



CoastScapes

Georgia Coastal Plain Native Plants For Bees, Beetles and Other Non-Lepidopteran Beneficial Insect Pollinators

Introduction

Pollinators are profoundly important to our well-being and the health of our environment. In addition to their beauty, pollinators provide an important link in our environment by moving pollen between flowers and ensuring the growth of seeds and fruits. The work of pollinators touches our lives every day through the food we eat.: of the estimated 1,330 crop plants grown worldwide for food, beverages, fibers, condiments, spices, and medicines, approximately 1,000 (75%) are pollinated by animals! In the United States, approximately one out of every three bites of food you eat and beverages you drink depends on the work of a pollinating animal! There are more than one hundred crop plants in the United States that need pollinators, without which grocery store shelves would not be so well stocked.

Pollination by animals is also essential for maintaining the structure and function of a wide range of habitats and ecosystems in North America. Pollination is a vital stage in the life cycle of all flowering plants: approximately 90 percent of all plant species need the help of pollinating animals. The plant communities maintained by pollinators are an important resource for other wildlife that relies on them for food, nesting, and shelter. For example, approximately 25 percent of birds include fruit or seeds that serve as a major part of their diet, the result of pollination. The loss of pollinators results in the disruption of plant communities in wild ecosystems, and has serious long-term implications for many animal and insect populations.

Pollinators comprise a diverse and fascinating group of wild creatures, from birds and bats to flies, beetles, wasps, ants, butterflies, moths, bees, and even the odd land mammal or reptile. About 1,000 of all pollinators are made up of vertebrates such as birds, bats, small mammals

and reptiles. However, most pollinators (about 200,000 species) are comprised of beneficial insects such as flies, beetles, wasps, ants, butterflies, moths, and bees.

Although pollinators comprise a diversity of wild creatures, there's no question that native bees are the most important pollinator in most ecosystems. Together, with other valuable insect pollinators such as butterflies, moths, flies, and beetles, they fulfill a critical function in our lives. But, too often their presence is taken for granted and we forget that, like all living creatures, we need to care for them. Native bees are affectionately referred to by some scientists as "the 800 pound gorillas" of the pollinator world. Four thousand of the roughly 20,000 worldwide bee species are found in North America. Unlike the social imported honeybees that live in hives with highly-organized social structure, the majority of the continent's native bees are solitary and almost 70 percent of native bee species nest in the ground or near the ground rather than in exposed hives. The female bees either excavate nest tunnels with a series of brood chambers or use existing holes or burrows bored by insects, worms or rodents into soil or under tree bark. The females place a mix of pollen and nectar in each brood cell, lay an egg and plaster over the cell with mud or little bits of leaves. The adult female bees live only a few weeks and die after the nest area is complete. The eggs hatch, become larvae, pupate and emerge as adults either the same year or the following season depending on the species.

Like all wildlife, native bees are affected by changes in our landscape. Native bees are in decline and, in places, suffering local extinction. And, like all wildlife, native bees and other pollinators are suffering from destruction of their habitat. Intensive agriculture and forestry, housing, infrastructure, and industry destroy and fragment wild areas. Pesticides have devastated pollinator populations, and pose a constant threat to the remaining populations. The native habitat that remains often is in isolated patches and is degraded by pesticides, invasive plant species, and changes in land management. Although habitat fragmentation is not as dramatic as destruction, it is a serious challenge to the survival of many bees. Native bees need both plants for foraging and suitable nesting sites. Isolated patches of habitat may have one but not the other, and thus will not be able to support viable bee populations.

Thus, conserving the habitats and plants native bees and other beneficial insect species depend on is an important strategy for sustaining adequate numbers of plant pollinators. In addition, helping native pollinators will also help support and protect the managed European honey bee (*Apis mellifera*) that is experiencing severe challenges in survival due to diseases, pests, aggressive strains of honey bees, fungus, viruses, and Colony Collapse Disorder. As Dr. Keith S. Delaplane, UGA Extension Entomologist stated, "Native bee conservation

goes hand in hand with conservation of native plants that depend on them for pollination. Without their pollinators, the colorful bee-pollinated plants that beautify our surroundings, control erosion, and increase our property values would decline with unknown effects on the wildlife that depends on them for food. Thus, bee conservation is not just an issue for beekeepers and crop growers and home gardeners, although food production is by far the most important area. It is at the very center of plant production and conservation, and all who use and enjoy plant products are stakeholders” (Bee Conservation in the Southeast, Bulletin 1164, 1998, UGA Honey Bee Program).

