

NATIVE FLORA

for life in
Northwest
Alabama



Issue 1: HERBACEOUS

Spring / Summer

This publication is brought to you by the Muscle Shoals National Heritage Area.

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Lady Bird Johnson Wildflower Center
The USGS Bee Inventory & Monitoring Lab

IN THIS ISSUE

SPRING & SUMMER

HERBACEOUS

Forbs: non-woody herbaceous plants with broad leaves and often flowers.

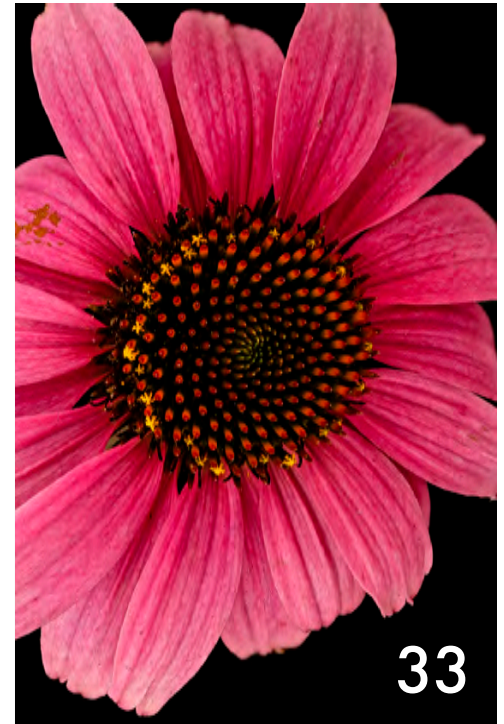
Graminoids: 'grass-like' herbaceous plants (grasses, sedges & rushes).

Vines: plants with stems that climb by tendrils, twining or creeping.

1
NW AL
The Singing River

4
SPRING
Waking Up

27
SUMMER
Surviving the Simmer



29
FERNS
Cozy Homes for Wildlife

39
PROTECTION ZONE
Regeneration Needed

47
WHAT NOW?
Build Habitat

INTRO

Native What

Native : indigenous to the area, original, not introduced.

For this series, we include a selection of plants native to Northwest Alabama.

The area includes the following counties:

Colbert, Franklin, Lauderdale, Lawrence,
Limestone, Madison, & Morgan

Native Why

The interdependent nature of the ecosystem relies on diverse, nutrient rich, and safe habitats. Native plants, animals, insects and other organisms evolved together to share resources and habitats. Most native insects rely on native host plants to feed them, especially in the larval stage. Some insects have only one known plant host, like Monarch Butterflies with Milkweed.

We are fortunate in Alabama to have nature preserves and wild spaces. However, they are often isolated islands for long distance travelers. The spaces in between are occupied by us, in suburbia. The average suburban landscape is a food desert for wildlife, dominated by a lawn and sparse shrubbery. There are enough of us with landscapes to serve as fueling stations for our pollinators, birds and other animal friends. We can bring back pollinator populations by converting our lived in landscapes to healthy habitats, starting with native plants.

how to read this ZINE

Think of it as a seasonal guide to many of Northwest Alabama's native plants with notes on form, function and ecological connections. It's roughly organized by bloom time or high interest.

This issue is focused on the herbaceous layer (forbs & graminoids). Also included are vines, some of which have woody stems. That technically makes some of the vines woody plants, rather than herbaceous. It's not an exhaustive list of all native plants found in this region, but hopefully an inspiring amount.

Enjoy the beauty of native plants and wildlife. Look for highlights on their importance in the big picture. Go through time in order, or look up specific plants in the back index. Refer to the season and habitat footers, for reference to when and where to find the plants.

At the end, you'll find a section on some of our special plant species that need protection. While cultivation is encouraged for most of the plants in this publication, some require highly specific growing conditions.

The Singing River

The Tennessee River and its tributaries have shaped the history of the Muscle Shoals region and the rest of the Tennessee River Valley. Earliest Native Americans of this region sustained themselves from the river and its significant biodiversity, with some referring to the river as Nunnahsae, the Singing River. Later, Euro-American settlers realized the potential of the river to fuel industry and generate power for development. Today, tens of thousands of people living within just a few miles of the Tennessee River across the Muscle Shoals National Heritage Area are affected by the national cultural, natural, and economic significance of this watershed.

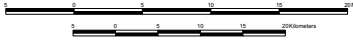
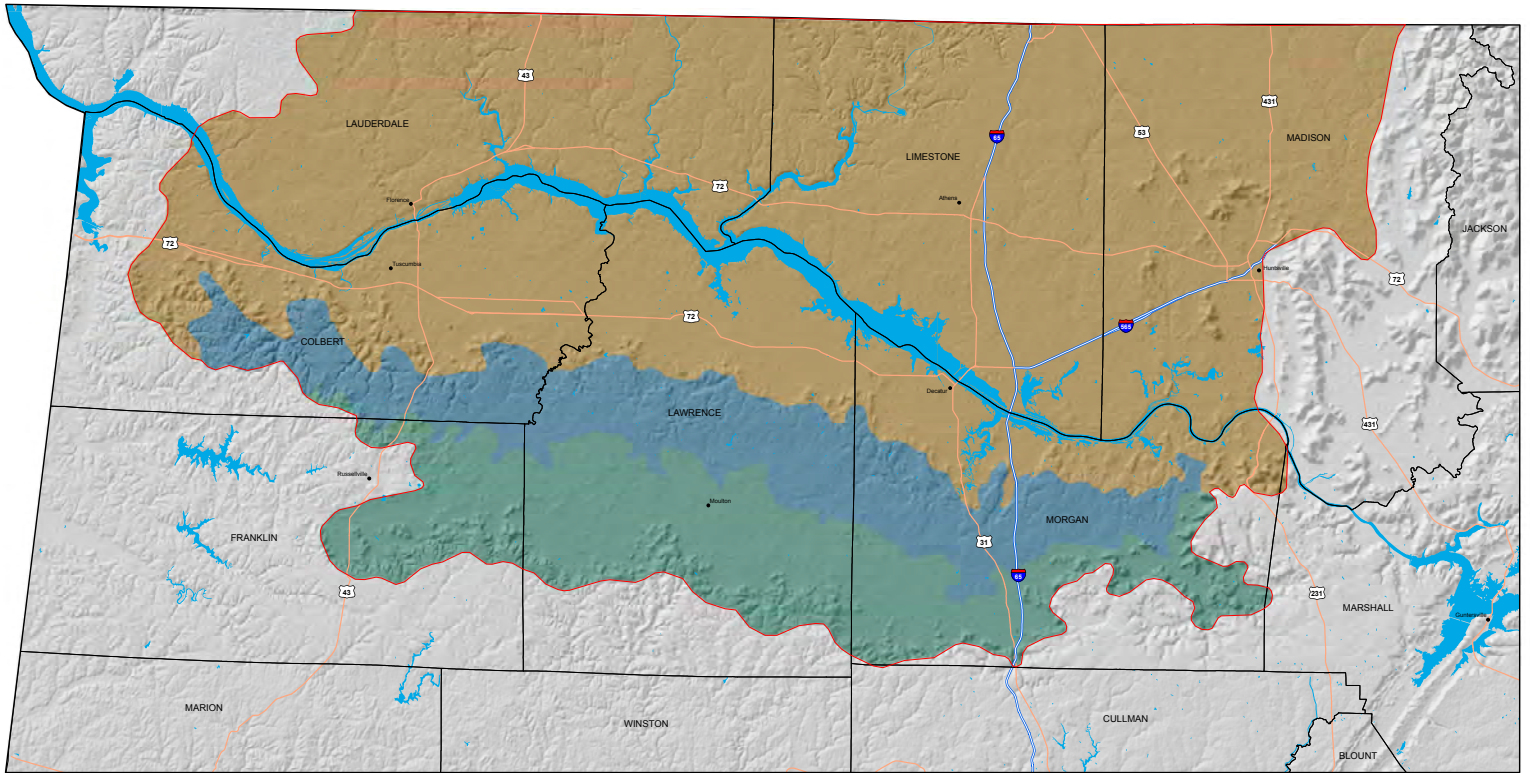
The Tennessee River continues to shape our lives in many ways, including through an increasing regional focus on exploring and preserving our native diversity. Local legends suggest something in the water provides members of the Shoals a unique musical vitality. Though we don't have evidence to support these apocrypha outside of the region's rich music culture, we can witness the extraordinary life-giving nature of our watershed's geological history and hydrology through the species richness of its habitats.

