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Master Gardener Extension Volunteer Program

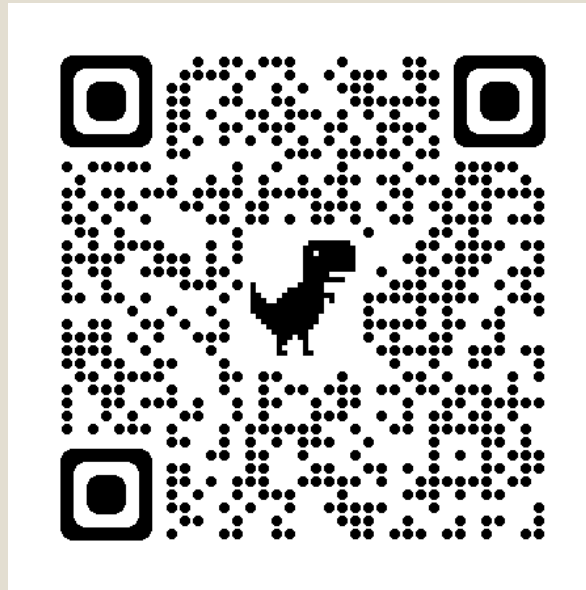


NATIVE PLANTS

PLANT CHOICE MATTERS!

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<https://www.waltonmastergardeners.com/ppt-pdfs>

Agenda

- Definitions
- Why Natives?
 - The Magnificent, Mighty Oak
 - The Monarch Story
- Landscaping with Natives
- Native Plant Options
 - Trees
 - Shrubs
 - Perennials
- Q&A & Resources





DEFINITIONS

Native Plants

Plants that have inhabited a particular region for ***thousands*** of years, prior to European settlement

Plants that are naturally occurring in a particular region without direct or indirect human intervention

Non-Native Plants *aka* Exotic Plants or Alien Plants

- Plants that have been introduced to an area from their native range, either purposefully or unintentionally
- Do **NOT** cause ecological or environmental damage
- An estimated 1 in 1000 non native plants become invasive
- The majority of home landscapes are non-native/exotics, introduced from Asia
- 98% of our crops are non-natives

Invasive Plant

A plant that is both non-native and able to establish on many sites, grow quickly, and spread to the point of disrupting plant communities

Invasive exotics sever the food web by outcompeting and displacing native species and degrading the overall habitat



Georgia's Dirty Dozen Covers Nearly 1 Million Acres:



GA Forestry Commission Data

Invasive Plant	Acres (2017)
Non-native Privet	644,000
Nepalese Browntop	90,000
Chinaberry	48,000
Non-native Lespedeza	36,000
Kudzu	31,000
Chinese Tallowtree	24,000
Japanese Climbing Fern	20,000
Non-native Olive	19,000
English Ivy	13,000
Mimosa	12,000
Trifoliate Orange	9,000
Chinese Wisteria	8,000
Total	954,000



Chinese Privet

Introduced in US in 1850's as an ornamental

Escaped cultivation in SE in 1930s

Tolerant of low light & poor soils it has colonized abandoned homesteads, vacant lots, pastures, forests & woodland habitats

Outcompetes & negatively impacts native plant growth & survival & disrupts forest succession



Alien Plants Typhoid Mary's

Chestnut blight a fungal disease was brought to US on resistant Japanese chestnut trees. Within 50 years the American Chestnut tree, once the predominate upland forest tree in the East was functionally eliminated.

Japanese beetles arrived in 1916 as eggs on Asian Iris. Adults consume foliage on over 400 plant species.

Hemlock wooly adelgid, introduced from Asia & is lethal to Eastern Hemlock, & currently threatening Appalachian forests.



WHY NATIVES?