Habitat Needs of Native Bees

Native bees have three basic habitat needs:

- Native bees must have access to a diversity of plants with overlapping blooming times so that flowers are available to forage from early in the spring until late in the fall. And, because native bees come in a range of sizes, it is important to provide flowers of various sizes, shapes, and colors, in order to support a diverse community of bees;
- They need places to nest. Most native bees are solitary, and none build the wax or paper structures we associate with honey bees or wasps. Most bees nest in small warrens of tunnels and cells they construct underground. Others nest in narrow tunnels often left behind by beetle larvae in dead trees, and a few use the soft pith in some plants. Bumble bees – the most familiar social bee group native to the U.S. – require small cavities, either in tree boles, underground, or under clumps of fallen grass. Often, they move into old rodent burrows. Whether underground or in snags, most solitary bees spend most of the year maturing in their nest (brood) cells. In these cells, they are vulnerable to mechanical nest disturbances such as deep soil tillage or tree removal. Bumble bees are different. Because their nests are started anew each spring by overwintering queens, bumble bees need both cavities to raise their young as well as undisturbed duff for queens to burrow and hibernate through the winter.
- Finally, bees need protection from pesticides. Insecticides are primarily broad-spectrum and therefore deadly to bees. Furthermore, indiscriminate herbicide use can remove many of the flowers that bees need for food.

Here are some guidelines provided by the Xerces Society for Invertebrate Conservation in providing a bee-friendly landscape:

- **Identify and protect bee forage already in place.** Existing pollen and nectar native plant sources can often be found near fencerows or hedgerows, riparian buffers, and other natural areas where a variety of plants grow. Protect these sites and their flowering plants.
- **Use locally adopted native plants.** Research suggests native plants are four times more attractive to native bees and butterflies than ornamentals and exotics. Wherever possible, consider how to include native plants, including shrubs and trees that, together, produce abundant flowers throughout the growing season. Locally adopted native plants with a diversity of flower shapes, sizes, and colors will support the greatest variety of pollinators. Local native plants are usually well adapted to your growing conditions, can thrive with minimum attention, and are good sources of nectar and pollen for native bees. **Do NOT** dig native plants from the wild and transport them unless the site in which you find them is in danger of being destroyed. Always get approval of the landowner if you are planning to “rescue” native plants from development.
- **Buy native plants based on ecotypes.** Whenever possible, buy native seed or native plants from a reputable nursery that sells local ecotypes (plants propagated from seed or stock originally collected in the area you plan to plant rather than in another biogeographic region). Often plants sold as native are not from local sources, and thus may not give you the full benefits of easy growing and pollinator forage
- **Do not use invasive plants.** A void plant species known to be highly invasive. These plants do not provide the quality nectar that the pollinators depend on, will likely spread and dominate other species, reduce the diversity and value of the habitat, and increase maintenance demands.
- **Choose plants with a diversity of color.** Native bees are particularly attracted to blue, purple, violet, white and yellow blooms. Bees have good color vision and can see as wide a range of colors as people. The difference, however, is that bees see in a spectrum shifted towards blues and ultraviolet. Specifically, what we see as red appears black to a bee.
- **Plant flowers in clumps.** Clusters of flowers attract more pollinators than individual blooms. Clumps four feet or more in diameter are particularly attractive to bees.
- **Include flowers of different shapes.** Bees are all different sizes, have different tongue lengths, and consequently, will feed on different shaped flowers. How large, how spiky, or how dense the plants grow may also be a factor in which plants to choose. Consequently, providing a range of flower shapes means more bees can benefit.
- **Have a diversity of plants flowering all season.** Most bee species are generalists, so a diversity of plants provides a supply of nectar and pollen through their life cycle.

Bees can be seen anytime between February and November – maybe longer in coastal Georgia – so a sequence of plants providing a diversity of flowers through the growing season will support a range of bee species that fly at different times of the year. The social bumble bee is often seen in any of these months, whereas the emergence and short (4-6 weeks) active adult life of many solitary-nesting bees depends on the species and can occur from early spring to late summer. Therefore, a sequence of plants that provide a diversity of flowers throughout the growing season is necessary to support a diverse community of native bee species.

