


Welcoming Pollinators to Your Landscape

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The following presentation is part of the University of Georgia Extension service Georgia Green Landscapes program funded by the Center for Urban Agriculture. These guidance series will help Georgia residents create certified sustainable Georgia Landscapes, protecting our natural resources for future generations.

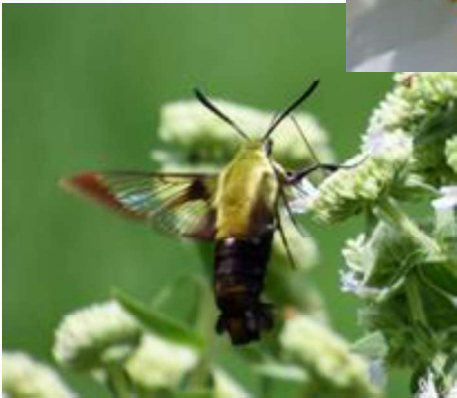
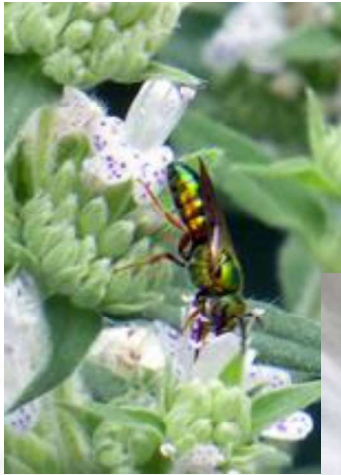


Pollinator Importance



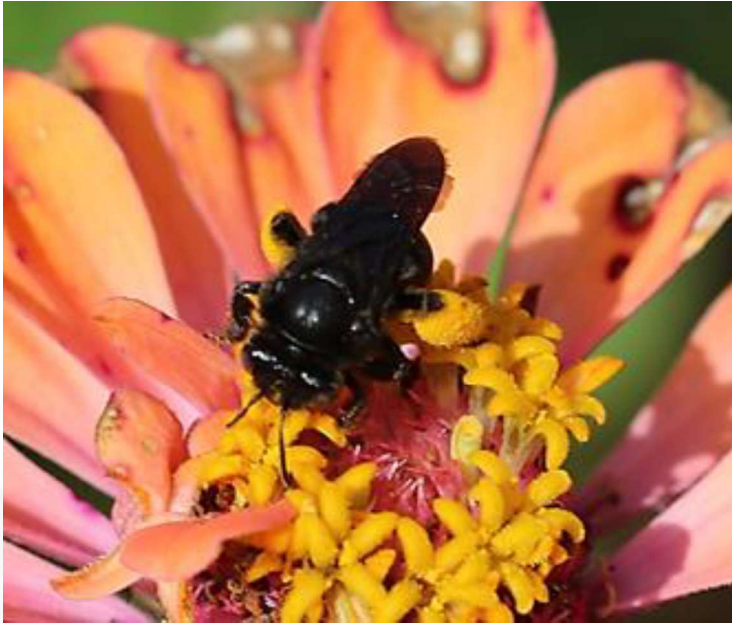
- 80% of plants rely on animal pollinators for survival
- The annual value of pollination to Georgia is over \$360 million.
- Pollinators play a vital role for:
 - native wildflowers, trees and shrubs
 - many horticulture crops (e.g. apple, peach, blueberry, tomato, watermelon)

Types of Pollinators



- Bees
- Flies
- Wasps
- Butterflies
- Moths
- Beetles
- Birds
- Lizards
- Frogs
- Mammals

Bees



long-horned bee



metallic green sweat bee



leafcutter (mason) bee

Flies



bee fly



calliphorid fly



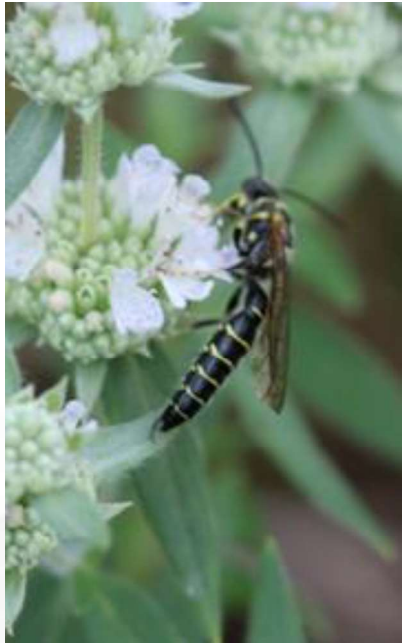
tachinid fly



syrphid flies (hoverflies)