Found partially in the Highland Rim physiographic region that makes up most of northwest Alabama, the Central Tennessee River Basin contends for the distinction of most biodiverse place in the United States and is a globally-significant center of biodiversity. Nationally, our region contributes to Alabama's leading number of shrubs, vines, oaks, hickories, buckeyes, and overall tree species count. Sixty percent of the nation's freshwater mussel species are found in Alabama, with one third of those found only in the state, making Alabama a greater hotspot for freshwater mussel diversity than any country in the world. Accompanying our freshwater mussel diversity is an equally robust presence of freshwater snails and crayfish. Alabama's waters also support over 300 native fish species, nearly 40 percent of all native freshwater fish species found in North America.

Such diversity is on display and publicly accessible in some of our favorite outdoor destinations like Cane Creek Canyon Nature Preserve, Cypress Creek, Joe Wheeler Wildlife Refuge, and the Sipsey Wilderness in Bankhead National Forest.

In this series, explore some of northwest Alabama's species that lay a foundation for our rich ecosystems – our native forbs and graminoids.

Text by TJ Johnson MSNHA



EXPLANATION

- | | |
|---|---|
| Physiographic Districts | Other Symbols |
| Moulton Valley | County boundary |
| Little Mountain | Major rivers, lakes, and reservoirs |
| Tennessee Valley | Outline of the Highland Rim |
| Not included in the Highland Rim | Interstate highway |
| | United States highway |

PHYSIOGRAPHIC DISTRICTS OF THE HIGHLAND RIM, ALABAMA

By
 Sophia M. Rutledge
 2016

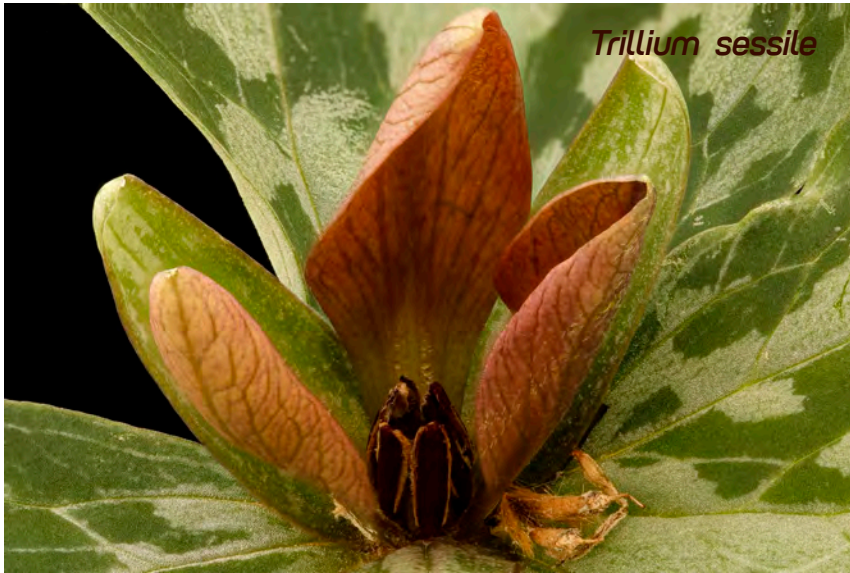
The information presented herein is for general location information only and should not to be used in place of site assessment. This map is an interpretation of recently compiled data, newly acquired or future data may allow a different interpretation.



Berry H. (Nick) Tow, Jr.
 State Geologist



Bloodroot
Sanguinaria canadensis



waking up

Warmer temps and increased light bring plants and animals out of dormancy. New growth brings renewed food and nesting sources. Insects crawl out of hiding, many of which quickly become food for other animals. Everyone is pretty hungry from the scarcity of winter. Some are already carrying babies.

Out into the wild, they go to search for food and shelter. They are off, in a wild greatly inhabited by humans. We find them in our forests, cities, and backyards. They're searching for food, water, mates, and homes.

Early spring wildflowers offer meals of nectar and pollen, as well as infrastructure. Trilliums or Toad Shades (pictured above) host broad sheltering leaves.



S
P
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G

SPRING happenings

Fiddleheads spiral out and up in early spring. Look in moist forests and woodlands, shady ravines and along rivers and streams.



Campbell and Lynn Loughmiller, Lady Bird Johnson Wildflower Center



Christmas Fern

Photo: Annie Myche

Once unfurled, you can fully appreciate the mass of foliage once so tightly wound up in a tiny spiral.



Sensitive Fern

James Garland Holmes, Lady Bird Johnson Wildflower Center



rich moist wooded slopes / meadows / near rivers & streams

***Sanguinaria canadensis* Bloodroot**

Rhizome named for the red root juice used traditionally by Native Americans to dye fabric, baskets and skin.

***Erythronium spp.* Trout Lily**

Cane Creek Canyon Nature Preserve hosts large swathes of these golden beauties in early Spring. Trout Lily specialist bees rely on *Erythronium* as their only source of pollen.

***Trillium spp.* Toad Shade**

Nectar & pollen for bees & pollinators, larval host for moths, berries for mammals. Can survive in deep shade. Avoid digging trilliums, as they aren't likely to survive the move.

***Claytonia virginica* Virginia Spring Beauty**

Benefits bees, pollinators and mammals. Eaten by people who forage and used medicinally by herbalists.



early **SPRING**

Common Blue Violet
Viola sororia



hola viola

Violets do well, so well that they are often deemed bad. They are sprayed with herbicides, and then what? Well, they come back. Futile.

What if we see them not as weeds, but as flowers, food and medicine? They support butterflies, specialized bees and provide seeds for birds and mammals.

Violets are harvested by herbalists both for topical and internal uses. Violet jelly is a thing. You don't want to use them if they've been treated with chemicals, though.

So, let's end the war on Violets, please? Then, we can have our teas, jelly and salves without fear of ingesting chemicals. There will still be plenty for the birds and bees to have their share.



moist woods / meadows / near rivers & streams



making peace with violets

Maybe you aren't into making food or medicine with Violets. Try working with their natural traits. They are tough enough to handle being moved to an area where you don't mind them being. Shallow rhizomes make it easy. They prefer moist soils and dappled sunlight. Plant near a downspout to help with erosion. They often thrive in shady, wet areas where lawns tend to fail.