- **Avoid hybrids.** Avoid planting hybrid flower varieties or those that have been bred for showy or “double” blossoms, as these often lack the pollen and nectar rewards of the parent species. In addition, horticultural varieties and hybrids are not necessarily suited to local conditions.
- **Include both perennials and annuals.** Given the huge diversity of native bees, it is not surprising that there are some that prefer foraging on perennials and others that prefer annuals. Research shows that some families of bees tend to forage more on one type than the other. Including both annuals and perennials in your choice of plants will thus support more bees.
- **Spare that tree limb!** By leaving dead trees, or at least an occasional dead limb, you provide essential nesting sites for native bees. Make sure that the limbs are not a safety hazard for people walking below. You can also build a bee condo by drilling holes of varying diameters about 3 to 5 inches deep in a piece of scrap non-treated lumber mounted to a post or under eaves.
- **Eliminate the use of herbicides and pesticides to ensure bee survival. Whenever feasible, choose non-pesticide solutions first.** Both insecticides and herbicides can be harmful to bees. While herbicides don't directly target pollinators, they can destroy plants that provide flowers when crops are not in bloom, forcing bees to forage more widely for food. This requires more energy and exposes them to more threats, and as a result, they produce fewer offspring to emerge the following year. Insecticides, on the other hand, target insects and, depending on the active ingredient and how it is formulated and applied, have a wide range of toxicities to bees. Foraging bees are poisoned by insecticides when they absorb the fast-acting toxins through their exoskeleton, drink toxin-tainted nectar, or gather polluted pollen or micro-encapsulated insecticides. Slow-acting toxins may be carried back to the nest where they are stored in pollen and nectar and are later eaten by larval bees. Even sublethal doses of insecticides can eventually kill bees by affecting their behavior. Bees that are exposed may have trouble navigating their way back to the nest after foraging, or they may; simply be unable to fly.

For more information regarding Georgia's coastal plain native plants, to utilize the CoastScapes coastal plains native plant search engine website, or to learn how to further promote and protect pollinators, go to the CoastScapes website: www.coastscapes.org.

Plant Choice Considerations

The native plants listed below include Georgia coastal plain native plants that have been reported by various sources to provide pollen, nectar, and in some cases, nesting sites, to both native and managed bees, as well as other non-lepidopteran (butterflies and moths) beneficial insects. Although these plants provide numerous benefits of being native plants (e.g., reduced water needs, reduced fertilizer and pesticide use, etc.), new plantings will require regular irrigation for six weeks to six months or more before they become established. Trees larger than two inches caliper width will take longer to establish. Although native plants have evolved to local conditions, plants of any species must be allowed time to become fully established in a landscape before all of its native plant features will be evident. All plants need water while establishing their root system and during periods of extended drought. Root establishment can take from months to one to several years, depending on the original size of the plant. Larger plants will take longer to establish.

Although the plants provided in the list below may be native to the coastal plain region of Georgia, individual plants may not grow everywhere in the region. In addition, the characteristics of any site will typically vary from place to place and some plants may do better than others at various places within a site. Putting plants in the right places is the key to ensuring they survive and remain healthy in your landscape. When selecting plants from this list, remember that many factors determine the suitability of a plant for a particular location. Consider light requirements, local climate, soil type, moisture, adaptability, hardiness, heat tolerance, and other factors. All plants listed are suited to the USDA Hardiness Zone 8. Please check to see if your zone falls within the 8a or 8b hardiness zone and then choose plants accordingly. Choose native plants that match and thrive under the conditions in your landscape and you will have a bee-friendly CoastScapes landscape! You will reduce the need for water, fertilizers, pesticides, and pruning while providing valuable pollinator habitat. This factsheet will help provide you flowers that these vital creatures need and make the landscape around us – from small urban backyards to large natural areas – better for bees!

Georgia Coastal Plain Native Plants For Bees, Beetles and Other Non-Lepidopteran Beneficial Insect Pollinators

Trees

<i>Acacia farnesiana</i>	sweet acacia
<i>Acer barbatum</i>	southern sugar maple
<i>Acer leucoderme</i>	chalk maple
<i>Acer negundo</i>	boxelder
<i>Acer rubrum</i>	red maple
<i>Acer saccharinum</i>	silver maple
<i>Aesculus parviflora</i>	bottlebrush buckeye
<i>Aesculus pavia</i>	red buckeye
<i>Amelanchier arborea</i>	common serviceberry
<i>Amelanchier canadensis</i>	Canadian serviceberry
<i>Catalpa bignonioides</i>	southern catalpa
<i>Cercis canadensis</i>	eastern redbud
<i>Cornus florida</i>	flowering dogwood
<i>Crataegus aestivalis</i>	mayhaw
<i>Crataegus crus-galli</i>	cockspur hawthorn
<i>Crataegus flava</i>	yellow hawthorn
<i>Crataegus marshallii</i>	parsley hawthorn
<i>Crataegus spathulata</i>	littlehip hawthorn
<i>Crataegus viridis</i>	green hawthorn
<i>Cyrilla racemiflora</i>	swamp titi
<i>Diospyros virginiana</i>	common persimmon
<i>Fraxinus americana</i>	white ash
<i>Fraxinus caroliniana</i>	Carolina ash
<i>Fraxinus pennsylvanica</i>	green ash
<i>Gleditsia aquatica</i>	water locust
<i>Gleditsia triacanthos</i>	honeylocust
<i>Gordonia lasianthus</i>	loblolly bay
<i>Halesia diptera</i>	two-wing silverbell
<i>Ilex ambigua</i>	Carolina holly

