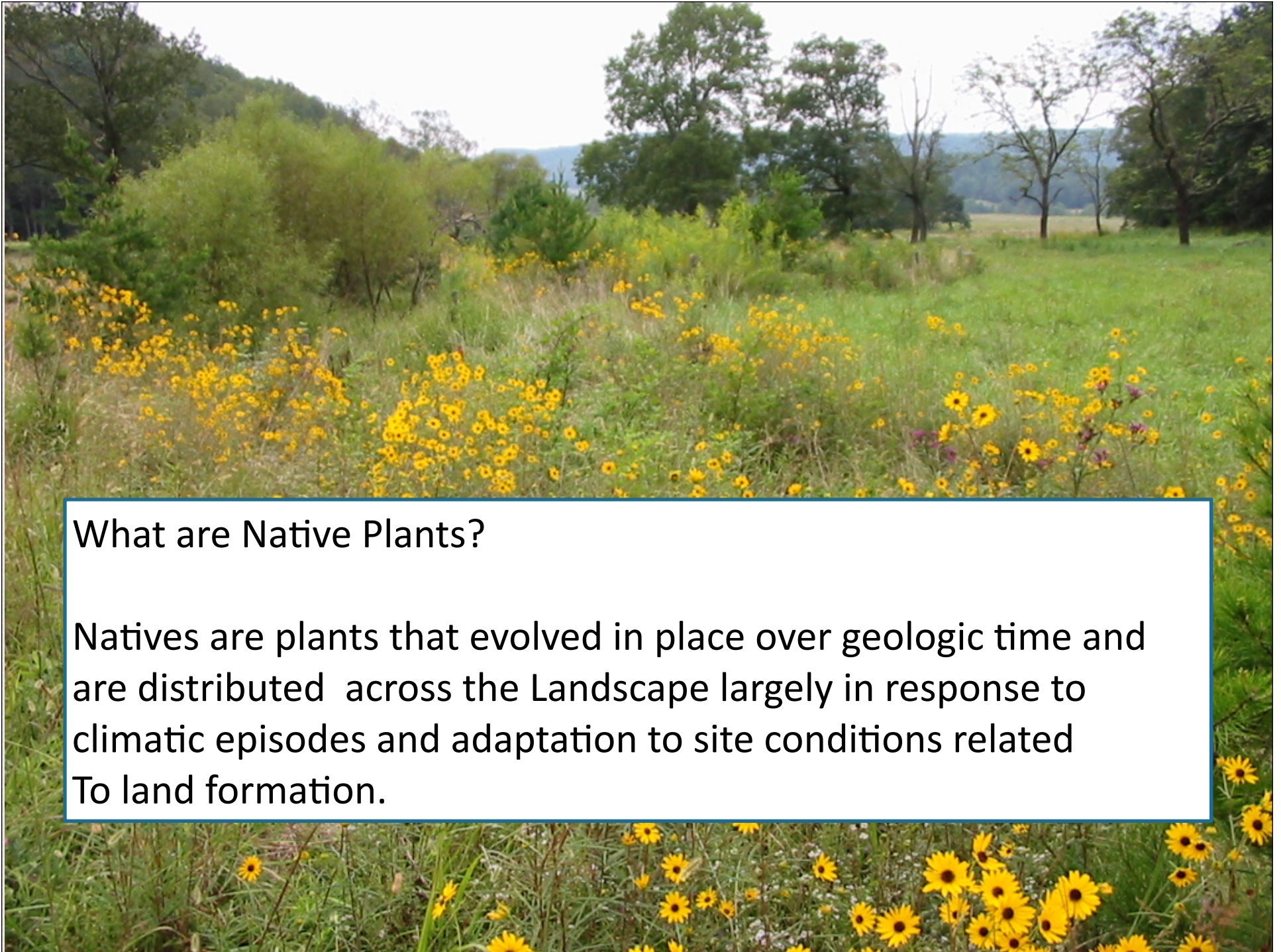


Sustainable Landscaping

Making informed choices