Wasps



tiphiid wasp



potter wasp



paper wasp



scoliid wasp



thread-waisted wasp



vespid wasp & black digger wasp

Beetles



lady beetle



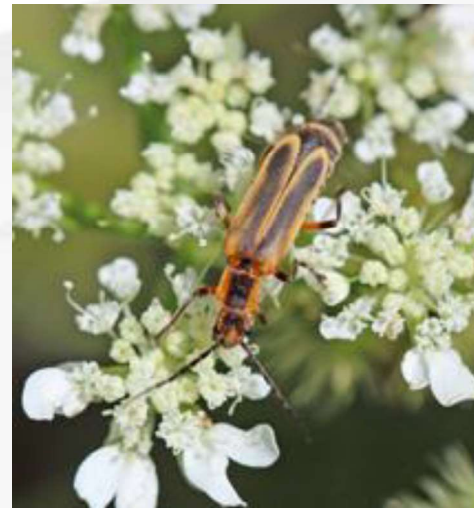
tumbling flower beetle



wedge-shaped beetle



long-horned beetle



soldier beetle

Habitat Needs

- Food
- Water
- Shelter
- Space



Habitat Needs - Food



- Bare soil (mineral salts)
- Nectar year round
- Pollen
- Insects
- Forage for young
- Diverse sources of forage and nectar
 - Different shapes, colors, and forms
 - Bees and flies have short tongues while butterflies and moths have long tongues

Habitat Needs - Water



- Moisture on plants (cupped leaves)
- Shallow dish
- Puddles
- Rock in a birdbath
- Rock with crevices or pooling area
- Bare soil

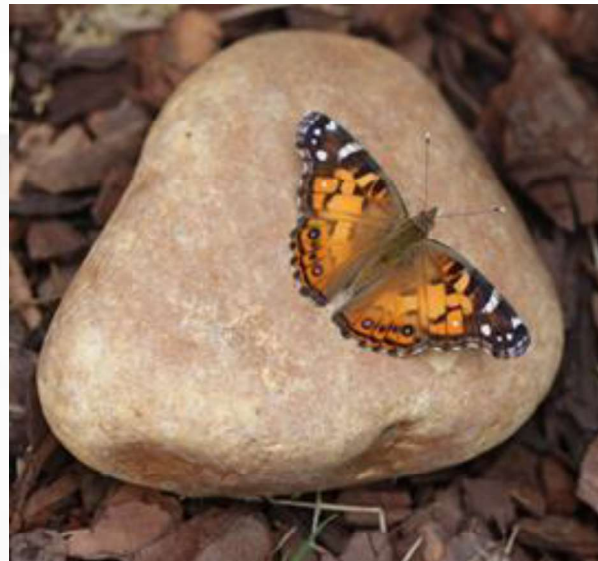


Habitat Needs - Shelter



- Log piles –provide shelter and warmth from decomposing logs
- Rock walls/piles
- Pithy or woody stems
 - In the spring cut off the top of the old stems 15 inches
- Bare soil
- Insect hotels

Habitat Needs - Structure

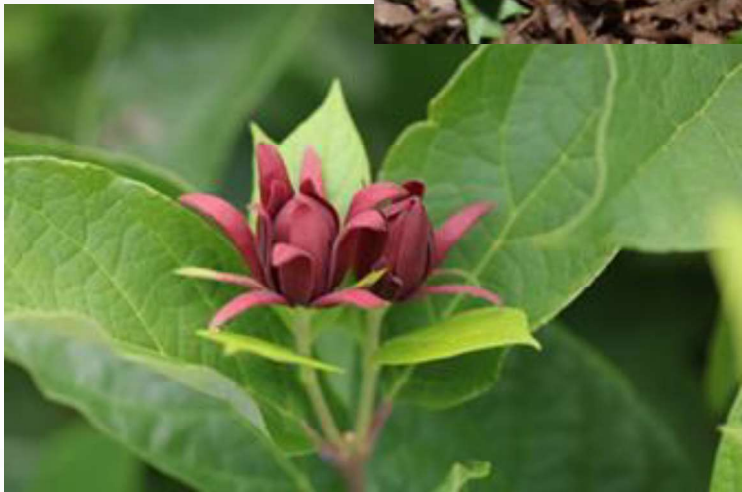


- Vertical vegetation layers (trees, shrubs, herbaceous, groundcovers)
- Overgrown areas for protection
- Stumps, snags, logs, brush piles
- Leave the leaves
- Warming areas
 - Insects are cold-blooded
 - Open flat surfaces to sun
 - Stones and flagstones are excellent