<i>Ilex coriacea</i>	large gallberry
<i>Ilex decidua</i>	possumhaw
<i>Ilex myrtifolia</i>	myrtle dahoon
<i>Ilex opaca</i>	American holly
<i>Ilex verticillata</i>	common winterberry
<i>Ilex vomitoria</i>	yaupon holly
<i>Liriodendron tulipifera</i>	tuliptree
<i>Magnolia grandiflora</i>	southern magnolia
<i>Magnolia virginiana</i>	sweetbay
<i>Malus angustifolia</i>	southern crab apple
<i>Malus coronaria</i>	sweet crab apple
<i>Nyssa aquatica</i>	water tupelo
<i>Nyssa ogeche</i>	Ogeechee tupelo
<i>Nyssa sylvatica</i>	blackgum
<i>Oxydendron arboreum</i>	sourwood
<i>Pinus clausa</i>	sand pine
<i>Pinus echinata</i>	shortleaf pine
<i>Pinus elliotii</i>	slash pine
<i>Pinus glabra</i>	spruce pine
<i>Pinus palustris</i>	longleaf pine
<i>Pinus serotina</i>	pond pine
<i>Pinus taeda</i>	loblolly pine
<i>Populus deltoides</i>	eastern cottonwood
<i>Populus heterophylla</i>	swamp cottonwood
<i>Prunus americana</i>	American plum
<i>Prunus angustifolia</i>	Chickasaw plum
<i>Prunus caroliniana</i>	Carolina laurelcherry
<i>Prunus serotina</i>	black cherry
<i>Prunus umbellata</i>	hog plum
<i>Quercus alba</i>	white oak
<i>Quercus arkansana</i>	Arkansas oak
<i>Quercus austrina</i>	bastard white oak
<i>Quercus chapmanii</i>	Chapman oak
<i>Quercus cocinea</i>	scarlet oak
<i>Quercus falcata</i>	southern red oak
<i>Quercus geminata</i>	sand live oak
<i>Quercus hemisphaerica</i>	Darlington oak

<i>Quercus incana</i>	bluejack oak
<i>Quercus laevis</i>	turkey oak
<i>Quercus laurifolia</i>	laurel oak
<i>Quercus lyrata</i>	overcup oak
<i>Quercus margarettae</i>	runner oak
<i>Quercus marilandica</i>	blackjack oak
<i>Quercus michauxii</i>	swamp chestnut oak
<i>Quercus nigra</i>	water oak
<i>Quercus pagoda</i>	cherrybark oak
<i>Quercus prinoides</i>	dwarf chinkapin oak
<i>Quercus prinus</i>	chestnut oak
<i>Quercus shumardii</i>	Shumard's oak
<i>Quercus sinuata</i> var. <i>sinuata</i>	bastard oak
<i>Quercus stellata</i>	post oak
<i>Quercus velutina</i>	blackoak
<i>Quercus virginiana</i>	live oak
<i>Robinia pseudoacacia</i>	black locust
<i>Sabal palmetto</i>	cabbage palm
<i>Salix caroliniana</i>	coastal plain willow
<i>Salix nigra</i>	black willow
<i>Tilia americana</i>	American basswood
<i>Ulmus alata</i>	winged elm
<i>Ulmus americana</i>	American elm
<i>Ulmus rubra</i>	red elm

Shrubs

<i>Alnus serrulata</i>	hazel alder
<i>Aralia spinosa</i>	devil's walkingstick
<i>Asimina parviflora</i>	smallflower pawpaw
<i>Baccharis angustifolia</i>	saltwater false willow
<i>Baccharis glomeruliflora</i>	silverling
<i>Callicarpa americana</i>	American beautyberry
<i>Ceanothus americanus</i>	New Jersey tea
<i>Cephalanthus occidentalis</i>	common buttonbush
<i>Clethra alnifolia</i>	coastal sweetpepperbush
<i>Clinopodium georgianum</i>	Georgia calamint