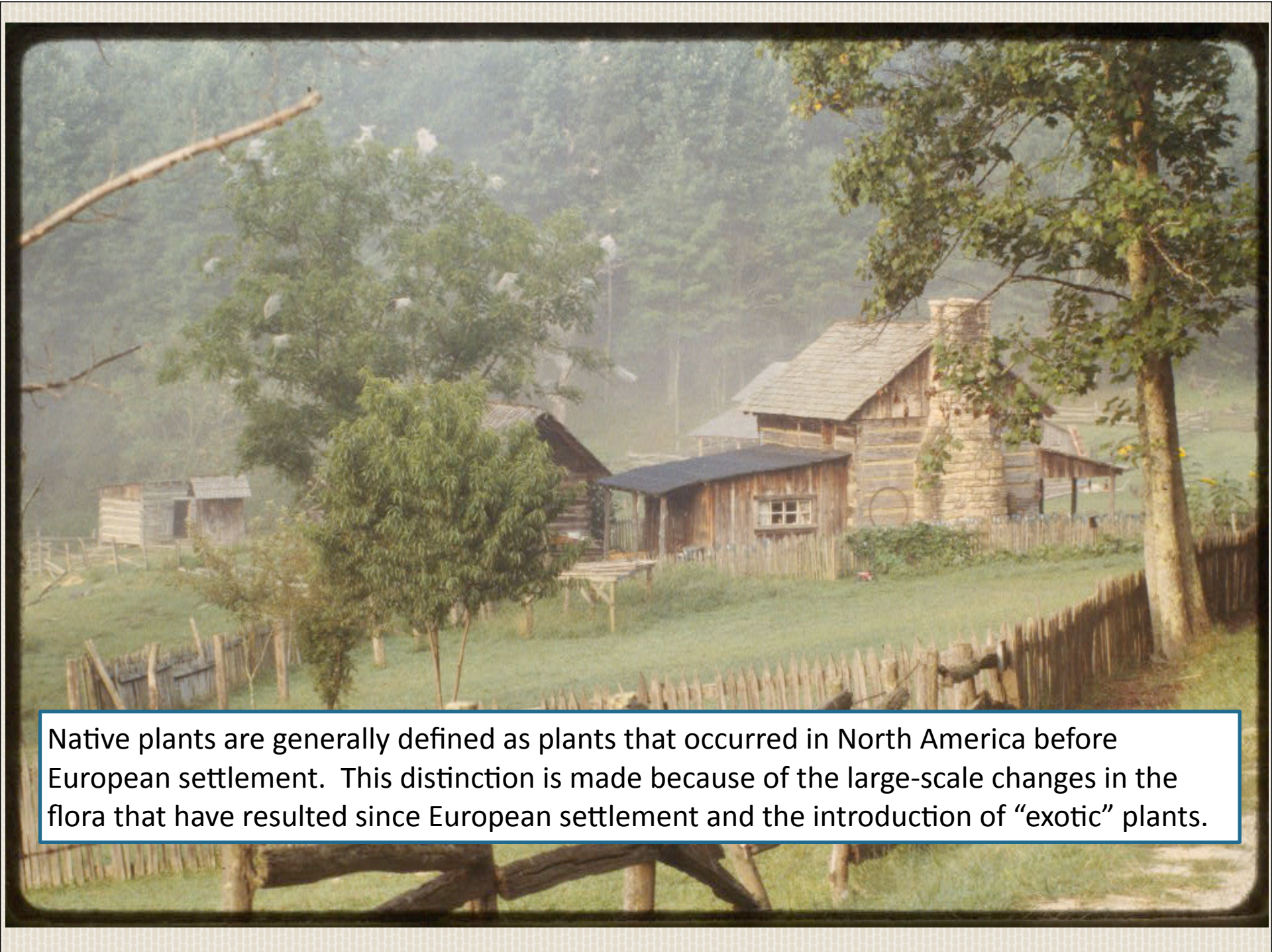


KRISTINE JOHNSON
Great Smoky Mountains National Park



What are Native Plants?