Sobering Statistics

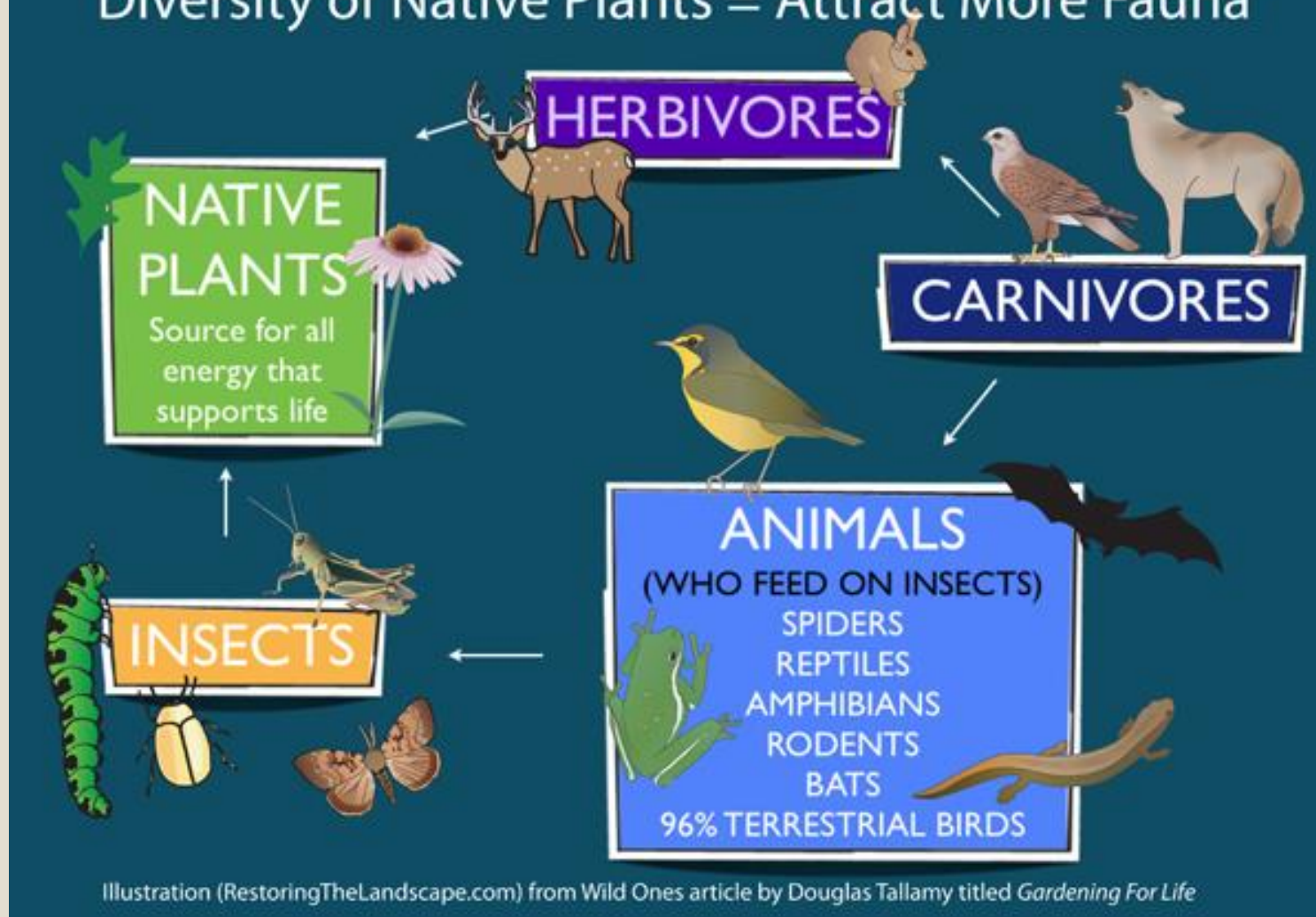


- 55% of the US has been converted to cities & suburbia
- Between 1982 and 1997, an estimated 2MM acres were gobbled up annually due to urban sprawl which is roughly the size of Yellowstone National Park
- There is approximately 43.5 MM square miles of paved blacktop in the lower 48 states
- Only 3 – 5% of the area in the lower 48 states remains in it's natural state
- 92% of suburbia is lawn – an alien grass which doesn't contribute to the food web
- Nearly 80% of our home landscapes is locally non-native

