

NC Native Plants for Coastal Landscapes



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EXTENSION



Review these slides and explore
additional resources:

<http://go.ncsu.edu/natives>



Overview

- Defining native
- Why you should plant natives
- Getting the most benefit
- Great natives for coastal landscapes
- Resources to learn more!



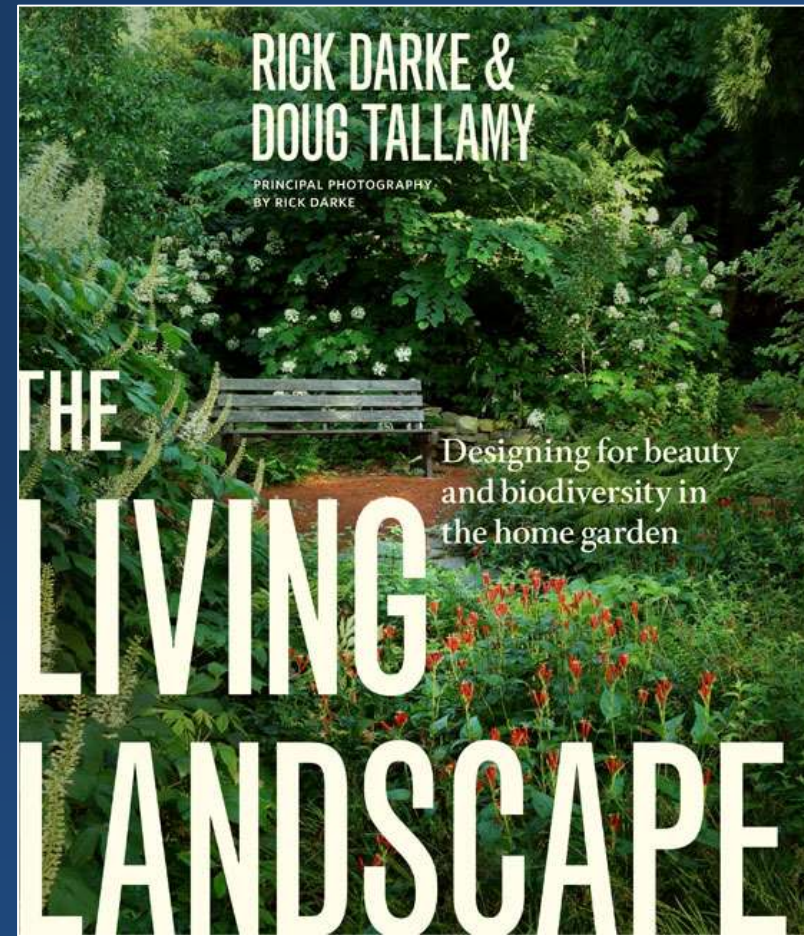
Eastern Columbine,
Aquilegia canadensis

What is native?

“A plant or animal that has evolved in

- a **given place**
- over a **period of time**
- sufficient to develop **complex and essential relationships**
- with the **physical environment** and **other organisms**

in a given **ecological community**”



Given Place

- Native is meaningless without location!
- **Think ecoregion, not political boundaries**
- **Greatest benefit:** choose plants from local ecoregion