Natives are plants that evolved in place over geologic time and are distributed across the Landscape largely in response to climatic episodes and adaptation to site conditions related To land formation.



Native plants are generally defined as plants that occurred in North America before European settlement. This distinction is made because of the large-scale changes in the flora that have resulted since European settlement and the introduction of “exotic” plants.

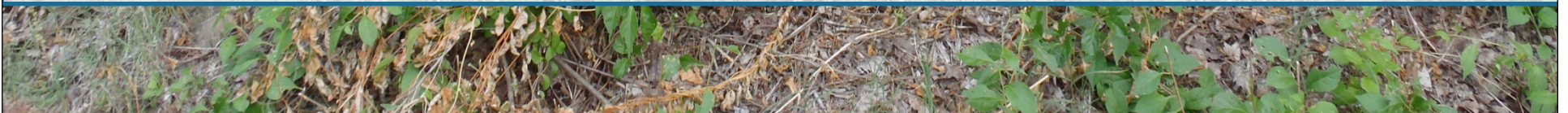


What are Exotic Plants?

Exotics are plants that are directly or indirectly, deliberately or accidentally introduced by human action.

Natives are natural elements of a regional landscape.

Some species native to North America may be exotic to East Tennessee.



Natives vs. Exotics

While many exotics are harmless, others pose serious threats to biodiversity. Exotics that escape and naturalize change the floral composition of native plant communities, spread, outcompete; and displace natives. Other exotics are vectors for disease and exotic insects.

Use of natives exhibits regional flora and promotes our natural heritage. Natives have aesthetic value, are the food and habitat with which native wildlife evolved and are well suited to their native environments.



Benefits of using Native Plants:

- Adapted to regional climates
- Require fewer pesticides or fertilizer due to natural adaptations
- Provide food and shelter for native wildlife
- Conservation: as wild areas disappear so do native species
- Greater diversity in the landscape
- Restore regional landscapes
- Prevent future exotic plant infestations

Natives can fit into any landscape, but *choose the right plant in the right place*

Do your homework before planting: study plants and site conditions before planting.

- Determine soil type and P.H.

- Choose plants adapted to conditions (drainage, sun/shade tolerance)



Don't Dig plants from the wild!
Buy only nursery-propagated plant material



Natives for wildlife

Using natives in landscaping helps sustain native butterflies, moths and other beneficial insects, native birds, reptiles, mammals and other fauna.

Fall migrating birds depend on high energy fruits from dogwood and spicebush. Spring migrating birds feed on insects in oak trees. Other native tree species provide nesting habitat, winter cover and food.



Chinese Silvergrass
(*Miscanthus sinensis*)
in China



**Chinese
Silvergrass under
power line**

CHINESE SILVERGRASS AND FIRE

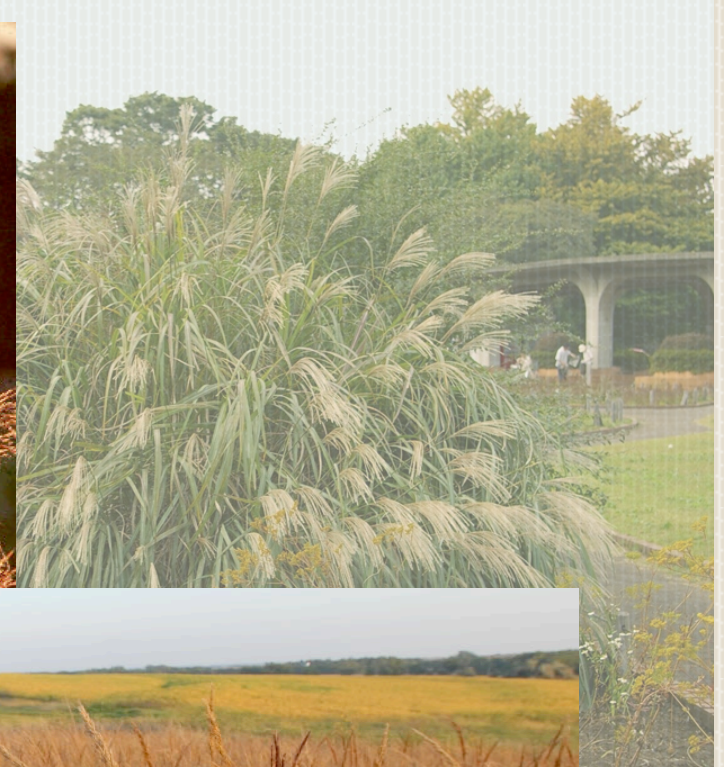
- ✘ Alters fuel structure
- ✘ Urban interface
- ✘ Extreme flammability
- ✘ Interferes with reforestation and succession