<i>Crataegus uniflora</i>	dwarf hawthorn
<i>Cyrilla parvifolia</i>	littleleaf titi
<i>Cyrilla racemiflora</i>	swamp titi
<i>Fothergilla gardenii</i> **	dwarf witch alder**
<i>Gaylussacia dumosa</i>	dwarf huckleberry
<i>Gaylussacia frondosa</i>	blue huckleberry
<i>Gaylussacia nana</i>	Confederate huckleberry
<i>Gaylussacia tomentosa</i>	hairytwig huckleberry

**** PLEASE NOTE!!** *Fothergilla gardenii* is a protected plant in Georgia. Before choosing this shrub for planting, please take great care to assure that your conditions are appropriate for the necessary requirements and needs of this rare and protected plant.

<i>Ilex amelanchier</i>	sarvis holly
<i>Ilex cassine</i>	dahoon holly
<i>Ilex glabra</i>	inkberry
<i>Ilex vomitoria</i>	yaupon holly
<i>Itea virginica</i>	Virginia sweetspire
<i>Morella cerifera</i>	wax myrtle
<i>Photinia pyrifolia</i>	red chokeberry
<i>Physocarpus opulifolius</i>	common ninebark
<i>Quercus pumia</i>	running oak
<i>Quercus minima</i>	dwarf live oak
<i>Rhododendron alabamense</i>	Alabama azalea
<i>Rhododendron arborescens</i>	smooth azalea
<i>Rhododendron atlanticum</i>	dwarf azalea
<i>Rhododendron austrinum</i>	orange azalea
<i>Rhododendron canescens</i>	mountain azalea
<i>Rhododendron colemanii</i>	Red Hills azalea
<i>Rhododendron flammeum</i>	pedmont azalea
<i>Rhododendron minus</i>	pedmont rhododendron
<i>Rhododendron periclymenooides</i>	pink azalea
<i>Rhododendron viscosum</i>	swamp azalea
<i>Rosa carolina</i>	Carolina rose
<i>Rhus copallinum</i>	winged sumac
<i>Rubus argutus</i>	sawtooth blackberry
<i>Sabal minor</i>	dwarf palmetto
<i>Salix humilis</i>	prairie willow
<i>Sambucus nigra ssp. canadensis</i>	American black elderberry

<i>Serenoa repens</i>	saw palmetto
<i>Stewartia malachodendron</i> **	silky camellia**
<i>Styrax americanus</i>	American snowbell
<i>Styrax grandifolius</i>	bigleaf snowbell
<i>Vaccinium arboreum</i>	huckleberry (E)
<i>Vaccinium corymbosum</i>	highbush blueberry
<i>Vaccinium crassifolium</i>	creeping blueberry
<i>Vaccinium darrowii</i>	Darrow's blueberry
<i>Vaccinium elliottii</i>	Elliott's blueberry
<i>Vaccinium myrsinites</i>	shiny blueberry
<i>Vaccinium stamineum</i>	deerberry
<i>Vaccinium virgatum</i>	smallflower blueberry
<i>Viburnum acerifolium</i>	mapleleaf viburnum
<i>Viburnum dentatum</i>	southern arrowwood
<i>Viburnum nudum</i>	possumhaw
<i>Viburnum obovatum</i>	small-leaf arrowwood
<i>Viburnum prunifolium</i>	blackhaw
<i>Viburnum rufidulum</i>	rusty blackhaw

**** PLEASE NOTE!!** *Stewartia malachodendron* is a protected plant in Georgia. Before choosing this shrub for planting, please take great care to assure that your conditions are appropriate for the necessary requirements and needs of this rare and protected plant.

Cactus and Succulents

<i>Opuntia humifusa</i>	devil's tongue
<i>Opuntia pusilla</i>	cockspur pricklypear
<i>Opuntia stricta</i>	erect pricklypear

Perennials

<i>Achillea millefolium</i>	common yarrow
<i>Allium canadense</i>	meadow garlic
<i>Amorpha fruticosa</i>	desert false indigo
<i>Aquilegia canadensis</i>	red columbine
<i>Argemone albiflora</i>	bluestem pricklypoppy
<i>Argemone mexicana</i>	Mexican pricklypoppy