Ecoregions of North America

Level III: Middle Atlantic
Coastal Plain

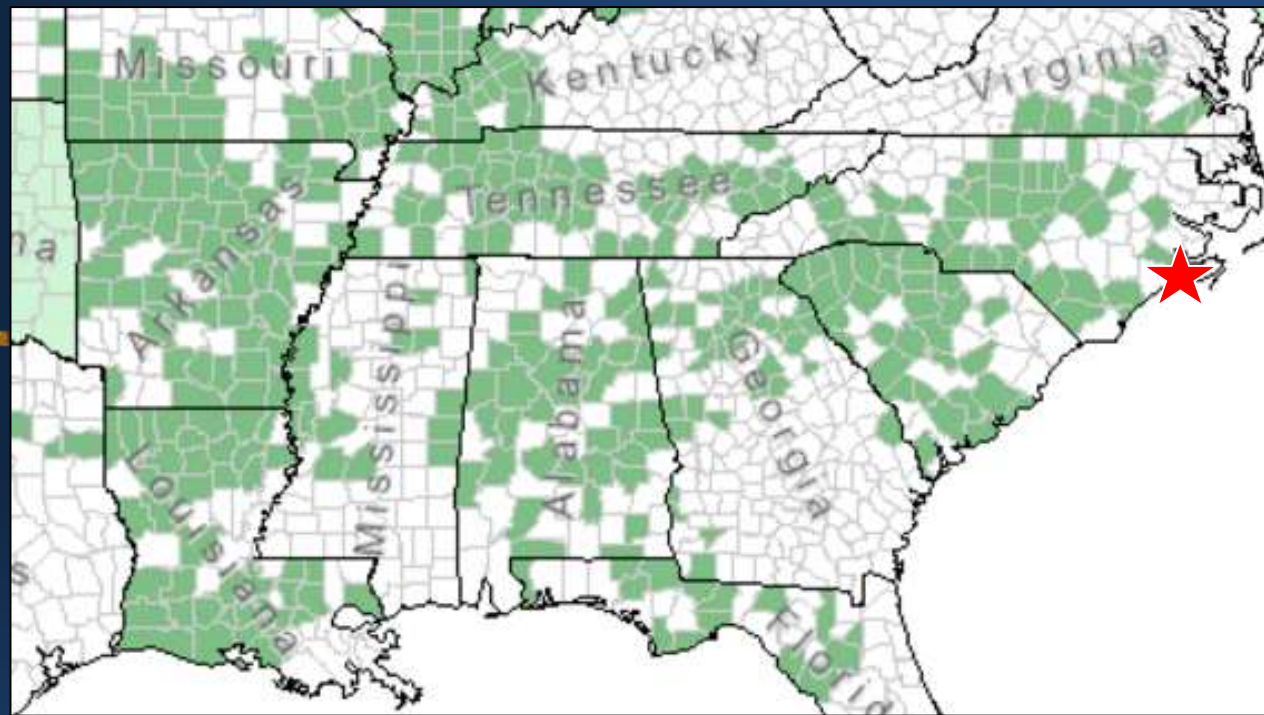
Congeners

- Plants in same genus
- For example:
 - *Amsonia tabernaemontana* →
 - *Amsonia hubrichtii* →
- Congeners from southeast US often support local pollinators and beneficial insects even if not native to this region



Native Range

Amsonia tabernaemontana



Amsonia hubrichtii



Best source for
native range: [USDA](#)
[PLANTS Database](#)

Native Range

Consider both:

- Geographical range
- Type of habitat
- *Amsonia tabernaemontana*
 - Moist woods, stream edges
 - Prefers moist soil, part shade
- *Amsonia hubrichtii*
 - Rocky outcrops, dry creek banks
 - More sun and drought tolerant



Period of Time

- 1000's of years
- Does not include plants recently introduced from other regions that have naturalized or become invasive

Not all plants found growing wild are native. **Naturalized species**, such as daylilies, persist after cultivation. Others are **invasive species**, such as Japanese honeysuckle



Daylily,
Hemerocallis fulva



Japanese Honeysuckle,
Lonicera japonica

Why Plant Natives?

Natives are needed to:

- To support a **diverse array** of insects, birds and animals
- **Sustain healthy ecosystems**



Doug Tallamy



Healthy Ecosystems

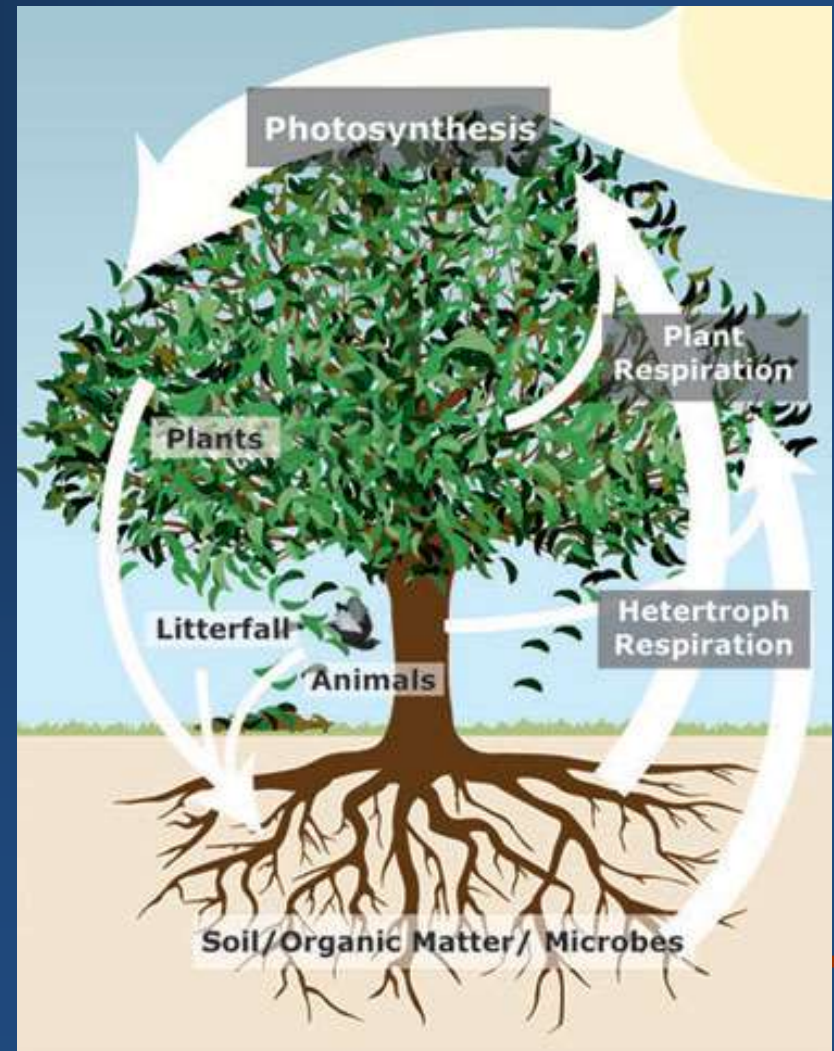
- Provide services essential to human wellbeing and survival, including:
 - Pollination
 - Water and Air Purification
 - Soil Formation
 - Balance Pest Species
 - Climate Stability



Learn More: [Millennium Ecosystem Assessment](#)