Populations of Neotropical migrating birds have declined by 50% since the mid 1960's

Growing native plants provides a vital habitat resulting in an increase in the overall biodiversity and success of native fauna

Diversity of Native Plants = Attract More Fauna



Plants – Earth’s Lifeblood

Plants capture & convert sunlight through the process of photosynthesis

All animals directly or indirectly depend upon plants for food

Diversity of animals in a habitat is closely linked to plant diversity

Herbivore insects play a critical role in passing energy held in plants to higher trophic levels

Here's the Rub - Insect Are Specialists

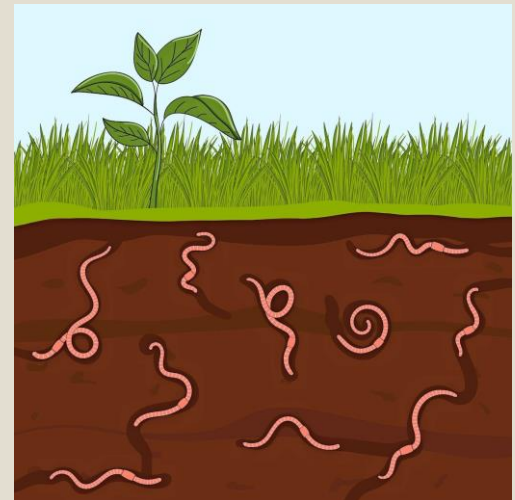
- 90% of plant eating insects are specialists
- OVER MILLIONS OF YEARS the insect specialist has a shared evolutionary history with their host plant
- Plants possess chemical & physical defense mechanisms
- Insect herbivore specialists adaptations include:
 - Synchronized lifecycle with their host plants
 - Capability to detoxify host plant chemical defense mechanisms
- This specializations limits ability of the insect herbivore from eating a wide variety of plants
- Research indicates that exotic plants support 29 times less biodiversity vs. Natives
- Example – Kousa dogwood from China supports 0 insect herbivores while native dogwood (*Cornus florida*) supports 117 moths & butterflies



Love 'Em or Hate 'Em We Need Them!

There are 4 Million Insect Species on Earth

- 96% of our global crops rely on insects for pollination
- Insects return nutrients tied up in dead plant & animal material to the soil
- Insects aerate & enrich our soil
- Insects are a critical base of our food web
- Insects are essential to our existence on Earth



The Monarch Story



Egg



Caterpillar



Chrysalis



Adult



© Rose Franklin

No milkweeds – no Monarchs



Mike Koenig

Tallamy, Douglas, *"Bringing Nature Home"*

The Mighty Oak

A native oak tree supports over 500 species of butterflies and moths

Caterpillars are a critical food source for over 96% of the songbirds

A pair of Carolina chickadees requires 6,000 - 9,000 caterpillars to successfully raise just one brood

Landscape Benefits

- Natives sustain the food web & drive biodiversity
- Natives will not become invasive
- Natives have substantial ornamental value including beautiful flowers, colorful seeds, vibrant fall color, attractive fruits
- Natives are adapted to local environmental conditions so will likely need less resource inputs including insecticides, herbicides, fertilizers, and supplemental watering
- Use of Natives limits “importing” Typhoid Mary’s – diseases and insects that can decimate native plant populations





Native vs. Nativar

Nativars are plants that have been selected by humans for some particular need to improve on the natural. The colors, bloom size/shape, length of bloom, height or pest resistance can be altered for our gardens.



Your landscape can play a vital role in
driving biodiversity & keeping the
ecosystem healthy

Call To Action!