Pair Violets with later blooming ground-covers to create a lush woodland carpet. They are soft enough to walk barefoot on and tough enough to take the foot-traffic.

early BLUES

Consider these deer resistant natives as alternatives to Hostas. Pair with later blooming woodland species for year round coverage. They are all in the 1-3 feet size range and prefer similar growing conditions. Part sun - part shade, & moist, rich, well draining soil.

1. **Eastern Bluestar** *Amsonia tabernaemontana*

2. **Virginia Bluebells, Lungwort Oysterleaf** *Mertensia virginica*

These two blue beauties share common pollinators, including butterflies, skippers, moths, long tongued bees, bumblebees and hummingbirds. The Mourning Cloak Butterfly (next page) favors Bluestars.



Photo: Abbie Hyche

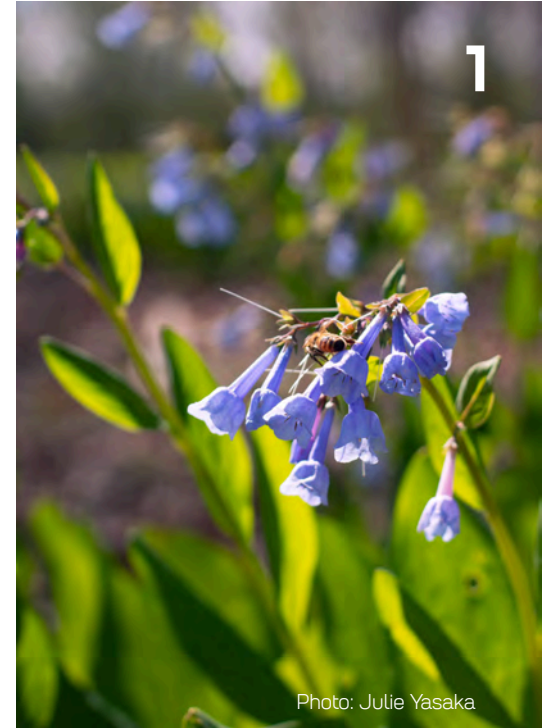


Photo: Julie Yasaka



3. Blue Eyed Grass *Sisyrinchium angustifolium, albidum*

Technically not a grass, but an Iris. Blue eyed grass fulfills a similar role as a cool season grass with semi evergreen foliage and upright habit that provides shelter for wildlife. They benefit birds and an array of pollinators including butterflies, bumblebees, sweat bees, bee flies and syrphid flies.



Left: Narrow Leaf Blue Eyed Grass
Sisyrinchium angustifolium

Right: White Blue Eyed Grass
Sisyrinchium albidum

Dutchman's Pipevine



Larval host to
Pipevine Swallowtail

Photo: Abbie Hyche



Photo: Dreamstime

Pipevine Swallowtails lay eggs on Dutchman's Pipevine. The caterpillars hatch and feed on the leaves until they are ready to form a chrysalis.



Photo: Abbie Hyche

chrysalis form



Photo: Dreamstime



Pipevine Swallowtail Butterflies

Photo: Dreamstime



Wendy Cutler [CC BY 2.0](https://creativecommons.org/licenses/by/2.0/)

Aristolochia tomentosa **Dutchman's Pipevine** This vine loves sunshine and rich, loamy, moist soil found near streams and rivers and in hardwood forests. Suitable for growing up a tree or trellis. Can reach 80 feet long. Host to the Pipevine Swallowtail.

This plant is poisonous if ingested. The Pipevine Swallowtail is immune to the poison of its host. The defense mechanism of the plant is actually transferred to the Swallowtail, and they become poisonous themselves.

groundcovers + shade tolerant companions



Below: A deep green *Huechera* among purple *Phlox* blooms in dappled shade.

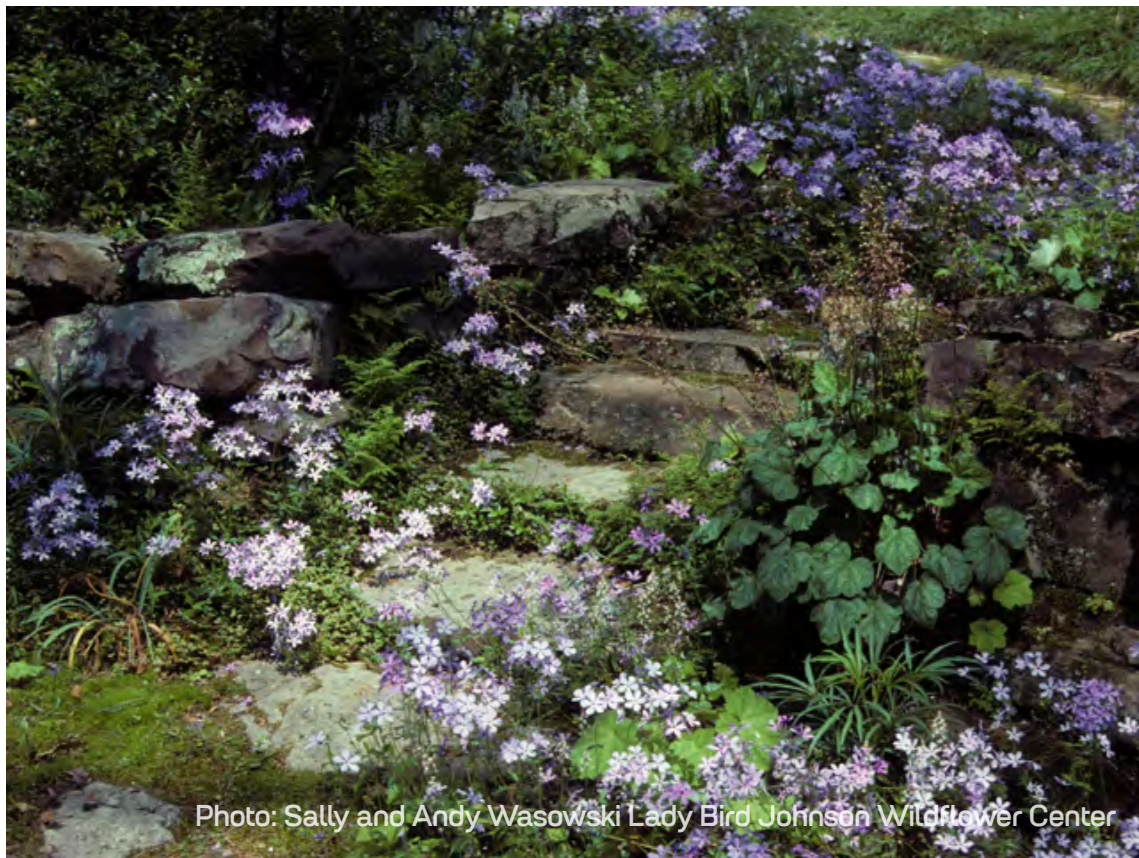


Photo: Sally and Andy Wasowski Lady Bird Johnson Wildflower Center

Huechera americana **Coral Bells**

1-2' H mounds with tiny bell shaped flower stalks. Blooms begin in April and last through Autumn. The foliage is semi-evergreen. Grows well in rich, moist, well draining soil & dappled sunlight. Variations include lime green, gold, silver, red and purple. Deer resistant. Supports pollinators and a *Huechera* specialist bee: *Colletes aestivalis*.