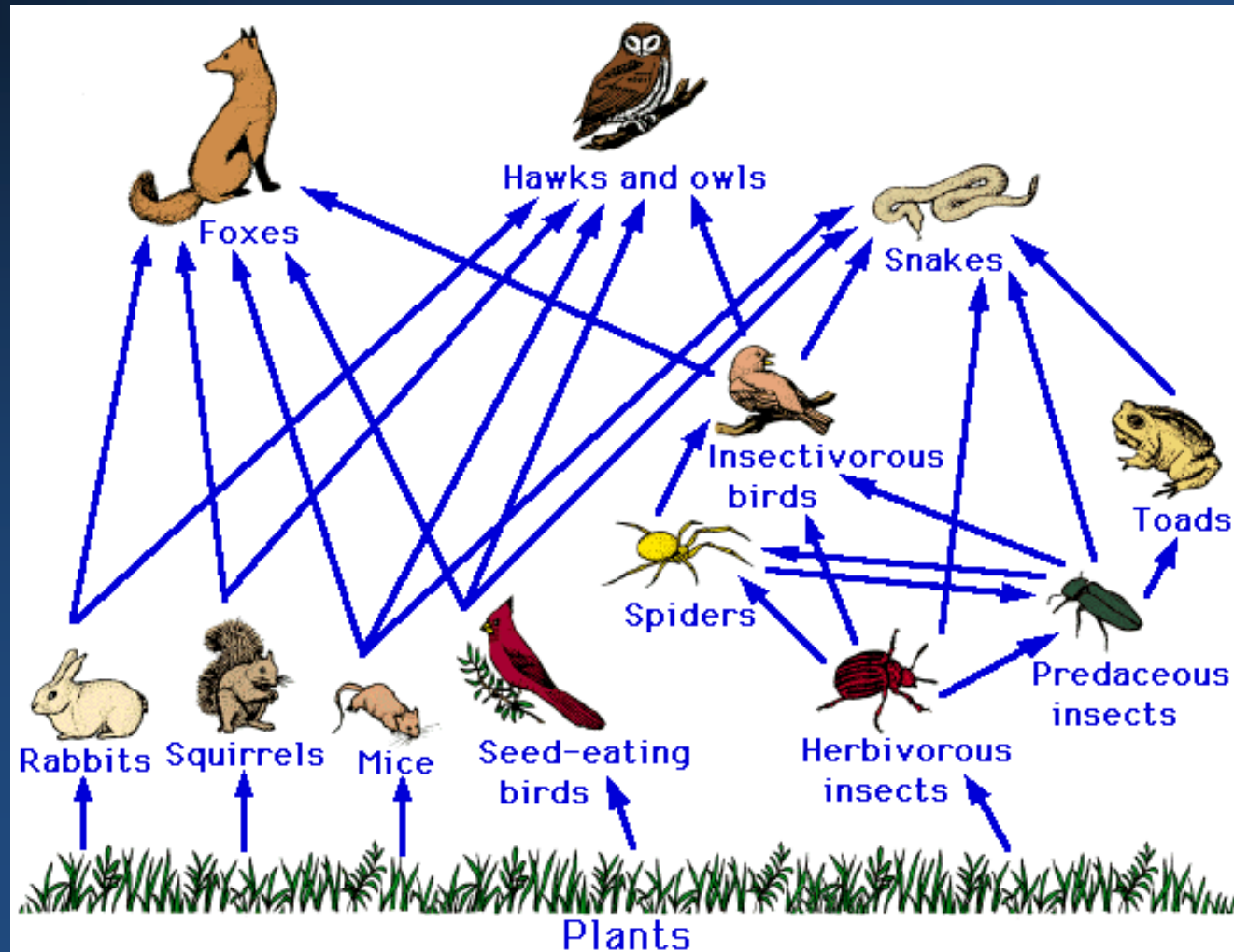
Plants Have Many Functions

- Protect soil from erosion
- Help cycle nutrients
- Help cycle water
- Support soil microbes



Most Important Function: Foundation of Food Webs

Plants capture and convert the **sun's energy** into a form that can be consumed by other organisms



Within Ecosystems, All Plants Are Not Equal

- Most herbivorous insects have adapted to feed on certain plants
- Plants with which they share an evolutionary history
- Plants native to the same region

Luna moth caterpillars
love sweet gum



Monarchs

- Caterpillars can only survive on species of *Asclepias*
 - Milkweed
 - Butterflyweed
- 15 species of *Asclepias* native to NC



The Good News

- **What you plant in your landscape can make a difference**
- Increasing the number of native plant species in your yard and neighborhood supports local ecosystem health



**Support Monarchs –
Plant Asclepias!**

More Natives, Not All Native Every Site

Native doesn't mean:

- Adapted to all landscapes/sites
- Well behaved
- Long lived
- Easy care or low maintenance – especially if planted in the wrong place

There are very few small, evergreen shrubs native to NC



Getting the Most Benefit

Choose plants adapted to site

- Sun/Shade
- Moisture/Drainage
- Soil pH and nutrient levels
- Space to grow

Swamp Rose Mallow
Hibiscus moscheutos
Needs moist soil!



Being Native Doesn't Make a Plant Great for Landscaping!

Things to consider:

- Spreading tendencies
- **Longevity**
 - Some species short lived - often self seed
 - Rely on disturbance to sustain populations
 - May disappear over time OR become a nuisance
 - May require periodic “editing”



Golden Alexanders
Zizia aurea

Some natives are too vigorous in landscapes, especially rhizomatous plants



Canada Goldenrod
Solidago canadensis

Hardy
Ageratum,
*Conoclinium
coelestinum*



Others natives are too finicky



Lady Lupine,
Lupinus villosus



Pitcher Plant,
Sarracenia flava

What about cultivars?