Native Solutions to Chinese Silvergrass

(Miscanthus sinensis)



Beard Grass
(*Saccharum [Erianthus] giganteum*)



Indian Grass
(*Sorghastrum nutans*)



Tree of Heaven

Native Solution to Tree of Heaven

(*Ailanthus altissima*)



Staghorn Sumac (*Rhus glabra*)

www.sakatahtrail.org/flowers.html

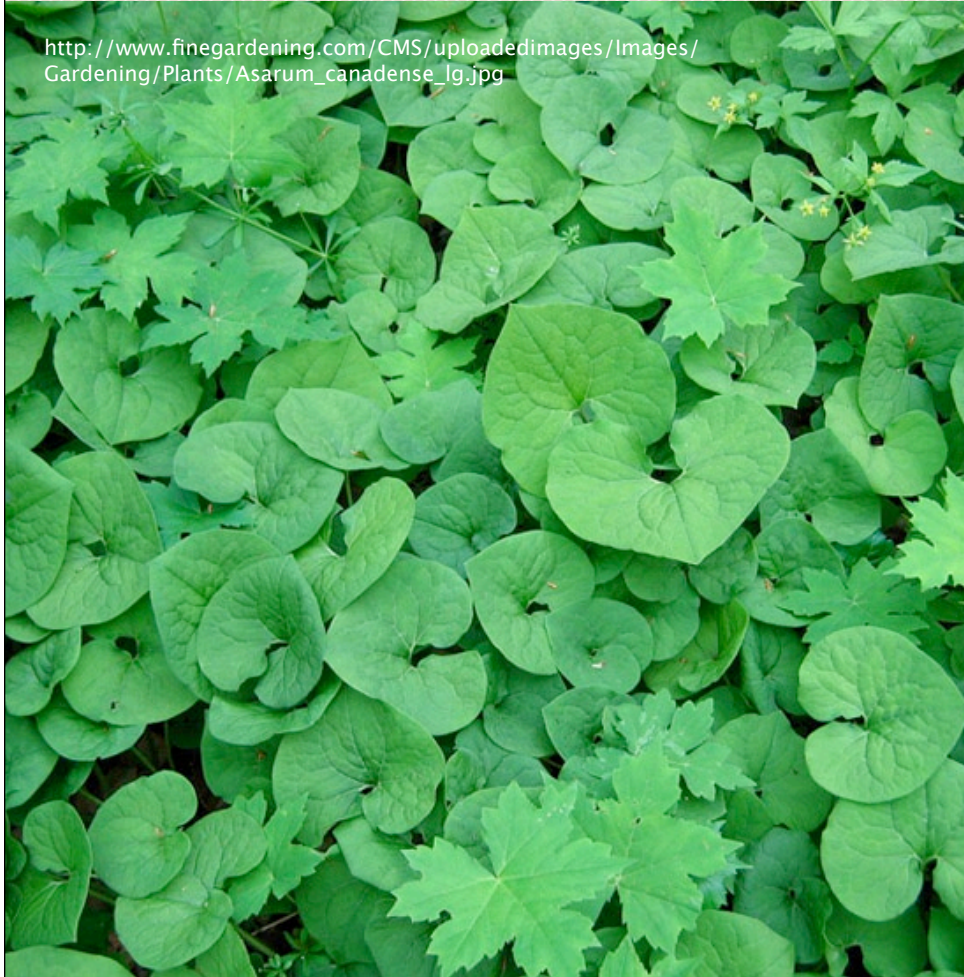


<http://www.gardenopus.com/images/HederaHelixBaltica.JPG>

English Ivy
(*Hedera helix*)