Photo: Apple Flyche

Iris fulva **Copper Iris**

Shade - sun as long as regularly moist. Blooms in April or May and again in Autumn when conditions are favorable.

SPRING interested sedges

Carex is an expansive genus of grass-like plants (graminoids) known as Sedges. Most are evergreen and thrive in cool seasons, sending out new growth in early Spring. They say “sedges have edges” to distinguish them by their triangular culms (blades). *Carex* seeds are consumed by mammals and birds. Leaves feed caterpillars of butterflies and moths.

Frank’s Sedge *Carex frankii* 1-3 feet.
Deciduous, mounding sedge with lime green foliage.
Grows best in low, moist areas, in part shade - sun.



Photo: Abbie Hyche

Above: *Hepatica* blooms peak out through sedge leaves.
Below: New bright green growth emerges from an evergreen sedge, possibly *Carex pensylvanica*.



Photo: Abbie Hyche



Photo: Abbie Hyche

Habitat gardening tip: Try replacing lawn areas with native sedges or using in place of monkey grass.

Cherokee Sedge *Carex cherokeensis* 2-4 feet.
Evergreen, mounding sedge with arching, soft green blades.
An excellent choice for stabilizing slopes and replacing
portions of lawn in areas that are too shady.
This *Carex* also tolerates full sun.



Below: Dun Skipper aka Sedge Witch butterflies
use Cherokee Sedge as a larval host.





Photo: Dreamstime

Podophyllum peltatum **Mayapple aka Mandrake**

Grows 1-1.5 ft H. Prefers dappled shade & sun. Forms colonies through underground rhizomes. Umbrella like leaves push up in March, flowers emerge in April, and 'Mayapples' (the fruits) ripen in May.

Leaves provide shade and shelter to wildlife. The flowers offer pollen and nectar. Although most parts of the plant are poisonous, Mayapple has a history of medicinal use by Native Americans. Today, foragers including humans and box turtles eat the fully ripe berries.





Penstemon laevigatus **Eastern Smooth Beardtongue**

Grows 2-3 ft H. Prefers moist soil and part sun - part shade.
Attracts many native bees and pollinators.
Common Buckeye butterfly larvae feed on leaves,
and adults feed on the flowers.



rich woods / meadows

late **SPRING** 18

hummingbird feeder VINES

Crossvine *Bignonia capreolata* Full sun, well draining soil. Semi-evergreen. ~ 50 feet long.

A more well behaved relative of **Trumpet creeper** *Campsis radicans*.

Vase Vine *Clematis viorna* Part sun, moist rich, well draining soil. ~ 12 feet long

Coral Honeysuckle *Lonicera sempervirens* Full - part sun, well draining soil. Evergreen. ~ 25 feet long.

These vines benefit not only hummingbirds, but also bees, butterflies and moths.



Passiflora incarnata **Purple Passionflower, Maypop**

long blooming source of nutrition and shelter



Photo: Dreamstime



Deciduous ~ 25' long. Grows in full sun to part shade, in well draining soil. Fruits ripen in late summer to fall and are consumed by songbirds and mammals including humans. Medicinal uses include teas and tonics for soothing nerves. Gulf Fritillary butterflies (top right) use Purple Passionflower as a larval host. Members of the Passionflower family feed nectar seeking hummingbirds and butterflies.



Photo: Dreamstime



Photo: Dreamstime

woodlands / meadows/ along rivers & streams

SPRING / SUMMER 20

Passiflora lutea **Yellow Passionflower**

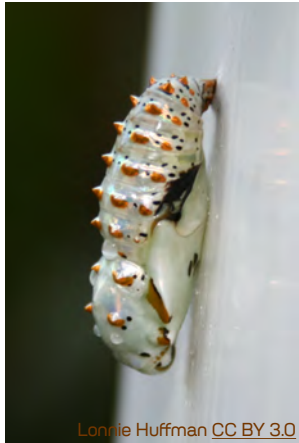
supports hummingbirds, butterflies, and bees



Part sun - part shade. ~ 20 feet long.

Host plant for variegated fritillaries (pupa & butterfly bottom left and bottom middle).

Host plant to the Gulf Fritillary, Zebra Heliconia (top right). Pollen source for the Passionflower Bee (bottom right).



Yellow Passionflower Vine
Passiflora lutea







- 1 *Aquilegia* **Eastern Red Columbine** March - May
- 2 *Bignonia capreolata* **Crossvine** March - May
- 3 *Zizia aurea* **Golden Alexanders** April - June
- 4 **Black Swallowtail Caterpillars** use Golden Alexanders as larval host
- 5 *Baptisia alba* **White Wild Indigo** April - June
- 6 *Asclepias tuberosa* **Orange Milkweed** May - September
- 7 *Centrosema virginianum* **Spurred Butterfly Pea** May - September
- 8 *Phlox divaricata* **Woodland Phlox** April - July
- 9 *Carex grayi* **Gray's Sedge** May - July
- 10 **Long-tailed Skipper** uses Spurred Butterfly Pea as larval host

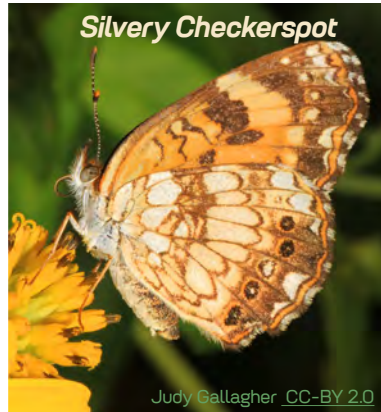
Field of pollinator dreams ...



Rudbeckia hirta Black Eyed Susan

Photo: Dreamstime

Black Eyed Susan *Rudbeckia hirta*



Black Eyed Susan is a larval host to Wavy-lined Emerald moths and Silvery Checkerspot butterflies.

Grows 1-3' H. Thrives in full sun and well draining soil. Reseeds readily. Flowers provide loads of nectar & pollen for a long time. In Autumn, seeds are eaten by birds.

fields / open woods / sunny ravines / prairies

Clasping Coneflower *Dracopis amplexicaulis*

Clasping Coneflower (below) resembles black Eyed Susans and other Yellow Coneflowers. They're also found in similar habitats. Notice a key difference of how the leaves wrap or "clasp" around the stems.



SPRING / SUMMER

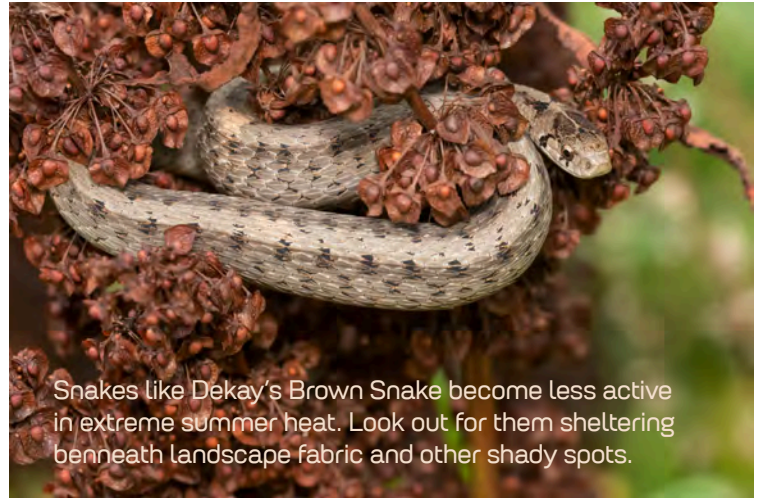


surviving the simmer

Summer in the South can be brutal with temperatures reaching over 100 degrees F. Shelter, food and water are vital for all members of the ecosystem.