- Varieties selected for unique/desirable feature
- Propagated by cuttings or grafting to maintain genetic integrity = clones



Merlot Redbud

Cercis canadensis 'Merlot'
Purple leaf form of redbud

Key Question: How different is it?

- Flowering time
- Flower shape
- Flower color
- Foliage color

Some cultivars provide same benefit, others do not – use in moderation



**Merlot
Redbud,**
*flowers same
time, same
color, leaves
purple*

Getting the Most Benefit

Help plants thrive:

- **Prepare the soil**
 - Alleviate compaction
 - Incorporate organic matter
- **Water during establishment**
 - First season
- **Mulch!**



Getting the Most Benefit

Ecological Design

- Majority of plants natives to local ecoregion
- Diversity of species and height ranges
 - Less lawn - More trees, shrubs, and flowers
- **Year round food supply**
 - Flowers, fruits, seeds, leaves

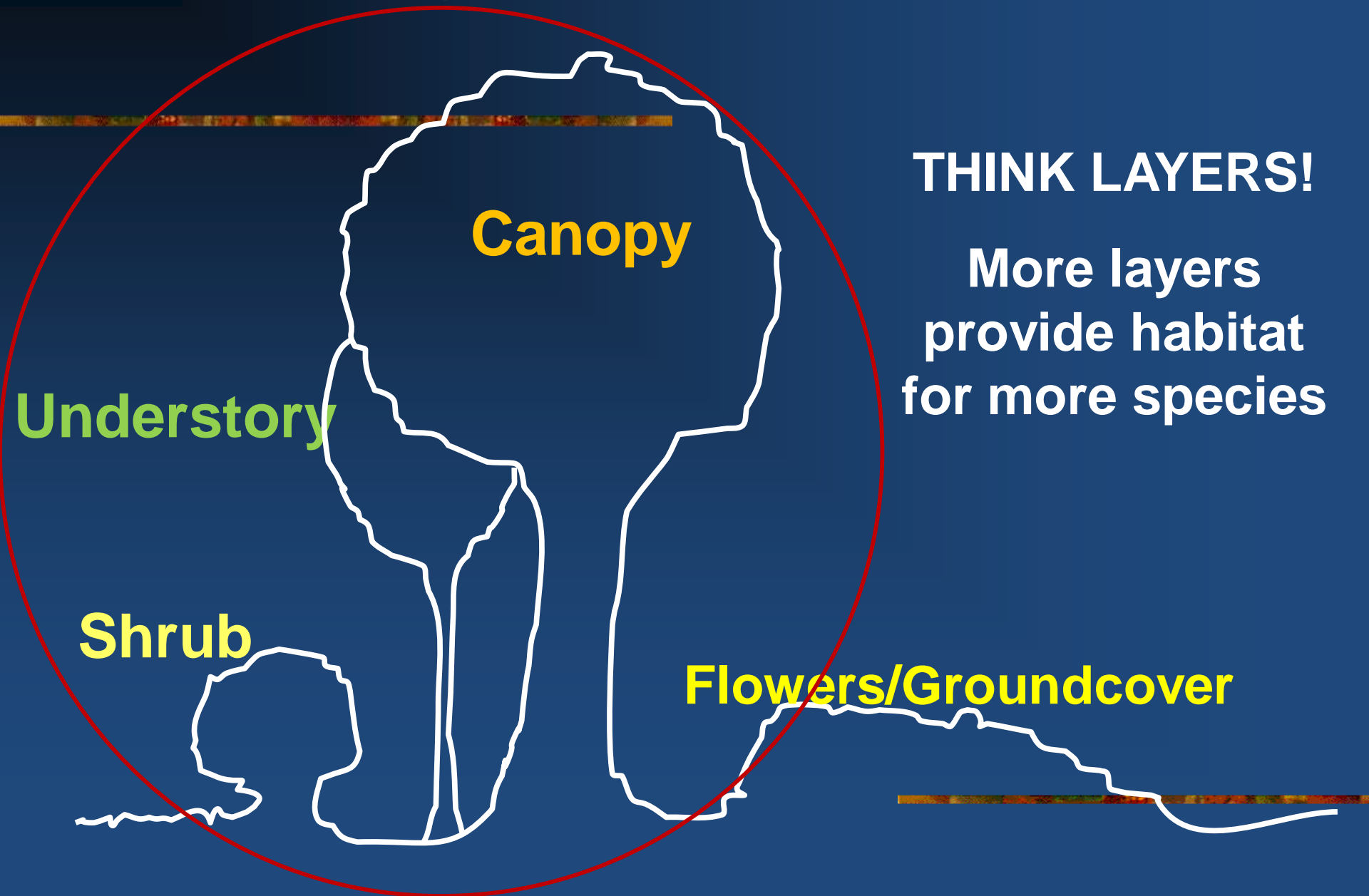


Not diverse!



Very diverse!

Getting the most benefit



THINK LAYERS!