Native Solutions to English Ivy

(*Hedera helix*)



Wild Ginger

(*Asarum canadense*)



Climbing Hydrangea /

Woodvamp

(*Decumaria barbara*)



Oriental Bittersweet – (*Celastrus orbiculatus*)

Native Solutions to Oriental Bittersweet

(*Celastrus orbiculatus*)

<http://www.invasive.org/images/768x512/0016241.jpg>

American Bittersweet

(*Celastrus scandens*)

[http://www.botanypictures.com/plantimages/celastrus%20scandens%201%20\(boomwurger\).jpg](http://www.botanypictures.com/plantimages/celastrus%20scandens%201%20(boomwurger).jpg)

Carolina Snailseed

(*Cocculus carolinus*)

<http://www.scnps.org/images/plantid/coralberry.jpg>

Native Solutions to Japanese Honeysuckle

(*Lonicera japonica*)



Crossvine
(*Bignonia capreolata*)



Carolina Jessamine
(*Gelsemium sempervirens*)



Japanese Wisteria
(*Wisteria floribunda*)

NATIVE SOLUTION TO JAPANESE WISTERIA

(WISTERIA FLORIBUNDA)





<http://fatherpitt.wordpress.com/category/nature/page/2/>

Multiflora Rose
(*Rosa multiflora*)

Native Solution to Multiflora Rose

(Rosa multiflora)



<http://www.biosurvey.ou.edu/okwild/images/pasturerose.jpg>

Carolina Rose

(Rosa carolina)