Native plants are more resistant to heat and drought provided they are in conditions similar to their native habitats. If you see native plants that aren't doing well, consider the conditions. Maybe the soil isn't draining properly or the afternoon sun is just too harsh.

Wait to make big changes. Plants are putting a lot of energy into blooming, creating their means of reproduction. It's not an ideal time to plant or transplant. It is a good time to fill up bird baths and other water stations for wildlife.



Snakes like Dekay's Brown Snake become less active in extreme summer heat. Look out for them sheltering beneath landscape fabric and other shady spots.

saving water



Native plants have been around way longer than plumbing. Once established, they only really need supplemental watering in times of drought. As a general rule, it's better to water deeply every 5 to 10 days rather than a little every day.

Soaker hoses and watering bags allow water to seep slowly. Overhead watering is problematic. Water is easily wasted on the foliage and leads to fungal infections. Watering in midday or evening has similar issues and increases likelihood of pests. The best solution is setting up a garden hose timer with soaker hoses that will go off about an hour or two before dawn.

Annual vegetables and lawns are different. They require lots of water. Seasoned Southern gardeners know this. Save water with native plants.



Gaillardia pulchella **Firewheel or Indian Blanketflower** and *Coreopsis lanceolata* **Lanceleaf Coreopsis** are drought tolerant and prolific. They both support a variety of pollinators.

They grow 1-2 feet high, prefer full sun, and well draining soil. Blanketflowers bloom for around 6 months, and then produce seed heads that persist into winter, becoming food for birds.

FERNS cozy homes for wildlife



MOIST SHADE Deciduous Ferns

Northern Maidenhair Fern *Adiantum pedatum* Up to 2 feet.
Rich, moist, well draining soil. Part - full shade.

Glade Fern *Homalosorus pycnocarpus* Up to 2.5 feet.
Moist, well-draining soil. Part - full shade.

Netted Chain Fern *Woodwardia areolate* Up to 2.5 feet.
Rich, moist - wet soil. Part - full shade.
Suitable for pond or bog gardens

Broad Beech Fern *Phegopteris hexagonoptera* Up to 2.5 feet.
Moist, rich soil. Part - full shade.
Often found under American Beech trees.

Lady Fern *Athyrium asplenoides* Up to 3 feet.
Rich, moist - wet soil. Part - full shade.

Cinnamon Fern *Osmunda cinnamomea* 3-6 feet.
Rich, moist - wet soil. Part - full shade.

rich, moist woods / near rivers & streams





MOIST SUN Deciduous Ferns

Royal Fern *Osmunda regalis* var. *Spectabilis*: 3-6 feet. Continuously moist - wet soil. Shade - part sun.

Sensitive Fern *Onoclea sensibilis* 1- 3 feet. Continuously moist - wet, well-draining soil. Shade - full sun. Named for sensitivity to drought or frost. Fertile stalks become beaded beauties in Autumn.

Eastern Marsh Fern *Thelypteris palustris* v. *Pubescens* 2-3 feet. Constantly moist - wet soil, or shallow water. Part shade - full sun (as long as constantly moist). E. Marsh Fern is the only known host for the Marsh Fern Moth.

Deciduous ferns really shine in Spring and Summer, but they have ecological benefits throughout the year. They offer shelter to frogs and provide nesting material to birds. Avoid cutting back the foliage until late February or early March. The foliage serves as winter protection, for the plant itself and for wildlife.

SUMMER bloom buddies

These plants bloom around the same time (June - September) and will grow in part - full sun. They are appropriate for growing in a rain garden. Plant the low - medium moisture loving plants towards the outer edges of the bed and the medium - high moisture plants towards the inside. Pair with native grasses for vertical support and multi-season interest.



Low - Medium Moisture / Part - Full Sun

Pycnanthemum tenuifolium **Narrowleaf Mountain Mint** 2-3' H x 3 W

Cirsium discolor **Field Thistle** (Biennial) 3-10ft H x 1-2' W

Medium - High Moisture / Part - Full Sun

Hibiscus moscheutos **Crimson Eyed Hibiscus** 4-8' H x 2- 5' W

Silphium asteriscus **Starry Rosinweed** 3-5'H x 1-3' W

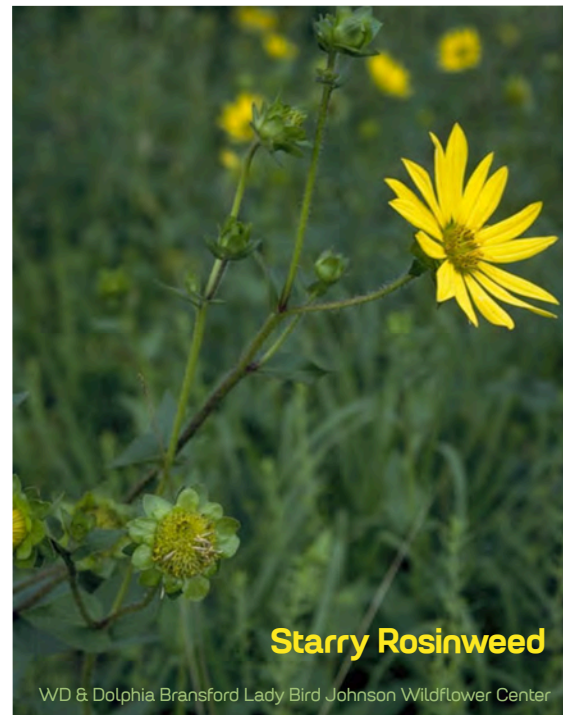
Heliopsis helianthoides **False Sunflower, Eastern Oxeye, Eastern Sunflower**
Everlasting 3-5' H x 1-3' W

Over 20 species of butterflies and moths use Hibiscus as a host plant!

Also supports Hibiscus specialist bees.



False Sunflower Eastern Sunflower Everlasting



SUMMER bloom buddies



Purple Coneflower

USGS Bee Inventory & Monitoring Lab

Low - Medium Moisture / Part - Full Sun

Eryngium yuccifolium **Rattlesnake Master** 4-6' H x 3-5' W
Evergreen foliage. Attracts pollinators including monarchs and skippers, and over 30 species of bees. The only known larval host for the Rattlesnake Master Stem Borer Moth. Native Americans used the plant for medicine and the leaves were woven to make essential goods including baskets and shoes. Right photo: Rattlesnake Master in a field of wildflowers.

Echinacea purpurea **Purple Coneflower** 2-4' H x W
Long lasting blooms are of special value to native bees. Echinacea also supports butterflies, hummingbirds. Adored by humans for their medicinal benefits.