<i>Asclepias amplexicaulis</i>	clasping milkweed
<i>Asclepias cinerea</i>	Carolina milkweed
<i>Asclepias connivens</i>	largeflower milkweed
<i>Asclepias humistrata</i>	pinewoods milkweed
<i>Asclepias incarnata</i>	swamp milkweed
<i>Asclepias lanceolata</i>	fewflower milkweed
<i>Asclepias longifolia</i>	longleaf milkweed
<i>Asclepias michauxii</i>	Michaux's milkweed
<i>Asclepias obovata</i>	pineland milkweed
<i>Asclepias pedicellata</i>	savannah milkweed
<i>Asclepias perennis</i>	aquatic milkweed
<i>Asclepias tuberosa</i>	butterfly milkweed
<i>Asclepias variegata</i>	redring milkweed
<i>Asclepias verticillata</i>	whorled milkweed
<i>Asclepias viridis</i>	green antelopehorn
<i>Baptisia alba</i>	white wild indigo
<i>Baptisia lanceolata</i>	gopherweed
<i>Baptisia lecontei</i>	pineland wild indigo
<i>Baptisia perfoliata</i>	catbells
<i>Baptisia tinctoria</i>	horseflyweed
<i>Bigelovia nudata</i>	pineland rayless goldenrod
<i>Bidens bipinnata</i>	Spanish needles
<i>Bidens cernua</i>	nodding beggartick
<i>Bidens laevis</i>	smooth beggartick
<i>Callirhoe papaver</i>	woodland poppymallow
<i>Campanula divaricata</i>	small bonny bellflower
<i>Chamaecrista fasciculata</i>	partridge pea
<i>Chamaecrista nictitans</i>	sensitive partridge pea
<i>Chrysogonum virginianum</i>	green and gold
<i>Chrysoma pauciflosculosa</i>	woody goldenrod
<i>Cirsium muticum</i>	swamp thistle
<i>Cirsium maculata</i>	spotted water hemlock
<i>Cirsium horridulum</i>	yellow thistle
<i>Cirsium virginianum</i>	Virginia thistle
<i>Coreopsis auriculata</i>	lobed tickseed
<i>Coreopsis basalis</i>	goldenmane tickseed
<i>Coreopsis falcata</i>	sickle tickseed

<i>Coreopsis gladiata</i>	coastal plain tickseed
<i>Coreopsis grandiflora</i>	largeflower tickseed
<i>Coreopsis lanceolata</i>	lanceleaf tickseed
<i>Coreopsis major</i>	greater tickseed
<i>Coreopsis nudata</i>	Georgia tickseed
<i>Coreopsis pubescens</i>	start tickseed
<i>Coreopsis tinctoria</i>	golden tickseed
<i>Coreopsis tripteris</i>	tall tickseed
<i>Coreopsis verticillata</i>	whorled tickseed
<i>Daucus pusillus</i>	American wild carrot
<i>Delphinium carolinianum</i>	Carolina larkspur
<i>Echinacea pallida</i>	pale purple coneflower
<i>Echinacea purpurea</i>	eastern purple coneflower
<i>Erigeron philadelphicus</i>	Philadelphia fleabane
<i>Erigeron pulchellus</i>	Robin's plantain
<i>Erigeron quercifolius</i>	oakleaf fleabane
<i>Eriogonum tomentosum</i>	dogtongue buckwheat
<i>Eryngium aquaticum</i>	rattlesnakemaster
<i>Eryngium yuccifolium</i>	button eryngo
<i>Eupatoriadelphus fistulosus</i>	trumpetweed
<i>Eupatorium altissimum</i>	tall thoroughwort
<i>Eupatorium capillifolium</i>	dogfennel
<i>Eupatorium hyssopifolium</i>	hyssopleaf thoroughwort
<i>Eupatorium perfoliatum</i>	common boneset
<i>Eupatorium purpureum</i>	sweetscented joe pye weed
<i>Eupatorium rotundifolium</i>	roundleaf thoroughwort
<i>Eupatorium serotinum</i>	lateflowering thoroughwort
<i>Euphorbia corollata</i>	flowering spurge
<i>Euphorbia cyathophora</i>	fire on the mountain
<i>Euphorbia heterophylla</i>	Mexican fireplant
<i>Eurybia paludosa</i>	southern swamp aster
<i>Eurybia surculosa</i>	creeping aster
<i>Fragaria virginiana</i>	Virginia strawberry
<i>Gaillardia aestivalis</i>	lanceleaf blanketflower
<i>Gaillardia pulchella</i>	firewheel
<i>Gaura angustifolia</i>	southern beeblossom
<i>Gaura filipes</i>	slenderstalk beeblossom