- Prioritize natives in your landscape, limit use of non-natives
- If you have room, plant an Oak tree
- Sprinkle milkweed & butterfly weed in your garden
- Educate yourself on invasive plants species, never plant (www.bugwood.org), remove any existing
- Shift your mindset & practice Adam's 12 step plan, holes in leaves just mean you fed someone
- Limit pesticide use, the overwhelming majority of insects in our gardens are beneficial or do not cause harm
- Finally, enjoy as nature thrives around you





LANDSCAPING WITH NATIVES

Medium/Large Trees

- American Beech / *Fagus grandifolia*
- American Holly / *Ilex opaca*
- American Yellowwood / *Cladrastis kentukea*
- Bald Cypress / *Taxodium distichum*
- Black Gum or Tupelo / *Nyssa sylvatica*
- Black Walnut / *Juglans nigra*
- Chestnut Oak / *Quercus prinus*
- Eastern Hemlock / *Tsuga canadensis*
- Eastern Red Cedar / *Juniperus virginiana*
- Laurel Oak / *Quercus hemisphaerica*
- Live Oak / *Quercus virginiana*
- Loblolly Pine / *Pinus taeda*
- Longleaf Pine / *Pinus palustris*
- Northern Red Oak / *Quercus rubra*
- Post Oak / *Quercus stellata*
- Red Maple / *Acer rubrum*
- River Birch / *Betula nigra*
- Scarlet Oak / *Quercus coccinea*
- Shortleaf Pine / *Pinus echinata*
- Shumard Oak / *Quercus shumardii*
- Slash Pine / *Pinus elliottii*
- Southern Magnolia / *Magnolia grandiflora*
- Southern Red Oak / *Quercus falcata*
- Spruce Pine / *Pinus glabra*
- Sugar Maple / *Acer saccharum*
- Sugarberry / *Celtis laevigata*
- Swamp Chestnut Oak / *Quercus michauxii*
- Sweetgum / *Liquidambar styraciflua*
- Sycamore / *Platanus occidentalis*
- Tulip Poplar or Yellow Poplar / *Liriodendron tulipifera*
- Virginia Pine / *Pinus virginiana*
- Water Oak / *Quercus nigra*
- Willow Oak / *Quercus phellos*
- White Ash / *Fraxinus americana*
- White Oak / *Quercus alba*
- White Pine / *Pinus strobus*
- Yellow Buckeye / *Aesculus flava*

Taxodium distichum

Bald Cypress

- Deciduous conifer
- Stately tree, reaching 70 feet or more
- Best used in large, open spaces such as parks or large residential properties
- Soft textured flat needles, emerge yellow-green in spring, turning bright green in summer
- Beautiful bronze color in fall before needles drop
- UGA Gold Medal Winner



Small Trees

- American Hornbeam / *Carpinus caroliniana*
- Big-Leaf Magnolia / *Magnolia macrophylla*
- Bigleaf Snowbell / *Styrax grandifolius*
- Carolina Silverbell / *Halesia tetraptera*
- Cherry Laurel / *Prunus caroliniana*
- Downy Serviceberry / *Amelanchier arborea*
- Eastern Hophornbeam / *Ostrya virginiana*
- Eastern Redbud / *Cercis canadensis*
- Florida or Southern Sugar Maple / *Acer barbatum*
- Flowering Dogwood / *Cornus florida*
- Fringetree / *Chionanthus virginicus*
- Georgia Oak / *Quercus georgiana*
- Loblolly Bay / *Gordonia lasianthus*
- Mayhaw / *Crataegus aestivalis*
- Narrow-Leaf Crabapple / *Malus angustifolia*
- Ogeechee Lime, Ogeechee Tupelo / *Nyssa Ogeche*
- Parsley Hawthorn / *Crataegus marshallii*
- Possumhaw / *Ilex decidua*
- Red Bay / *Persea borbonia*
- Sassafras / *Sassafras albidum*
- Sourwood / *Oxydendrum arboreum*
- Turkey Oak / *Quercus laevis*
- Two-Winged Silverbell / *Halesia diptera*
- Washington Hawthorn / *Crataegus phaenopyrum*
- Wild Olive, Devilwood / *Osmanthus americanus*
- Yaupon Holly / *Ilex vomitoria*