More layers
provide habitat
for more species

Canopy

Understory

Shrub

Flowers/Groundcover

Great Native Trees, Shrubs & Perennials for Coastal Landscapes

- **Serve ecological function:**
 - Support other species
- **Serve landscape function:**
 - Attractive and adaptable
- **Can be nursery produced**
 - Some only available from specialty nurseries



Plants with this symbol are less likely to be repeatedly eaten by deer

Think Layers: Canopy Trees

- The top layer, 40'-80'+ tall
- Provide shade
- Protect soil
- Food source for many species (leaves, nuts/fruits, nectar/pollen)



Foraging Hubs

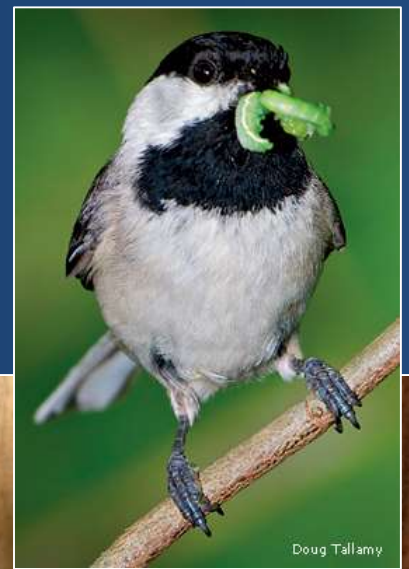
- Trees are the most important source of caterpillars
- Most caterpillar species feed on very narrow range of species
- Feed for part of life cycle – usually 2-4 weeks



Polyphemus moth caterpillars feed for a few weeks in late summer

Caterpillar Hunters

- Nearly all terrestrial birds rear their young on insects, not seeds or berries
- Chickadees are caterpillar specialists
 - Requires 6,000-10,000 caterpillars to fledge a single nest!
- **Caterpillars rarely a threat to tree health!**



Trees



Oaks

- Support 100's of species
 - Acorns
 - Leaves
 - Habitat
- The best shade trees
- Most are very long lived
- Over 30 species native to NC!



Live Oak

Quercus virginiana

- **The most wind resistant and salt tolerant tree!**
- **Extremely long lived**
- **Drought tolerant**
- Up to 80' x 80' – smaller where sheared by wind
- Deer resistant
- Evergreen



Leafy Oak Gall

- Common but not considered damaging
- Caused by a gall wasp
- Females lay eggs in buds, enzymes cause distorted growth
- No treatment recommendations available



Willow Oak

Quercus phellos

- Deciduous
- 50-75' x 30-50'
- Tolerates wet sites
- Among fastest growing oaks
- Looks similar, but stronger than laurel oak



River Birch

Betula nigra

- Native to streams and riverbanks
- Fast growing, tolerates wet or dry soil
- Can grow 50' tall, often multi-stemmed
- Cultivars: 'Heritage', 'Duraheat'



In spring, aphids may cause leaf distortion but attract ladybugs and do not damage tree



Ladybug larvae

Red Maple

Acer rubrum

- 40'-60' tall and wide
- Wet – well drained soil
- Avoid sites surrounded by pavement
- Excellent fall color
- Cultivars:
 - 'October Glory'
 - 'Brandywine'
- Winter blooms are early nectar source for bees



Blooms (top)
Seeds (bottom)

Red Maple foliage



Southern Magnolia

Magnolia grandiflora

- 60'-80' x 30'-50'
- Moderate salt tolerance
- Moderate drought tolerance
- Best in acid soil
- 'Kay Parris' – more compact
- 'Little Gem' – smallest, 30'x10'



More Great Native Trees

Less Readily Available:

- **Persimmon**, *Diospyrus virginiana*
- **Hickory**, *Carya* species
- **American Beech**, *Fagus grandifolia*

NC Forest Service,
Tree Seedling Store -

<http://nc-forestry.stores.yahoo.net>



American beech in winter

Understory Trees and Shrubs

- Middle layer
- Often missing in managed landscapes
- **Prime nesting height** for most birds, 5'-15' above ground
- Many have attractive flowers, produce fruits/berries