http://farm3.static.flickr.com/2224/3534438210_64361f0e1b.jpg



Great Natives for Eastern TN Landscapes

Trees, Shrubs, Vines, Grasses and Perennials



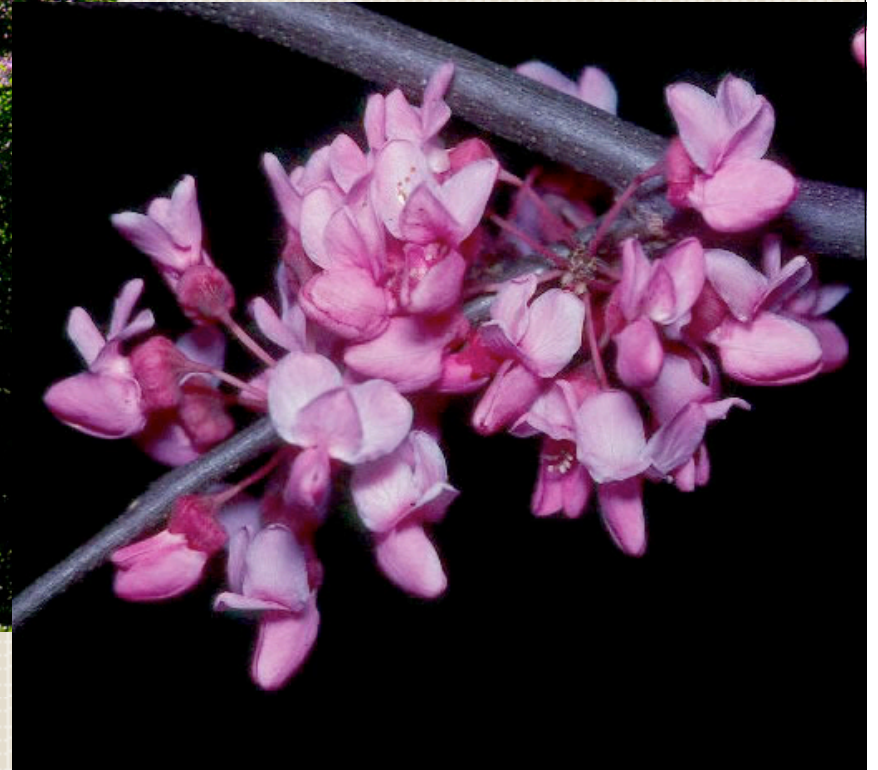
River Birch *Betula nigra*

Native, streams and riverbanks

Can grow 50' tall

Papery bark

Grows fast, tolerate very wet to average conditions



Redbud *Cercis canadensis*

Native throughout TN

Blooms early spring, deciduous

Lives ~ 20 yrs.

Sun –pt. shade, well drained soil

Fuller in sun



Fringe Tree *Chionanthus virginicus*

Native throughout TN in moist woodlands

Deciduous shrub or small tree to 10'-20'

Sun to part shade, moist to well drained soil

Showy white lacy flowers in the spring –males are heavier bloomers

Female plants have dark blue berries in late summer

Late season leaf spot common, not harmful



Sweet Bay Magnolia *Magnolia virginiana*

Grows 20'-30' tall

Often grows with multiple trunks

Attractive red seeds in fall are eaten by birds

Sun to part shade, moist soil –tolerates flooding

Mostly deciduous



Red Buckeye *Aesculus pavia*

Native to lower Coastal Plains and Cape Fear River Basin

Small deciduous tree –grows 10’-15’ high and 10’ wide

Beautiful spring flowers

Best in moist soil and afternoon shade

Foliage is deer resistant

Attracts hummingbirds!

Often defoliates early (Sept)



Blackhaw Viburnum *Viburnum prunifolium*

Native throughout TN

Grows 15' to 20' tall, often multi-stemmed

Clusters of white flowers in spring

Berries provide food for birds in the fall

Great fall color!

Sun to part shade

Moist, well drained soil



Flowering Dogwood

Deciduous tree 10-20 feet tall

Well drained soil

Part shade to full sun

Winter berries good for birds

Great Fall color

Resistant varieties available: Appalachian Spring



American Beautyberry *Callicarpa americana*

Native throughout TN

Tough native shrub for sun to part shade

Brilliant magenta berries in late summer and fall

Berries attract songbirds, including goldfinches

Grows 3'-10' tall and wide, depending on soil moisture

Can be cut back to 1' in early spring to produce denser shrub

Tolerates moist or dry soil, once established





Buttonbush *Cephalanthus occidentalis*

Native throughout TN

Deciduous shrub, grows 6'-10'

For sun to part shade, Moist to wet soil

Can grow in up to 3' of standing water

Unusual white globe like flowers in summer

Excellent nectar source for butterflies



©2005 Will Cook



Sweet Pepperbush *Clethra alnifolia*

Deciduous -yellow fall color

Sun –part shade, well drained or moist soil

Blooms in June-July, exceptional fragrance,

attract butterflies and pollinators



Virginia Sweetspire *Itea virginica*

Native throughout TN, wetlands
Deciduous shrub –great fall color
Sun to part shade, wet or well drained soil,
suckers
Flowers in May-June



Hearts-a-Burstin' *Euonymus americanus*

Native throughout TN

Deciduous shrub 6' to 8' tall and 3' to 4' wide

Sun to shade, moist or well drained soil –grows more open in shade

Covered each fall in red seed capsules that burst open to reveal orange seeds



Dwarf Witch-alder *Fothergilla gardenii*
Deciduous shrubs, great fall color
Early spring flowers, fragrant
Sun –pt. shade, moist or well drained soil



Inkberry *Ilex glabra*

Evergreen

Sun, moist soil

Black berries on female bushes

To 8'x 6'