Eastern Redbud *Cercis canadensis*

- Deciduous tree or multi-stemmed shrub
- 12– 30 feet tall
- Purple flowers early spring before foliage appears
- 3 – 5” heart shaped leaves
- Part shade to shaded
- Many cultivars with leaf/flower color interest
- ‘Forest Pansy,’ ‘Oklahoma’, ‘Texas White’ & ‘Lavender Twist’ UGA Gold Medal winners



Old Man's Beard Fringe Tree

Chionanthus virginicus

- UGA Gold Medal Plant & GNPS Plant of the Year 2021
- Deciduous small tree often multi-stemmed reaching 25 ft
- Needs part sun
- According to State Botanical Garden, "fringe tree is one of the most beautiful flowering trees in SE"
- Blooms period roughly the same time as dogwoods and azaleas, yet much longer, up to 6 weeks
- At the end of bloom period, the emerging lime-green leaves accent the snowy blooms for an impressive finale



Serviceberry

Amelanchier arborea

- Small tree up to 25 feet, typically multi-stemmed
- Easy care plant for part shade (will tolerate full sun), tolerates clay soils
- Fragrant white flowers in spring, followed by equally showy fruit maturing to size & color of blueberries that attracts birds
- Fruit often used to make jellies & jams
- Nice yellow fall color
- Tendency to sucker & if not removed results in shrubby growth habit
- GNPS Plant of the Year 2005



Dogwood

Cornus florida

- Small deciduous tree growing 15 – 30 feet
- Best in part shade
- Low branching, graceful habit
- Arguably most beautiful flowering native tree
- Showy white blooms in April
- Bright red fruits in fall loved by birds
- Subject to anthracnose in high humidity and poor air circulation



Shrubs



- Adam's Needle, Threadleaf Yucca / *Yucca filamentosa*
- American Beautyberry / *Callicarpa americana*
- Arrowwood Viburnum / *Viburnum dentatum*
- Blackhaw Viburnum / *Viburnum prunifolium*
- Bottlebrush Buckeye / *Aesculus parviflora*
- Button Bush / *Cephalanthus occidentalis*
- Common Witchhazel / *Hamamelis virginiana*
- Drooping Leucothoe / *Leucothoe fontanesiana*
- Dwarf Fothergilla / *Fothergilla gardenia*
- Fetterbush, Pipestem / *Agarista populifolia*
- Fetterbush / *Lyonia lucida*
- Sparkleberry / *Vaccinium arboreum*
- Florida Anise-Tree / *Illicium floridanum*
- Gallberry, Inkberry / *Ilex glabra*
- Mapleleaf Viburnum / *Viburnum acerifolium*
- Mayberry / *Vaccinium elliotii*
- Mountain Laurel / *Kalmia latifolia*
- Mountain Stewartia / *Stewartia ovata*
- Oakleaf Hydrangea / *Hydrangea quercifolia*
- Painted Buckeye / *Aesculus sylvatica*
- Pinckneya, Feverbark / *Pinckneya bracteata*
- Rabbiteye Blueberry Cultivars / *Vaccinium virgatum*
- Red Buckeye / *Aesculus pavia*
- Red Titi, Swamp Cyrilla / *Cyrilla racemiflora*
- Rhododendron & Deciduous Azalea Species
- Rhododendron, Evergreen Species
- Rusty Blackhaw / *Viburnum rufidulum*
- Small Anise-Tree, Yellow Anise-Tree / *Illicium parviflorum*
- Southern Highbush Blueberry / *Vaccinium corymbosum*
- Southern Wax Myrtle / *Morella cerifera*
- Spice-Bush / *Lindera benzoin*
- Strawberry-Bush / *Euonymus americanus*
- Summersweet Clethra / *Clethra alnifolia*

- Swamp-Haw / *Viburnum nudum*
- Sweetshrub / *Calycanthus floridus*
- Virginia Sweetspire / *Itea virginica*
- Winged Sumac / *Rhus copallina*
- Winterberry / *Ilex verticillata*



American Beautyberry

Callicarpa americana



- 6 – 8 feet tall, rugged deciduous shrub
- Small tubular pale pink blossoms in spring, followed by clusters of magenta drupes that ripen from Aug – Nov
- Berries provide food to many bird species, raccoons, opossums, squirrels & deer
- Found naturally in woodland clearings, growing in a wide variety of soil types
- Great in mass plantings
- Native Americans used leaves, roots & branches for medicinal purposes