Middle/understory layer missing
in many modern landscapes

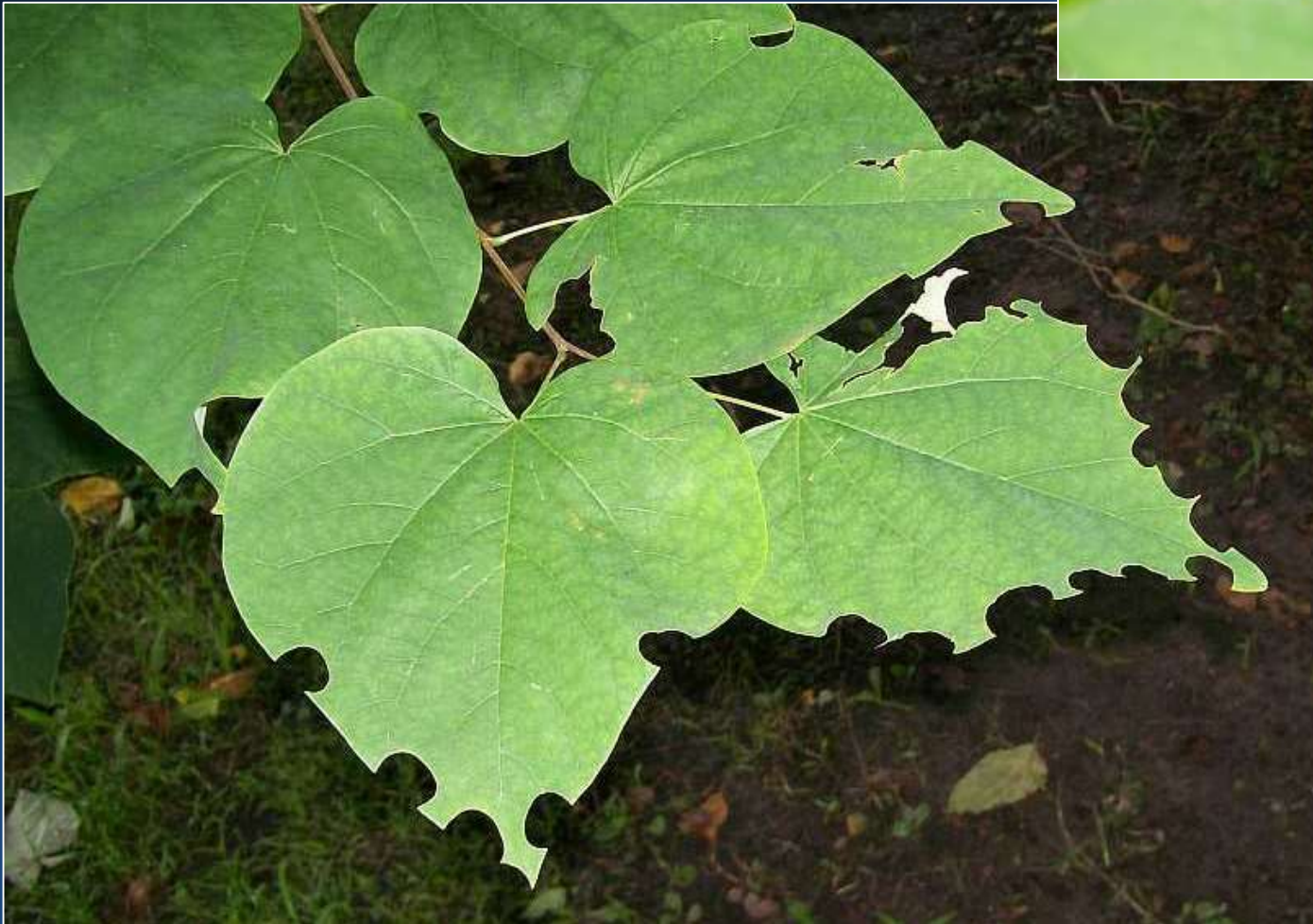
Redbud

Cercis canadensis

- Small deciduous tree
- Blooms early spring before leaves come out
- Lives ~ 20 yrs.
- Sun – pt. shade, well drained soil
- Protect from deer when young



Leafcutter Bees



Redbud Cultivars



'Royal
White'

'Forest Pansy',
'Merlot',
'Burgundy Hearts'



'Hearts
of Gold',
'Rising
Sun'



Dogwood

Cornus florida

- 15' – 30' tall
- Moist, well drained soil
- Best in afternoon shade
- Spring blooms, excellent fall color
- Many cultivars



Fall fruits relished by birds



Red Buckeye

Aesculus pavia

- 10'-15' high and 10' wide
- Beautiful spring flowers attract hummingbirds
- Best in moist soil and afternoon shade
- Loses leaves in early fall
- Seeds are poisonous



Seeds ripen in fall



Called:

- Conkers
- Horse Chestnuts
- Buckeyes

NOT EDIBLE!

Sweet Bay Magnolia

Magnolia virginiana

- Smaller cousin of Southern Magnolia
- Grows 20'-30' tall, often with multiple trunks
- Sun to part shade,
- Moist or well-drained soil – tolerates flooding
- Fragrant flowers, spring-early summer
- Deciduous



Upright habit;
Fall seeds great
for birds



©2009 Jeffrey Pip



Palmetto, Cabbage Palm

- *Sabal palmetto*
- Rarely over 20' in NC
- Hardy to zone 8, 10 degrees F
- Highly salt tolerant
- Good drought tolerance



Yaupon Holly

Ilex vomitoria

- Evergreen
- Red berries on female plants
- Sun to part shade, moist to well drained soil
- Salt spray and drought tolerant!
- Rarely bothered by deer
- Many varieties



Yaupon



Dwarf yaupon,
3'-4' tall and
wide,
no berries

**Standard/wild
yaupon, 15'+ tall,
10'+ wide. Tough
hedge or small tree**



Weeping yaupon
15'+ tall, 10' wide.
Accent tree.