Habitat Needs – Safety Pesticide (non)use

- Avoid pesticides if possible (insecticides, herbicides, fungicides)
- Never apply anything during bloom
- Sprays are preferred to dusts or powders – dusts and powders are incorporated into pollen stores
- Mow before lawn applications – weed flowers are bee pasture
- Diagnose the problem or pest accurately before applying any type of treatment
- Use low toxicity and selective formulations
- Avoid systemic and broad spectrum
- Use correct formulation and rates
- Follow label directions
- Be cautious of drift
- Spray in late afternoon or evening when pollinators are less active

Plant Selection



- Native plants offer the best nutrition to native pollinators
- Year round bloom
- Suited to your landscape
 - Drainage
 - Sunlight
 - Soil type

Native Perennials for Spring Bloom

Botanical Name	Common Name	Plant and Culture Info									Flower Color		
		Plant Size			Light Level*			Moisture Preference					
		<1 ft.	1-3 ft.	> 3 ft.	○	◉	●	Well-Drain	Dry	Moist		Wet	
<i>Actea pachypoda</i>	doll's eyes		x				x	x	x		x		white
<i>Actaea racemosa</i> (syn. <i>Cimicifuga racemosa</i>)	black cohosh			x			x	x	x		x		white
<i>Amsonia ciliata</i>	fringed blue star		x		x	x			x				blue
<i>Amsonia tabernaemontana</i>	wideleaf blue-star		x		x	x			x				blue
<i>Anemone quinquefolia</i>	wood anemone	x				x					x		white or pink
<i>Anemonella thalictroides</i>	rue-anemone	x				x	x				x		white
<i>Aquilegia canadensis</i>	eastern columbine		x		x	x			x				red and yellow
<i>Arisaema triphyllum</i> spp <i>quinatum</i>	jack-in-the-pulpit		x			x					x		green to purple
<i>Asarum canadense</i>	canadian wild ginger	x				x	x	x			x		purple
<i>Caulophyllum thalictroides</i>	blue cohosh		x				x	x			x		brown to yellow green
<i>Chamaelirium luteum</i>	fairy wand		x			x	x				x		white
<i>Chrysogonum virginianum</i>	green-and-gold	x				x			x		x		yellow
<i>Dodecatheon meadia</i>	eastern shooting star	x					x				x		white to pink

Native Perennials for Spring Bloom

Botanical Name	Common Name	Plant and Culture Info									Flower Color	
		Plant Size			Light Level ^x			Moisture Preference				
		<1 ft.	1-3 ft.	> 3 ft.	○	◉	●	Well-Drain	Dry	Moist		Wet
<i>Erythronium umbilicatum</i>	dimpled trout lily	x				x	x	x		x		yellow
<i>Geranium maculatum</i>	wild geranium		x		x	x		x		x		pink
<i>Hepatica americana</i>	hepatica, liverleaf hepatica	x				x		x		x		blue, white
<i>Heuchera americana</i>	coral bells, alumroot		x			x	x	x				chartreuse
<i>Hexastylis arifolia</i> (syn. <i>Asarum arifolia</i>)	heartleaf	x				x	x		x	x		red-brown
<i>Iris cristata</i>	dwarf crested iris	x				x	x			x		pale blue, gold crest
<i>Iris fulva</i>	copper iris	x			x	x				x	x	copper yellow
<i>Iris virginica</i>	virginia iris			x	x	x				x	x	violet blue
<i>Maianthemum racemosum</i>	solomon's plume		x			x				x		white
<i>Mitchella repens</i>	partridge-berry	x				x				x		white
<i>Phlox divaricata</i>	woodland phlox		x		x	x		x		x		lavender, white
<i>Polygonatum biflorum</i>	solomon's-seal		x			x				x		greenish white

Native Perennials for Spring Bloom

Botanical Name	Common Name	Plant and Culture Info										Flower Color
		Plant Size			Light Level*			Moisture Preference				
		<1 ft.	1-3 ft.	> 3 ft.	○	◉	●	Well-Drain	Dry	Moist	Wet	
<i>Sanguinaria canadensis</i>	bloodroot	x					●			x		white
<i>Silene virginica</i>	fire pink, scarlet catchfly		x			x		x				scarlet
<i>Spigelia marilandica</i>	indian-pink		x			x		x		x		crimson red
<i>Stellaria pubera</i>	star chickweed	x	x				x	x		x		white
<i>Tiarella cordifolia</i>	foamflower	x					x	x		x		white to pink
<i>Trillium catesbaei</i>	catesby's trillium		x				x		x			pink to rose
<i>Trillium cuneatum</i>	sweet betsy, toad trillium	x					x	x		x		maroon, chartreuse
<i>Trillium lancifolium</i>	lance-leaved trillium		x				x			x		brownish maroon
<i>Trillium luteum</i>	yellow trillium		x			x	x	x		x		yellow
<i>Viola pedata</i>	bird's foot violet	x			x	x		x	x			pale purple
<i>Viola rostrata</i>	longspur violet	x			x	x				x		lilac purple
<i>Zizia aurea</i>	golden alexander		x			x		x		x		yellow