Photo: Dreamstime

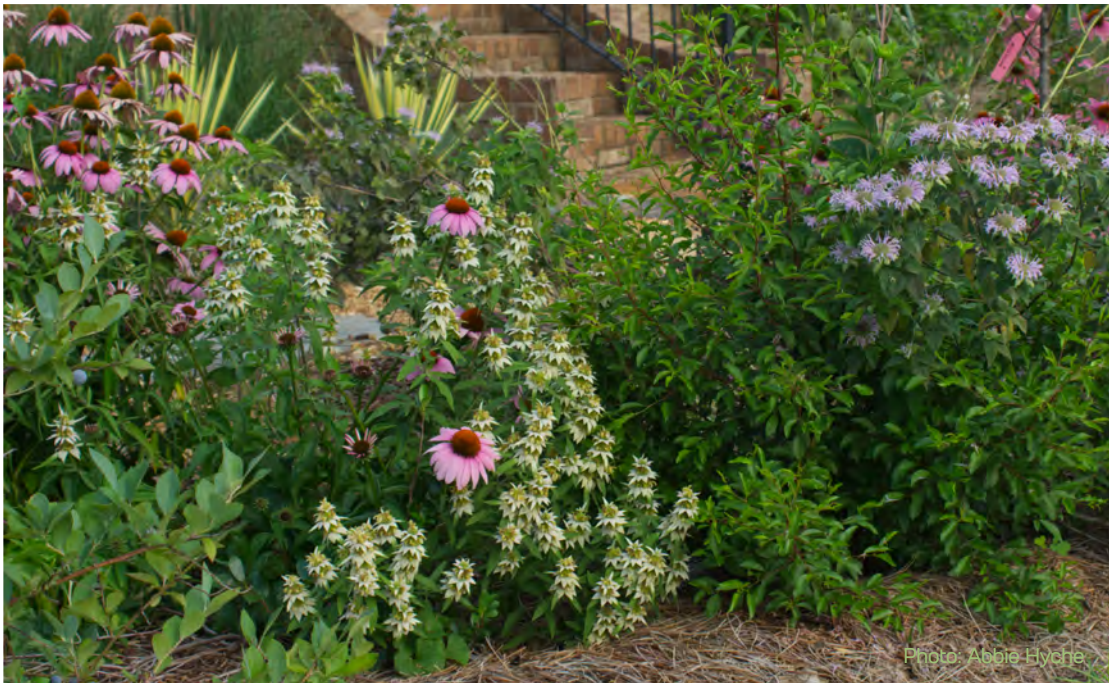


Photo: Abbie Hylche



Mondarda punctata
Spotted Bee Balm

RW Smith Lady Bird Johnson Wildflower Center

Above left: In mid-July, Purple Coneflower, Spotted Bee Balm and Wild Bergamot are all in bloom. Spotted Bee Balm grows in stacked bloom towers while Bee Balm has fountain shaped blooms at the ends of stalks.



Monarda fistulosa
Bee Balm

Photo: Dreamstime

Medium Moisture / Part - Full Sun

Monarda punctata **Spotted Bee Balm, Horsemint** 2-3' H x W

Monarda fistulosa **Bee Balm, Wild Bergamot** 4' H x W

The genus *Monarda* supports specialized bees, butterflies and hummingbirds.

water loving **LOBELIAS**



Great Blue Lobelia *Lobelia siphilitica*

These *Lobelias* both grow up to around 5 feet tall. They prefer moist - wet soils & part shade - sun.

Lobelia siphilitica, **Great Blue Lobelia** has a long history of medicinal and ceremonial use.



USGS Bee Inventory & Monitoring Lab

Red Cardinal Flower *Lobelia cardinalis*

Lobelias support butterflies, caterpillars of pink washed looper moths, native bees and hummingbirds. *Lobelias* rely heavily on hummingbirds for pollination.

wet meadows / watery edges / swamps / floodplains



Lobelia cardinalis

Photo: Dreamstime

late SUMMER 36

WETLAND inhabitants



Dragonflies and damselflies are some of the flying beauties making their homes around watery edges. They eat both larvae and adult forms of mosquitos.

Pictured:

Nymphaea odorata **Fragrant Water Lily**

Pontederia cordata / **Pickerel Weed**

Saururus cernuus **Lizard Tail aka Water Dragon**



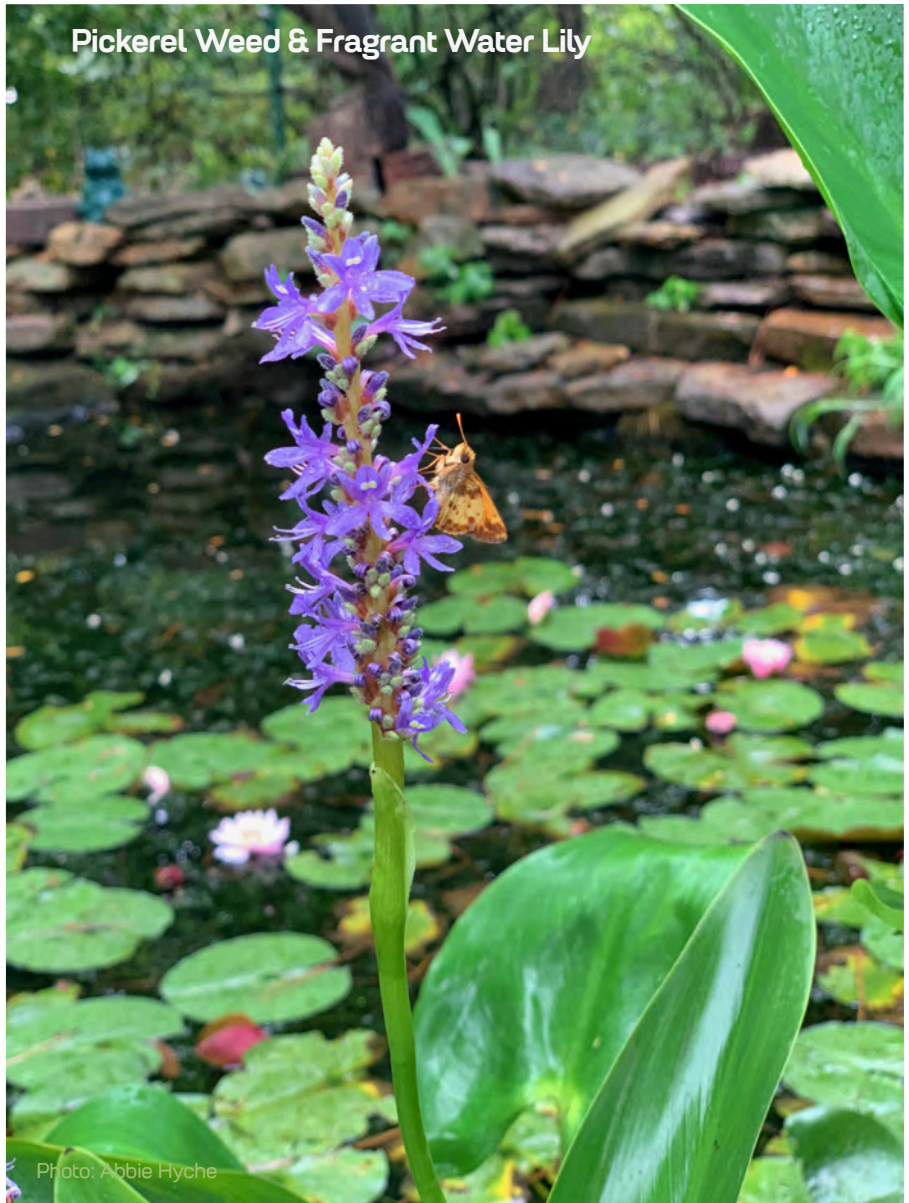
Pickerel Weed

James L. Reveal Lady Bird Johnson Wildflower Center



Red-eared Slider

Photo: Abbie Hyche



Pickerel Weed & Fragrant Water Lily

Photo: Abbie Hyche

PROTECTION ZONE

These plants need us to protect them due to factors including loss of habitat and over harvesting. Often the best thing we can do for Nature is allow space for regeneration.