'Mt. Airy' Fothergilla

Fothergilla major

- 4'-5'x 4'-5'
- Sun to part shade
- Moist or well drained soil, acidic
- Honey scented spring blooms
- Dwarf fothergilla, *F. gardenii* similar but smaller



Fothergilla fall color



Sweet Pepperbush

Clethra alnifolia

- Sun – part shade
- Well drained or moist soil
- Dwarf cultivars grow 3'-4'
 - Hummingbird
 - Sixteen Candles
- Blooms in June-July, attracts butterflies and pollinators
- Very fragrant





fall
color

‘Ruby Spice’ – pink flowers



Clethra ‘Sixteen Candles’
Grows 3’ - 4’ tall and wide

American Beautyberry

Callicarpa americana

- Sun to part shade
- Moist or dry soil
- Magenta berries late summer - attract songbirds
- 4'-5' tall and wide
- Cut back to 1'-2' in early spring





Sweat Bee



**Rustic
Sphinx
Moth**

Southern Wax Myrtle

Morella cerifera

- Full sun – lt. shade
- Moist to dry soil
- 10'-15' x 10'-15'
- Semi-evergreen
- Drought tolerant
- Prone to ice and wind damage but quickly recovers
- Winter berries for birds (female shrubs)



Dwarf Palmetto

Sabal minor

- Tough, evergreen shrubby palm
- 4'-5' tall and wide
- Sun or shade
- Well drained to wet soil
- Tolerates salt spray
- Deer resistant!
- Fall fruit



Coral Honeysuckle

- *Lonicera sempervirens*
- Semi-evergreen vine
- Spring blooming – often reblooms
- Hummingbirds!
- Sun, most soil types
- Climbs 10'+
- Protect from deer



Perennials

- Ground layer
- Critically important nectar and pollen source for pollinators and beneficial insects
- **Most benefit:**
 - Plan for something to be in bloom spring-fall
 - At least 3 different types in bloom each season



Blossoms with many small flowers clustered together are the richest nectar plants

Getting the Most Benefit

- Plant in groups, 3+ plants per group
- Allows birds and pollinators to feed with less movement
- Also aesthetically pleasing



Black-eyed Susan,
Rudbeckia fulgida

Select single over double varieties



Purple Coneflower,
Echinacea purpurea



Echinacea 'Razzmatazz'

Eastern Columbine

Aquilegia canadensis

- Blooms March - May
- Part sun or shade, well drained soil
- 12" – 24" tall in bloom
- Attracts butterflies and hummingbirds
- Will naturalize in the garden by self seeding



Bluestar

Amsonia tabernaemontana



- Tough, long lived clumping perennial



False Indigo



- *Baptisia* - hybrids and species
- 3' - 4' x 2' - 3'
- Sun to light shade
- Drought tolerant
- Very long lived, clump forming
- Several species native to SE US



Baptisia australis

Baptisia alba



'Purple Smoke'



'Carolina Moonlight'



Coreopsis, Tickseed

- Several species native to NC
- Sun lovers
- Threadleaf Coreopsis
 - *C. verticillata*
 - Long live
 - Summer blooming
 - Drought tolerant
 - 'Zagreb' – 2' x 2'



Butterfly Weed

Asclepias tuberosa

- Sun to part shade
- Well drained soil
- Very drought tolerant
- 2-3' tall
- Late to emerge in spring
- Orange flowers summer – attract many pollinators





**Support Monarchs –
Plant Asclepias!**



Swamp Milkweed

Asclepias incarnata

- 3' tall and wide
- Summer flowers
- Sun to part shade
- Moisture tolerant
- Monarch larval host
- Attracts many pollinators



Yucca, Adam's Needle

- *Yucca filamentosa*
- Evergreen
- 2' x 2', summer flower spikes to 5'
- This species NEVER FORMS TRUNKS
- Broken roots regenerate new plants
- Deer resistant, drought tolerant, salt tolerant



**Yucca
'Bright Edge'**



**Yucca
'Color Guard'**



Orange Coneflower

Rudbeckia fulgida

- Aka “Black-eye Susan”
- Yellow flowers summer
- 3’ tall
- Sun, moist to average soil
- Low mat of semi-evergreen foliage in winter
- Leave seed heads in winter for birds
- Cultivar: ‘Goldstrum’ most common
- Deer love it!



Seashore Mallow

Kosteletskyia virginica

- Perennial
- Native to brackish wetlands - Tolerates salt spray
- Beautiful pink flowers in summer
- 5'-7' tall
- Sun, moist to wet soil
- Attracts butterflies
- Deer resistant



Coastal Joe Pye Weed

Eupatorium dubium

- Perennial
- Sun to light shade, wet to moist soil
- 4'-5' tall x 3'-4' wide
- Great butterfly nectar source!
- Deer resistant
- 'Little Joe' – 4' tall
- *E. fistulosum* much taller



Rough Stemmed Goldenrod

- *Solidago rugosa*
- cultivar 'Fireworks'
- Grows 3'-4' high and wide
- Sun to part shade, moist or well drained soil
- Blooms late summer - nectar for butterflies and many other pollinators



Native Grasses

- Many do best in a meadow setting
 - Little Blue Stem
 - Broomsedge
 - Indian Grass
- In landscape, can become large and floppy
- Competition keeps them compact in the wild



Little
Blue-
stem

Indian
Grass

Switch Grass

Panicum virgatum

- Several cultivars, 3' - 8' tall
- Moist or dry soils
- Sun to light shade
- Stands up well through winter, birds enjoy seeds
- Cut back by late Feb.