Loved by bees



©2009 Will Cook



Cross Vine

Bignonia capreolata

Native throughout TN

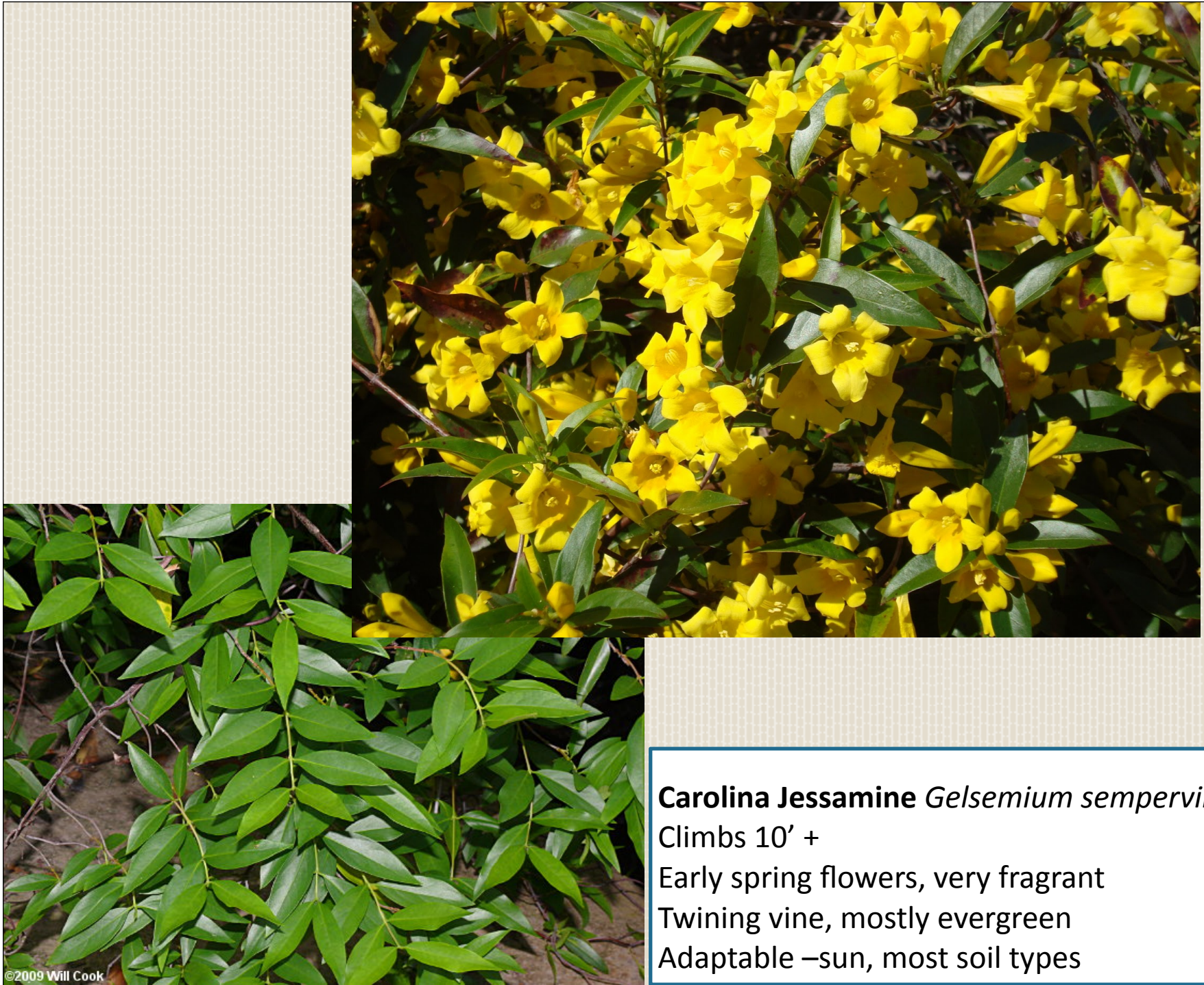
Moist or well drained soil, sun

Blooms mid spring

Vigorous climber –20'+

Good for hummingbirds

Can sucker from root pieces, but not as bad as its cousin, *Campsis*(Trumpet Vine)