NW Alabama has a special **Cedar Glade habitat**, characterized by exposed limestone flats & predominantly Eastern Red Cedar trees. Plants endemic to cedar glades require the specialized habitat of cedar glades and should not be removed.

Prairie Grove Glades in Lawrence County, is situated on 191 acres of land, home to one of the last and largest cedar glade complexes in Alabama. The Nature Conservancy (TNC) protects this land by preventing vehicles from damaging the soils and plants. Consider donating to TNC to support efforts including building mindful visitor trails and prescribed burning.

Alabama cedar glade natives include:

Leavenworthia alabamica **Alabama Glade Cress (opposite left)**

Sisyrinchium calciphilum **Limestone Blue-eyed Grass (opposite right)**

Delphinium alabamicum **Alabama Larkspur**

Arnoglossum plantagineum **Groovestem Indian Plantain**

Eriogonum harperi **Harper's Umbrella Plant**

Scanned specimens collected by universities are more common to find than photos in the wild. Much of the cedar glade habitat occurs on private land, while some exists in Bankhead National Forest.



Alabama Glade Cress
Leavenworthia alabamica

Hartlee McLean AL Plant Atlas COEY-SA 4.0



Limestone Blue-eyed Grass
Sisyrinchium calciphilum

Colbert County, Barger, T. Wayne FH-341

IRIDACEAE
FLORA OF FREEDOM HILLS FW TRACT

Sisyrinchium calciphilum Scribn.
Glade Blue-Eyed-Grass

PROTECTION ZONE

over harvested / needs to regenerate

The genus *Panax* (Ginseng) is home to some of the oldest known and most important medicinal plants in the world. In Asia, thousands of years of harvest and use has led to near extinction of Ginseng in the wild.

American Ginseng (*Panax quinquefolius*) came into the global market later, along with other goods exchanged by North American traders and merchants.

As with their Asian counterparts, American Ginseng plants have been over harvested, causing them to become threatened in at least 20 North American states.

Ginseng in the wild benefits birds and pollinators including syrphid flies and halictid bees. Ginseng plants will regenerate if their habitat is protected and their roots are not over harvested.

If you're interested in helping to restore Ginseng populations, try to find a reputable grower who cultivates more than they harvest.



Panax quinquefolius
American Ginseng

USGS Bee Inventory and Monitoring Lab



Chamaelirium luteum
Fairy Wand, False Unicorn

Eric Hunt CC BY-SA 4.0

Becoming rare:

Herbalists have long used the roots of Fairy Wand for medicine. The demand has outweighed cultivation efforts. Loss of habitat has also played a role in this plant becoming scarce in its original range.

Protect the magic:

Refrain from digging in the wild. If you wish to cultivate Fairy Wand, only harvest $\frac{1}{4}$ of the seeds available in autumn. Since they require a period of cold stratification to germinate, plant them from time of seed harvest through winter.

The safest bet is to buy starter plants from a nursery. They love water and would be happy in a shady rain garden or near a pond where they would be visited by bees and butterflies.

ORCHIDS

Galearis spectabilis **Showy Orchid, Purple Hooded Orchid**

Cypripedium parviflorum **Yellow Lady's Slipper**

Neottia bifolia **Southern Twayblade**

Malaxis unifolia Michx. **Green Adder's Mouth**

Monotropa uniflora **Ghost Pipe, Indian Pipe**

Isotria verticillata **Large Whorled Pogonia Five Leaf Orchid**

Liparis liliifolia **Large Twayblade, Mauve Sleekwort**

Goodyera pubescens **Downy Rattlesnake Orchid**

Platanthera lacera **Green Fringed Orchid**

Tipularia discolor **Crane-fly Orchid, Crippled Crane-fly**

Spiranthes cernua **Nodding Ladies' Tresses**

Corallorhiza odontorhiza **Autumn Coralroot, Late Coralroot**

Triphora trianthophoros **Three Birds Orchid, Nodding Pogonia**

Ponthieva racemosa **Shadow Witch**

cosmic beauty



Tipularia discolor
Crane-fly Orchid



USGS Bee Inventory & Monitoring Lab

The Cranefly Orchid (left) is pollinated by nocturnal moths, like the Snout Moth (right). You can tell the moth had recently visited an orchid flower from the yellow pollinia (glob of pollen) that has gotten stuck to their head.

Orchidaceae is the largest flowering plant family on the planet, yet much about them remains mysterious. The North American Orchid Conservation Center is dedicated to research, education and protection of native orchids. It's worth visiting their website to dive deeper into the intricacies of these amazing plants.

Given that North American Orchids require specialized habitats and cultivation techniques are still in their infancy, it is not recommended to remove them from where they are found.

Fun fact: In Alabama, it's possible to see a native orchid at any time of year.

Monotropa uniflora
Ghost Pipe



USGS Bee Inventory & Monitoring Lab

Monotropa uniflora **Ghost Pipe** is a mycotrophic wildflower. Ghost Pipes lack chlorophyll, so they don't photosynthesize. Instead, they get their nutrients by tapping into mycorrhizal (fungal root) networks. There is much to be explored via mycorrhizal relationships and a vast, mysterious and fascinating world of fungi.

Platanthera lacera
Green Fringed Orchid



USGS Bee Inventory & Monitoring Lab

Photo: Dreamstime

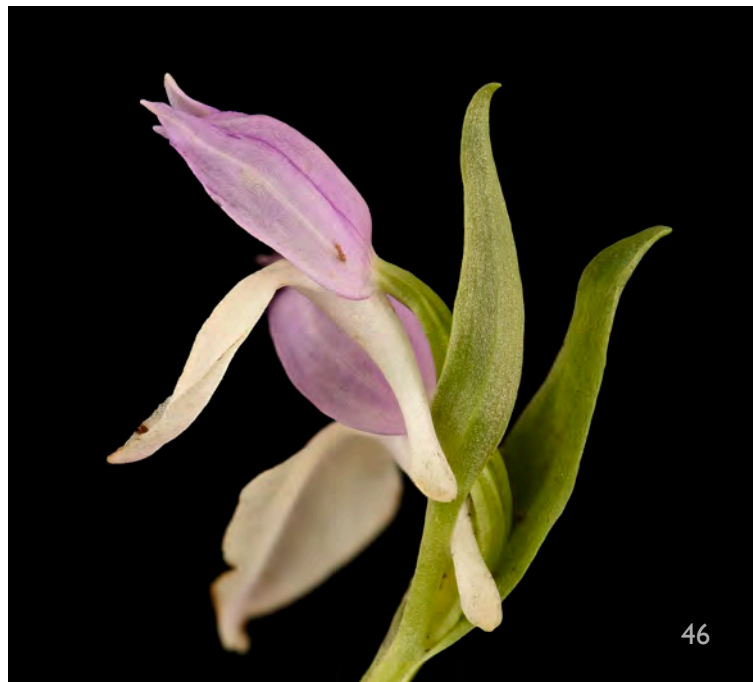


Cypripedium parviflorum **Yellow Lady's Slipper**

Galearis spectabilis **Showy Orchid**



USGS Bee Inventory & Monitoring Lab



WHAT NOW?