Oakleaf Hydrangea

Hydrangea quercifolia



- 6 – 8 feet tall
- Found naturally along stream banks, hillsides & open woods
- Accommodating garden plant requiring very little maintenance
- Prefers moist, well drained soil, but can be fairly drought tolerant once established
- Showy white flowers early summer that fade to pink
- Spectacular fall color
- Best with some afternoon shade
- Several named cultivars including dwarf varieties in nursery trade
- 2000 GNPS Plant of the Year

Button Bush

Cephalanthus occidentalis



- 8-12 feet tall
- Deciduous, prefers sunny/wet locations
- Flower heads resemble white pincushions covered in tiny tubular flowers which are an excellent nectar source to pollinators
- Fruit is round, hard reddish-brown and persist through winter
- Seeds are eaten by songbirds & waterfowl
- Naturally found in wetlands & floodplains

More Favorites



Clethra 'Ruby Spice'
UGA Gold Metal



Fothergilla 'Mt. Airy'
UGA Gold Medal



Itea - Virginia Sweetspire
'Merlot'

Woody Vines

- American Wisteria / *Wisteria frutescens*
- Carolina Yellow Jessamine / *Gelsemium sempervirens*
- Climbing Hydrangea / *Decumaria barbara*
- Crossvine / *Bignonia capreolata*
- Dwarf Smilax, Sarsparilla Vine / *Smilax pumila*
- Lanceleaf Smilax, Sweet-Scented Smilax / *Smilax smallii*
- Trumpet Honeysuckle / *Lonicera sempervirens*
- Trumpetcreeper / *Campsis radicans*
- Virginia Creeper / *Parthenocissus quinquefolia*





PERENNIALS

Butterfly Weed – *Asclepias tuberosa*



- Host plant for the Monarch butterfly
- 2 – 3 feet tall, full sun
- Drought tolerant once established
- Showy orange blooms late spring, may rebloom later in summer
- Seed pods open to release fuzzy seeds in fall
- If lucky, Monarch caterpillars will defoliate late in the season

Cardinal flower

lobelia cardinalis

- Native
- Part shade to sun
- Short lived perennial, about 2' tall
- Adaptable to soil condition from wet to dryish
- Intense red flowers, very showy midsummer
- Hummingbird magnet
- Great specimen plant for beds
- Also *Lobelia Siphilitica* which is blue



Swamp Milkweed

Asclepias incarnata

- Host plant for Monarch butterfly & good nectar plant for many pollinators
- Grows 2 – 4 feet tall, sunny location
- Tolerant of wet locations
- Showy pink blooms
- Also attracts hummingbirds



Turtlehead - *Chelone glabra*

- Clump forming perennial, 2 – 4 feet tall
- Best in humus, moist soils in part shade
- Tolerates some wet feet
- Blooms late summer into fall
- Attracts butterflies
- Spreads slowly by rhizomes to form large clumps, but is not invasive.
- Name from Greek word *chelone* meaning tortoise in reference to the turtlehead shape of the flowers
- Pink cultivar 'Hot Lips'
- Deer tolerant



Coneflower – *Echinacea purpurea*

- Grows 3 – 4 feet tall full - partial sun
- Pinkish-purple flowers early summer through mid-fall
- Attractive to pollinators especially butterflies
- Leave some of the flower heads on to produce seeds for the birds
- Prefers well-drained moist loams but is adaptable to various soil types
- Drought tolerant once established
- Many cultivars available, but may not be as beneficial to pollinators & wildlife