Carolina Jessamine *Gelsemium sempervirens*

- Climbs 10' +
- Early spring flowers, very fragrant
- Twining vine, mostly evergreen
- Adaptable –sun, most soil types



Coral Honeysuckle *Lonicera sempervirens*

Spring blooming

Adaptable –sun, most soils

Flowers followed by red berries

Climbs 10'+



American Wisteria *Wisteria frutescens*
Vigorous twining vine – grows 15'+
Spring flowers, not fragrant
Sun, moist or well drained soil



Eastern Columbine *Aquilegia canadensis*

Native throughout TN

Blooms late March - May

Sun or shade, well drained soil

12" -24" tall in bloom

Attracts butterflies and hummingbirds

Will naturalize in the garden by self seeding



Green and Gold *Chrysogonum virginianum*
Light to part shade, moist or well drained soil
1'x 2'
Evergreen foliage
Early spring flowers
Good groundcover



American Alumroot *Heuchera americana*

Attractive marbled evergreen foliage

Small cream flowers in spring

Light to full shade

Well drained soil

Parent of hybrid Heuchera's



Bluestar *Amsonia tabernaemontana*
Tough, long lived clumping perennial
Attractive clusters of pale blue flowers in spring
Grows 1 to 2' tall and wide
Glossy green foliage, turns clear yellow in the fall
Sun to part shade, wet to well drained soil



White False Indigo *Baptisia alba*
Long lived, clump forming perennial
3'-4' tall, leggy
Blooms May



Plantain Leaved Pussytoes *Antennaria plantaginifolia*

Groundcover for sun to part shade

Well drained soil

Silky white spring flowers

Evergreen, grey foliage

Larval host for the American Painted Lady butterfly!



Partridge Berry *Mitchella repens*

Evergreen creeping perennial

Small white flowers in spring, with red berries ripening in the fall and often persisting over the winter

Shade and well drained soil, drought tolerant once established



Butterfly Weed *Asclepias tuberosa*

Tough clump forming perennial

Vibrant orange flowers in spring and early summer

Sun to part shade

Well drained soil

Very drought tolerant

Larval host plant for the Monarch butterfly

Great for beneficials



Swamp milkweed *Asclepias incarnata*

3' tall and wide

Spring/early summer flowers, pink or white

Sun to part shade

Moisture tolerant

Monarchs! Attracts many pollinators



Orange Coneflower *Rudbeckia fulgida*

Yellow flowers all summer, 3'tall

Sun, moist to average soil

Low mat of semi-evergreen foliage in winter

Leave seed heads in winter for birds



Cardinal Flower *Lobelia cardinalis*
Sun or shade, wet to moist soil
Gorgeous red flowers late summer to fall
3'-4' tall in flower
Attracts hummingbirds and butterflies



Rough Stemmed Goldenrod *Solidago rugosa*

Grows 3'-4' high and wide

Sun to part shade, well drained to wet soils

Tolerates drought once established

Yellow flowers in late summer provide nectar for butterflies and many other pollinators

Makes a spreading mat



Ironweed *Vernonia noveboracensis*

Royal purple flowers in late summer and fall

5' –8' in flower

Sun to light shade, wet to moist well drained soil

Attracts butterflies

Great for natural areas and pond's edge –spreads!



Narrow Leaf Sunflower *Helianthus angustifolius*

Grows well in sun, wet to well drained soils

Clump forming perennial 5'-8' tall, and 5' wide

Mountains of yellow flowers in fall

Excellent nectar source for butterflies



Switch Grass *Panicum virgatum*

Moist or dry soils

Sun to light shade

Stands up well through winter

References:

NC State Cooperative Extension <http://pender.ces.ncsu.edu/natives/>

Landscaping with Native plants brochure

Manual of Woody Landscape Plants. 1990 Michael Dirr