We are incredibly fortunate to live in one of the top 5 most biodiverse states in the US.

It's up to us to protect our community of plants and animals.

Let's nurture nature like nature nurtures us.

Here's how.

- 1** Take action in your space. You can make a difference, even in the smallest of spaces.
 - Start by removing invasive species like Nandina, Privet, English Ivy, Chinese Wisteria and Asian Honeysuckle.
 - Adopt a native plant...or 20!
 - Consider replacing portions or all of lawn spaces with native habitat.
 - Participate in *No Mow May*.
 - Protect beneficial insects - don't spray pesticides.
 - Consider alternatives and know that predatory insects help to control unwanted pests.
 - If your space is 50-75% native habitat, get your garden on the map with homegrown National Park, or certify your garden with Wild Ones.
- 2** Plug-in into organizations protecting habitat by donating time or money. Check out the websites on the next page.
- 3** Spread the word!

MORE TO EXPLORE

WEBSITES

Alabama Audubon alaudubon.org

Alabama Butterfly Atlas alabama.butterflyatlas.usf.edu

Alabama Plant Atlas floraofalabama.org

Alabama Wildlife Federation alabamawildlife.org

Butterflies and Moths of North America butterfliesandmoths.org

Homegrown National Park homegrownnationalpark.org

Land Trust of North Alabama landtrustnal.org

Muscle Shoals National Heritage Area msnha.una.edu

North American Orchid Conservation northamericanorchidcenter.org

Paint Rock Forest Research Center paintrock.org

Tennessee Riverkeeper tennesseeriverkeeper.org

The Nature Conservancy nature.org/en-us/

USGS Bee Inventory and Monitoring Lab usgs.gov/centers/eesc/science/native-bee-inventory-and-monitoring-lab

Wild Ones wildones.org/chapters/alabama/

XERCES SOCIETY for Invertebrate Conservation xerces.org

BOOKS

Alabama Wildflowers Jan Midgley

Bringing Nature Home Douglas W. Tallamy

Gardening with Native Wildflowers Samuel B. Jones and Leonard E. Foote

Southern Wonder R. Scot Duncan

The Forest Unseen: A Year's Watch in Nature David George Haskell

PLANT INDEX

- A** *Amsonia tabernaemontana* Eastern Bluestar, 9
Aquilegia Eastern Red Columbine, 23
Aristolochia tomentosa Dutchman's Pipevine, 11, 12
Asarum canadensis Wild Ginger, 13
Asclepias tuberosa, Orange Milkweed, 23, 24
- B** *Baptisia alba* White Wild Indigo, 23
Bignonia capreolata Crossvine, 19, 23
Campsis radicans Trumpet creeper, 19
Clematis viorna Vase Vine, 19
- C** *Carex*, Sedges 15, 16
 Carex cherokeensis, 16
 Carex frankii, 15
 Carex pensylvanica, 15
 Carex grayi Gray's Sedge, 22
Centrosema virginianum Spurred Butterfly Pea, 23
Chamaelirium luteum Fairy Wand, False Unicorn, 42
Cirsium discolor Field Thistle, 31
Claytonia virginica Virginia Spring Beauty, 6
Coreopsis lanceolata Lanceleaf Coreopsis, 28, 47
- D** *Dicentra cucullaria* Dutchman's Breeches, 13
Dracopis amplexicaulis Claspig Coneflower, 26
- E** *Echinacea purpurea* Purple Coneflower, 33, 34
Eryngium yuccifolium Rattlesnake Master, 33
Erythronium spp. Trout Lily, 6
- F** Ferns, 5, 29, 30
 Adiantum pedatum Northern Maidenhair Fern, 29
 Athyrium asplenoides Lady Fern, 29
 Homalosorus pycnocarpus Glade Fern, 29
 Onclea sensibilis Sensitive Fern, 5, 30
 Osmunda cinnamomea Cinnamon Fern, 5, 29
 Osmunda regalis var. *Spectabilis* Royal Fern, 30
 Phegopteris hexagonoptera Broad Beech Fern, 29
 Thelypteris palustris v. *Pubescens* Eastern Marsh Fern, 30
 Woodwardia areolate Netted Chain Fern, 29
- G** *Gaillardia pulchella* Firewheel, Indian Blanketflower, 28
- H** *Heliopsis helianthoides* False Sunflower, Eastern Oxeye, 32
Huechera americana Coral Bells, 13, 14
Hibiscus moscheutos Crimson Eyed Hibiscus, 32
- I** *Iris fulva* Copper Iris, 14
- L** *Leavenworthia alabamica* Alabama Glade Cress, 39, 40
Lobelia cardinalis Red Cardinal Flower, 36
Lobelia siphilitica Great Blue Lobelia, 35
Lonicera sempervirens Coral Honeysuckle, 19
- M** *Mertensia virginica* Virginia Bluebells, Lungwort Oysterleaf, 9
Monarda fistulosa Bee Balm, Wild Bergamot, 34
- N** *Nymphaea odorata* Fragrant Water Lily, 37, 38
- O** *Orchids* 43-46
 Galearis spectabilis Showy Orchid, 43, 46
 Cypripedium parviflorum Yellow Lady's Slipper 43, 46
 Monotropa uniflora Ghost Pipe, 43, 45
 Platanthera lacera Green Fringed Orchid 43, 45
- P** *Passiflora incarnata* Purple Passionflower, 20
Passiflora lutea Yellow Passionflower, 21, 22
Panax quinquefolius American Ginseng, 41
Penstemon laevigatus Eastern Smooth Beardtongue, 18
Phlox divaricata Woodland Phlox, 24
Phlox subulata Moss Phlox, 13
Podophyllum peltatum Mayapple, 17
Pontederia cordata Pickerel Weed, 37, 38
Pycnanthemum tenuifolium Narrowleaf Mountain Mint, 31
- R** *Rudbeckia hirta* Black Eyed Susan, 25, 26
- S** *Sanguinaria canadensis* Bloodroot 3, 6
Saururus cernuus Lizard Tail aka Water Dragon, 37
Silphium asteriscus Starry Rosinweed, 32
Sisyrinchium calciphilum Limestone Blue-eyed Grass, 39, 40
- T** *Tipularia discolor* Crane-fly Orchid 43, 44
Trillium spp. Toad Shade, 4, 6
- V** *Viola sororia* Common Blue Violet, 7, 8
- Z** *Zizia aurea* Golden Alexanders, 23, 24

Stay tuned for more herbaceous abundance in the next issue of NATIVE FLORA: Autumn / Winter.



MUSCLE SHOALS

NATIONAL HERITAGE AREA

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