<i>Gaura sinuata</i>	wavyleaf beeblossom
<i>Gentiana autumnalis</i>	pine barren gentian
<i>Gentiana saponaria</i>	harvestbells
<i>Geranium carolinianum</i>	Carolina geranium
<i>Geranium maculatum</i>	spotted geranium
<i>Helénium amarum</i>	yellowdicks
<i>Helénium autumnale</i>	common sneezeweed
<i>Helénium flexuosum</i>	purple sneezeweed
<i>Helénium pinnatifidum</i>	southeastern sneezeweed
<i>Helianthus angustifolius</i>	swamp sunflower
<i>Helianthus annuus</i>	common sunflower
<i>Helianthus debilis</i>	cucumberleaf sunflower
<i>Helianthus divaricatus</i>	woodland sunflower
<i>Helianthus heterophyllus</i>	variableleaf sunflower
<i>Helianthus microcephalus</i>	small woodland sunflower
<i>Helianthus simulans</i>	muck sunflower
<i>Helianthus strumosus</i>	paleleaf woodland sunflower
<i>Hibiscus aculeatus</i>	comfortroot
<i>Hibiscus coccineus</i>	scarlet rosemallow
<i>Hibiscus grandiflorus</i>	swamp rosemallow
<i>Hibiscus laevis</i>	halberdleaf rosemallow
<i>Hibiscus moscheutos</i>	crimsoneyed rosemallow
<i>Hieracium gronovii</i>	queendevil
<i>Hyptis alata</i>	clustered bushmint
<i>Ionactis linariifolius</i>	flaxleaf whitetop aster
<i>Iris verna</i>	dwarf violet iris
<i>Iris virginica</i>	Virginia iris
<i>Lachnanthes carolina</i>	Carolina redroot
<i>Lespedeza angustifolia</i>	narrowleaf lespedeza
<i>Lespedeza hirta</i>	hairy lespedeza
<i>Lespedeza repens</i>	creeping lespedeza
<i>Lespedeza virginica</i>	slender lespedeza
<i>Liatris aspera</i>	tall blazing star
<i>Liatris chapmanii</i>	Chapman's blazing star
<i>Liatris elegans</i>	pinkscale blazing star
<i>Liatris gracilis</i>	slender blazing star
<i>Liatris pilosa</i>	shaggy blazing star

<i>Liatris spicata</i>	dense blazing star
<i>Liatris squarrosa</i>	scaly blazing star
<i>Liatris tenuifolia</i>	shortleaf blazing star
<i>Lupinus diffuses</i>	Oak Ridge lupine
<i>Lupinus perennis</i>	sundial lupine
<i>Mentha x piperita</i>	peppermint
<i>Monarda citriodora</i>	lemon beebalm
<i>Monarda punctata</i>	spotted beebalm
<i>Oclemena reticulata</i>	pine barren whitetop aster
<i>Oenothera biennis</i>	common evening primrose
<i>Oenothera drummondii</i>	beach evening primrose
<i>Oenothera fruticosa</i>	narrowleaf evening primrose
<i>Oenothera humifusa</i>	seabeach evening primrose
<i>Oenothera laciniata</i>	cutleaf evening primrose
<i>Oenothera speciosa</i>	pinkladies
<i>Penstemon australis</i>	Eustis Lake beardtongue
<i>Penstemon laevigatus</i>	eastern smooth beardtongue
<i>Penstemon multiflorus</i>	manyflower beardtongue
<i>Physostegia angustifolia</i>	narrowleaf false dragonhead
<i>Physostegia purpurea</i>	eastern false dragonhead
<i>Physostegia virginiana</i>	obedient plant
<i>Pityopsis graminifolia</i>	narrowleaf silkgrass
<i>Pontederia cordata</i>	pickerelweed
<i>Prunella vulgaris</i>	common selfheal
<i>Pycnanthemum flexuosum</i>	Appalachian mountainmint
<i>Pycnanthemum incanum</i>	hoary mountainmint
<i>Pycnanthemum pycnanthemoides</i>	southern mountainmint
<i>Pycnanthemum tenuifolium</i>	narrowleaf mountainmint
<i>Rhexia alifanus</i>	savannah meadowbeauty
<i>Rhexia cubensis</i>	West Indian meadowbeauty
<i>Rhexia lutea</i>	yellow meadowbeauty
<i>Rhexia mariana</i>	Maryland meadowbeauty
<i>Rhexia nashii</i>	maid Marian
<i>Rhexia virginica</i>	handsome Harry
<i>Rosa palustris</i>	swamp rose
<i>Rudbeckia hirta</i>	blackeyed Susan
<i>Rudbeckia fulgida</i>	orange coneflower

