Spiraea japonica* (Japanese spirea)

**Ridge & Valley Native Alternatives:** *Spiraea tomentosa* (Steeplebush)

**Invasive:** *Wisteria sinensis* (Chinese Wisteria) and *Wisteria floribunda* (Japanese Wisteria)

**Ridge & Valley Native Alternatives:** See VINES

**Invasive:** *Viburnum dilatatum* (Linden Viburnum)

**Ridge & Valley Native Alternatives:** *Viburnum acerifolium* (Mapleleaf Viburnum), *Viburnum dentatum* (Arrowwood); see SHRUBS

# WHAT NOT TO PLANT

**Invasive:** *Liriope muscari* (Liriope)

**Ridge & Valley Native Alternatives:** *Carex platyphylla* (Broad-Leaved Sedge)

**Invasive:** *Albizia julibrissin* (Mimosa)

**Ridge & Valley Native Alternatives:** *Chionanthus virginicus* (Fringetree); see SMALL TREES

**Invasive:** *Nandina domestica* (Nandina)

**Ridge & Valley Native Alternatives:** *Ilex verticillata* (Winterberry), *Aronia arbutifolia* (Red Chokeberry); see SHRUBS

**Invasive:** *Lythrum salicaria* (Purple Loosestrife)

**Ridge & Valley Native Alternatives:** *Liatris spicata* (Dense Blazing Star); see RIVERS & WETLANDS, pp. 124-131

**Invasive:** *Paulownia tomentosa* (Princess Tree)

**Ridge & Valley Native Alternatives:** *Magnolia acuminata* (Cucumbertree Magnolia); see SMALL TREES

**Invasive:** *Lamium maculatum* (Spotted Deadnettle)

**Ridge & Valley Native Alternatives:** *Geranium maculatum* (Wild Geranium), *Hexastylis virginica* (Virginia Heartleaf)

**Invasive:** *Gallium odoratum* (Sweet Woodruff)

**Ridge & Valley Native Alternatives:** *Heuchera americana* (American Alumroot) or *Tiarella cordifolia* (Foamflower)

**Invasive:** *Iris pseudacorus* (Yellow Iris)

**Ridge & Valley Native Alternatives:** *Iris virginica* (Virginia Blue Flag), *Iris versicolor* (Blue Flag), *Orontium aquaticum* (Golden Club), *Caltha palustris* (Marsh Marigold)

As you remove harmful invasive plants, try to replace them with some of the desirable native plants featured in this book. Nature abhors a vacuum, so be sure not to leave gaps in your landscape as they are likely to fill with invasive species.

# RESOURCES

## **Additional Resources**

Blue Ridge PRISM: [www.blueridgeprism.org](http://www.blueridgeprism.org)

Center for Invasive Species and Ecosystem Health:  
[www.invasive.org/species/weeds.cfm](http://www.invasive.org/species/weeds.cfm)

Department of Conservation and Recreation Natural Heritage:  
<https://www.dcr.virginia.gov/natural-heritage/nativeplants>

Digital Plant Atlas of Virginia Flora:  
<http://vaplantatlas.org>

Plant Invaders of Mid-Atlantic Natural Areas Field Guide:  
<https://bugwoodcloud.org/imageSites/pdf/midatlantic-web.pdf>

Plant Virginia Natives: <https://www.plantvirginianatives.org>

Soil Information, Maps, and Surveys:  
<https://www.dcr.virginia.gov/soil-and-water/ssurveys>  
<https://websoilsurvey.nrcs.usda.gov/app>

Virginia Department of Conservation and Recreation,  
Invasive Plants:  
[www.dcr.virginia.gov/natural-heritage/invspinfo](http://www.dcr.virginia.gov/natural-heritage/invspinfo)

Virginia Native Plant Society: [www.vnps.org](http://www.vnps.org)

Virginia Solar Site Native Plant Finder:  
[www.dcr.virginia.gov/natural-heritage/solar-site-native-plants-finder](http://www.dcr.virginia.gov/natural-heritage/solar-site-native-plants-finder)

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**Plant Virginia Natives Initiative**

[www.plantvirginiannatives.org/plant-ridge-and-valley-natives](http://www.plantvirginiannatives.org/plant-ridge-and-valley-natives)

**Virginia Native Plant Society**

[www.vnps.org](http://www.vnps.org)