Muhly Grass

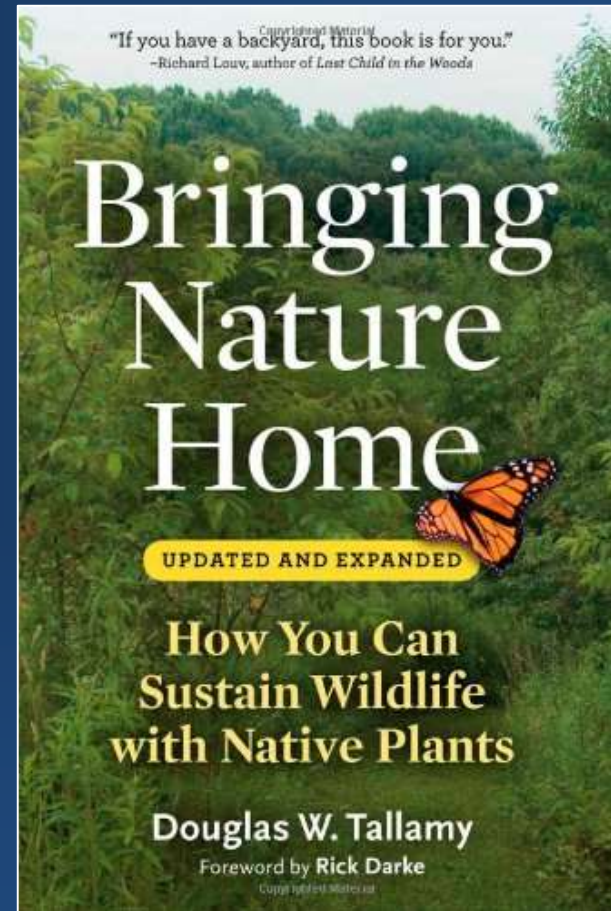
Muhlenbergia capillaris

- 4' tall in bloom, 3' x 3' mound
- Blooms late fall
- Sun, well drained soil
- Cut back in late winter, before new growth begins



“A plant that has
fed nothing has
not done its job”

- D. Tallamy,
*Bringing Nature
Home*



Learn More

Extension Gardener Handbook

- Chapters cover many topics
 - Soils, Insects, Landscape Design, Vegetables, Flowers, etc.
- **Chapter 12 is Native Plants!**

NC State Extension



Cardinal flower -
Lobelia cardinalis

Learn More: Going Native Website

<http://www.ncsu.edu/goingnative/>

Searchable plant database!

NC STATE UNIVERSITY



GOING NATIVE

URBAN LANDSCAPING FOR WILDLIFE WITH NATIVE PLANTS

HOME | NATIVE PLANTS ATTRACTIVE TO WILDLIFE | WHERE TO GET NATIVE PLANTS | INVASIVE, EXOTIC PLANTS OF THE SOUTHEAST | MY PLANT LIST



Home >

WHY GO NATIVE

HOW TO GO NATIVE

CREATE YOUR OWN NATIVE LANDSCAPE

Going Native: Urban Landscaping for Wildlife with Native Plants

You can go native!...with native plants in your landscape.

- See why landscaping with native plants is better for wildlife and for the environment.
- Find out about the problems caused by invasive, exotic plants. Odds are you have invasive exotics in your own backyard!
- Discover the native plants you can use as alternatives to exotic plants. We even tell you where you can

Extension Plants Database:

Can help you select native and non-invasive
non-native species for your yard

<http://plants.ces.ncsu.edu/>


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Annuals	Poisonous Plants
Carnivorous Plants	Roses
Edible Plants	Shrubs
Ferns	Spring Bulbs
Groundcover	Summer Bulbs
Herbs	Trees
Native Plants	Vines
Ornamental Grass	Water Garden
Perennial Bulbs	Wildflowers
Perennials	All Plants



Plant Profiles:

- Height
- Hardiness
- Soil
- Exposure
- Description
- Images
- More!

Plants > [Native Plants](#) > [Hydrangea quercifolia](#)

Hydrangea quercifolia

This plant has poison characteristics. See below.

Common Name(s):

Oakleaf hydrangea

Cultivar(s):

Snow Queen , Snowflake , Harmony , Pee Wee, Sykes Dwarf, Alice, Little Honey (golden foliage), Munchkin (semi-dwarf), Ruby Slippers (semi-dwarf)

Categories:

[Native Plants](#), [Poisonous Plants](#), [Shrubs](#)

Comment:

Bold leathery leaves; spread of 8 ft.; seeds eaten by birds; mulch to keep root system cool; exfoliating bark on mature plants; wine, orange, and mahogany fall foliage; coarse texture; drought tolerant; native to southeastern US; rapid growth rate

Description:

Deciduous shrubs; leaves opposite, simple, stalked, toothed and sometimes lobed; flowers in terminal, round or umbrella-shaped clusters, white, pink, or blue, 4-5-parted, the sterile flowers (around the margin or the entire cluster) are much enlarged.

Height:

4-8 ft.

Foliage:

Opposite, simple, bold leathery leaves; 3-8 in. long; wine, orange, mahogany fall color

Flower:

4-12 in. erect panicles of creamy white flowers in summer; fades to pink, then tan; fragrant; good for drying

Zones:

5 to 9

Habit:

Deciduous

Site:

Sun to partial shade; prefers moist, well-drained soil but tolerates damp soil

Texture:

Coarse

Form:

Upright, irregular, rounded, multi-stemmed shrub with limited branching; stoloniferous; forms colonies

Exposure:

Sun to partial shade; moist, well drained soil

Fruit:



H. quercifolia 'Snowflake'

Photo by Kingsrise Garden, [CC BY-NC-SA - 2.0](#)



H. quercifolia 'Snow Queen'

Photo by Henry10, [CC BY-NC-ND - 2.0](#)

Questions?



Learn more:

<http://go.ncsu.edu/natives>