<i>Rudbeckia laciniata</i>	cutleaf coneflower
<i>Rudbeckia mohrii</i>	Mohr's coneflower
<i>Rudbeckia triloba</i>	browneyed Susan
<i>Salvia azurea</i>	azure blue sage
<i>Salvia coccinea</i>	blood sage
<i>Salvia lyrata</i>	lyreleaf sage
<i>Salvia urticifolia</i>	nettleleaf sage
<i>Scutellaria elliptica</i>	hairy skullcap
<i>Scutellaria incana</i>	hoary skullcap
<i>Scutellaria integrifolia</i>	helmet flower
<i>Senecio glabellus</i>	butterweed
<i>Solidago altissima</i>	Canada goldenrod
<i>Solidago arguta</i>	Atlantic goldenrod
<i>Solidago caesia</i>	wreath goldenrod
<i>Solidago erecta</i>	showy goldenrod
<i>Solidago fistulosa</i>	pine barren goldenrod
<i>Solidago gigantea</i>	giant goldenrod
<i>Solidago gracillima</i>	Virginia goldenrod
<i>Solidago leavenworthii</i>	Leavenworth's goldenrod
<i>Solidago nemoralis</i>	gray goldenrod
<i>Solidago odora</i>	anisescented goldenrod
<i>Solidago patula</i>	roundleaf goldenrod
<i>Solidago rugosa</i>	wrinkleleaf goldenrod
<i>Solidago sempervirens</i>	seaside goldenrod
<i>Stachys floridana</i>	Florida hedgenettle
<i>Stokesia laevis</i>	Stoke's aster
<i>Symphotrichum adnatum</i>	scaleleaf aster
<i>Symphotrichum concolor</i>	eastern silver aster
<i>Symphotrichum cordifolium</i>	common blue wood aster
<i>Symphotrichum dumosum</i>	rice button aster
<i>Symphotrichum elliotii</i>	Elliott's aster
<i>Symphotrichum lateriflorum</i>	calico aster
<i>Symphotrichum novae-angliae</i>	New England aster
<i>Symphotrichum patens</i>	late purple aster
<i>Symphotrichum praealtum</i>	willowleaf aster
<i>Symphotrichum tenuifolium</i>	perennial saltmarsh aster
<i>Symphotrichum undulatum</i>	wavyleaf aster

<i>Symphotrichum walteri</i>	Walter's aster
<i>Teucrium canadense</i>	Canada germander
<i>Trichostema dichotomum</i>	forked bluecurls
<i>Trifolium carolinianum</i>	Carolina clover
<i>Trifolium reflexum</i>	buffalo clover
<i>Verbena bonariensis</i>	purpletop vervain
<i>Verbena scabra</i>	sandpaper vervain
<i>Verbesina alternifolia</i>	wingstem
<i>Verbesina occidentalis</i>	yellow cornbeard
<i>Vernonia angustifolia</i>	tall ironweed
<i>Vernonia gigantea</i>	giant ironweed
<i>Vernonia noveboracensis</i>	New York ironweed
<i>Viola affinis</i>	sand violet
<i>Viola bicolor</i>	field pansy
<i>Violet cucullata</i>	marsh blue violet
<i>Viola lanceolata</i>	bog white violet
<i>Viola x palmata</i>	early blue violet
<i>Viola pedata</i>	birdfoot violet
<i>Viola primulifolia</i>	primrose-leaf violet
<i>Viola septemloba</i>	southern coastal violet
<i>Viola sororia</i>	common blue violet
<i>Viola walteri</i>	prostrate blue violet

Vines

<i>Ampelaster carolinianus</i>	climbing aster
<i>Ampelopsis arborea</i>	peppervine
<i>Berchemia scandens</i>	rattan vine
<i>Bignonia capreolata</i>	crossvine
<i>Campsis radicans</i>	trumpet creeper
<i>Clematis crispa</i>	swamp leather flower
<i>Clematis virginiana</i>	devil's darning needles
<i>Gelsemium rankinii</i>	Rankin's trumpetflower
<i>Gelsemium sempervirens</i>	evening trumpetflower
<i>Ipomoea sagittata</i>	saltmarsh morningglory
<i>Lonicera sempervirens</i>	rumpet honeysuckle
<i>Parthenocissus quinquefolia</i>	Virginia creeper

Vitis aestivalis
Vitis rotundifolia

summer grape
muscadine