Blue False Indigo – *Baptista australis*

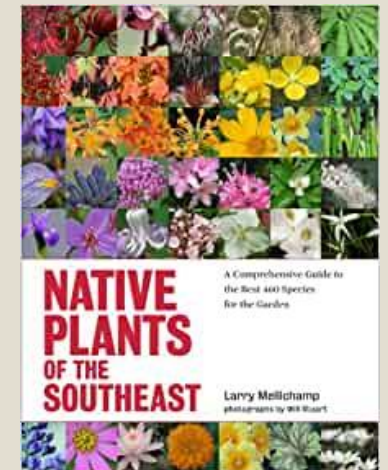
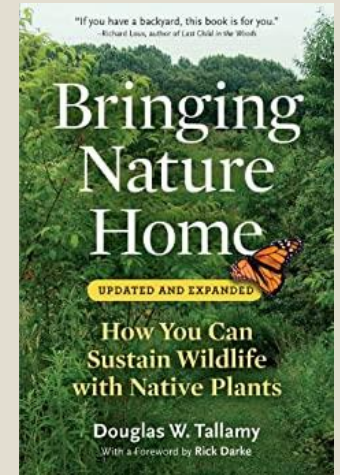
- Grows 3 – 4 feet tall
- Showy blue flowers in spring
- Attractive blue/gray foliage
- Forms ornamental seed pods in fall
- Wide variety of cultivars with many flower color options





References & More Information

- ***Bringing Nature Home. How You Can Sustain Wildlife with Native Plants*** by Douglas W. Tallamy
- ***Georgia Native Plant Society*** - www.gnps.org
- ***Georgia Audubon Society*** – gardening for the birds - [Georgia Audubon - Home](http://GeorgiaAudubon.org)
- ***Native Plants of the Southeast*** by Larry Mellichamp
- ***UGA Gold Medal Plants***
 - [All Winners by Year Archives - UGA State Botanical Garden](http://UGAStateBotanicalGarden.org)
- ***UGA Center for Invasive Species & Ecosystem Health*** - www.bugwood.org
- www.extension.uga.edu/publications , Bulletin B987 (Trees/Shrubs/Woody Vines) , B987-2 (Ferns), B987-3 (Wildflowers), B987-4 (Grasses/Sedges)



Thank you



Questions?

Contact us at
waltonmg@uga.edu
770-267-1324

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*Master Gardener
Fundraiser*

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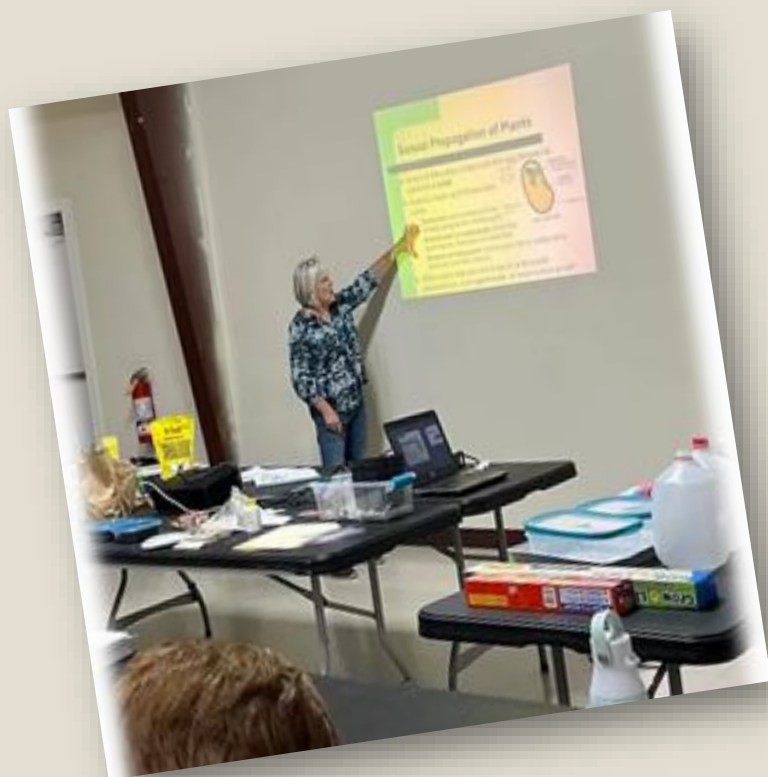
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