Native Perennials for Summer Bloom

Botanical Name	Common Name	Plant and Culture Info									Flower Color	
		Plant Size			Light Level*			Moisture Preference				
		<1 ft.	1-3 ft.	> 3 ft.	○	◉	●	Well-Drain	Dry	Moist		Wet
<i>Chelone glabra</i>	white turtlehead		x			x				x	x	white
<i>Chelone lyonii</i>	pink turtlehead		x			x	x			x		pink to rose purple
<i>Eryngium yuccifolium</i>	rattlesnake-master, button snake-root		x			x	x	x	x	x		white
<i>Eurybia divaricata</i> , syn. <i>Aster divaricatus</i>	white wood aster, heartleaf aster		x		x	x		x				white
<i>Liatris spicata</i>	dense blazing star, marsh blazing star		x	x	x	x				x	x	deep purple
<i>Lobelia cardinalis</i>	cardinal flower		x	x	Mo m.		Aft			x		red
<i>Monarda fistulosa</i>	appalachian bergamot		x	x	x	x		x		x		lavender
<i>Monarda punctata</i>	spotted horse-mint		x		x	x		x	x	x		yellow with purple spots
<i>Phlox paniculata</i>	garden phlox, summer phlox			x	x	x				x		pink to lavender
<i>Phlox stolonifera</i>	creeping phlox	x				x		x		x		lavender
<i>Pycnanthemum pycnanthemoides</i>	southern mountain mint			x		x		x				white to lavender

Native Perennials for Fall Bloom

Botanical Name	Common Name	Plant and Culture Info									Flower Color	
		Plant Size			Light Level ^x			Moisture Preference				
		<1 ft.	1-3 ft.	> 3 ft.	○	◉	●	Well-Drain	Dry	Moist		Wet
<i>Gentiana saponaria</i> (syn. <i>Dasystephana saponaria</i>)	Soapwort Gentian		x			x	x	x		x		blue
<i>Helianthus angustifolius</i>	Narrowleaf Sunflower, Swamp Sunflower		x		x	x			x	x		yellow
<i>Liatris pilosa</i> (syn. <i>Liatris graminifolium</i>)	Shaggy Blazing Star, Grass-leaf Blazing Star		x		x	x		x		x		pink
<i>Physostegia virginiana</i>	Obedient Plant			x	x	x				x		pink, lavender
<i>Solidago nemoralis</i>	Gray Goldenrod		x		Mor n		Aft.		x			yellow
<i>Symphyotrichum concolor</i>	Eastern Silvery Aster		x		x	x		x	x			lilac
<i>Symphyotrichum novae-angliae</i>	New England Aster			x	x	x		x		x		purple, lavender, white
<i>Symphyotrichum patens</i> (syn. <i>Aster patens</i>)	Late Purple Aster		x		x	x		x		x		purple rays, yellow disks

Resources

- UGA Marine Extension/Georgia Sea Grant EcoScapes Native Plant Search Engine
<https://gacoast.uga.edu/outreach/resources-outreach/native-plant-search-engine/>
- Coastal Wildscapes
<https://www.coastalwildscapes.org/>
- Fire Adaptive Landscaping
https://coastalwildscapes.wildapricot.org/resources/Documents/Education%20TAB/Plant%20Info/Firewise_entire-book.pdf

Certification Checklist Items:

- Provide food for pollinators. Bare soil, diverse sources of forage and nectar year round, pollen, insects, and **native plants**.
- Provide areas that collect water puddles (rocks, bare soil, leaves, large rocks), birdbaths, or a shallow dish.
- Provide habitat with shelter. Logs, rock walls, pithy or woody stems, bare soil, or insect hotels.
- Provide habitat with structure. Vertical vegetation layers (trees - shrubs - ground cover), overgrown vegetation, stumps, logs, brush piles, leaves, stone surfaces.
- Use pesticides wisely, if you must. Diagnose the pest correctly before treatment, **follow the label directions**, use low toxicity and selective formulas, use the correct formula, use sprays instead of powders/dusts, mow the lawn before applying, avoid broad application, prevent drift, do not apply during bloom, and spray in the late afternoon or evening.

Questions?

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