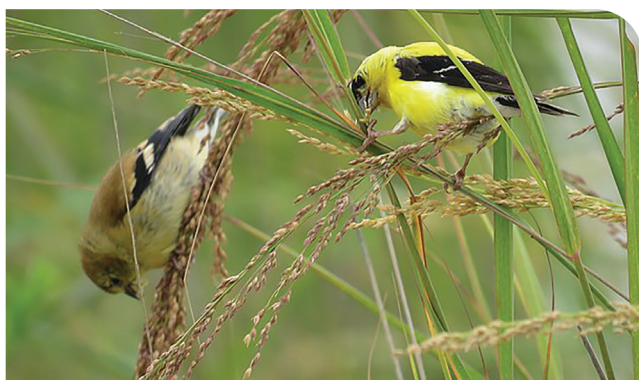


COASTAL
NORTH CAROLINA



PLANT THIS INSTEAD!

Eco-friendly Alternatives to
Harmful Ornamental Plants



From the
COASTAL
LANDSCAPES
INITIATIVE

This resource was produced by the Coastal Landscapes Initiative, a collaborative effort to address landscaping at every stage of the process, from planning and design to installation and management. Partners come from public and private sectors and draw on a range of North Carolina coastal landscaping expertise. The ultimate goal of the CLI is to foster coastal landscapes that are attractive, desirable, manageable, and environmentally friendly.

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Are Some Plants Harmful?

Homeowners, governments, and businesses want attractive properties that are not difficult to maintain. However, many people are unaware that some ornamental plants can cause harm by being “invasive.”

A plant from any region of the world can potentially be invasive in another region. This happens when a plant spreads beyond the site where it was introduced, eventually reducing the complexity of the plant and animal life in the surrounding natural systems.

Since invasive plants are accidentally or intentionally introduced to a new geographic area, they have not evolved with the other plants and animals at that location. A plant is typically considered native to the United States if the species grew here prior to European settlement — the time period when non-indigenous plant introductions rose.

In general, invasive plants produce and disperse a lot of seeds, and those seeds survive. They also grow vigorously and tolerate a wide range of environmental conditions. These characteristics, combined with no natural diseases or predators, give them an advantage outside their original territory.

What's At Stake

Controlling the spread and impact of harmful plants is a drain on individual, community, and government resources. Economic impact estimates range widely, but for one ornamental species, the European purple loosestrife (*Lythrum salicaria*), control costs and forage loss are estimated at \$45 million annually in the 48 states where it occurs.



Both mechanical and chemical controls may be needed to manage Callery pear trees (*Pyrus calleryana*).

Environmental losses occur when natural plant communities are degraded or displaced and when biodiversity is reduced. The direct and indirect costs of these disruptions are immeasurable, but a 2018 University of Delaware study of residential yards in the Washington D.C. area helps illustrate the importance of native plants to local wildlife. Scientists determined that Carolina chickadees (*Poecile carolinensis*) could sustain their population only where 70% or more of the plants were native.

Carolina chickadees feed primarily on caterpillars — that often rely exclusively on one (or a few) native plant species for their food. A single clutch of chickadees, hatched from 3 to 10 eggs, consumes up to 9,000 caterpillars in the 16 days it takes to develop into fledglings.

Native plant communities are essential for the survival of many other species, too. North Carolina has a vast array of coastal habitats and networks of vegetation — estuarine shorelines, dunes, maritime forests, and grasslands that connect to our wetlands, sounds, and ocean. Each has a unique arrangement of plants that support migratory and resident birds, mammals, reptiles, dragonflies, butterflies, bees, and other insects.

While development at the coast has reduced these habitats, we can support wildlife species by growing native plants in our yards and around our businesses, schools and other public properties.

How to Use this Guide

This guide can help our state's coastal property owners, landscapers, and designers become familiar with eco-harmful landscaping plants, as well as eco-friendly North Carolina plants that make better alternatives.

We organized this information according to how landscapers and property owners typically use plants: specimen trees or grasses; foundation or border shrubs; screens or hedges using shrubs, grasses, or vines; ornamental vines; and groundcovers. In each section, we identify plants to avoid and suggest beautiful, eco-friendly native plants that can fill the same purpose. Featured plants have characteristics (e.g., early spring flowers) similar to those most often sought in the avoided species.

On the pull-out poster, we provide details about the impacts of eco-harmful plants, as well as ten more plant

pests that you will want to remove quickly if they show up on your property. Catching them early will save time, money, and energy.

Finding Eco-Friendly Plants

The availability of North Carolina native plants has been increasing in recent years, and all of the species we suggest are available. However, some are only available at smaller, specialty, or online nurseries.

The costs of the plants we recommend should be similar to the choices to avoid; but you will find that in some cases they are for sale in smaller sizes. Grasses might be available as very young plants, or “plugs.” Plugs are very economical if you are planting a large area. They are also easy to install but might require more care in the first year than larger plants, and, in sandy and dry soils, they might need intensive watering during that time.

When shopping, always check the botanical (scientific) name to be sure you are purchasing the correct plants. Common plant names are easily confused and sometimes even refer to multiple different plants. For online searches, you might have more success locating a plant using the botanical name.

We do not recommend eco-harmful plants even when they are labeled “sterile.” Historically, some plants — or their seeds — have reverted back to a fertile state over time.

For information on locating these plants, visit go.ncsu.edu/get-them-here.

Landscape Use

Specimen Plants: Trees and Grasses

You can use these plants to draw attention in or through the landscape, with characteristics like showy flowers, large size, or interesting form. These specimen and accent plants work well singly, in pairs, or as a group.

Foundation and Border Shrubs

Small to medium sized shrubs work well as foundation plants to visually connect a building to the surrounding landscape — or in groups to define spaces. Placed close together, shrubs interweave and can provide a barrier to wind, as well as cover for wildlife. A mix of heights, as well as evergreen and deciduous plants, can create a layered effect for more visual appeal and ecological benefit.



American beautyberry (*Callicarpa americana*) attracts wildlife, including birds like this American Robin.

Screens and Hedges: Shrubs, Grasses and Vines

These plants serve as screens or hedges to block a view or provide a barrier to sound, create privacy, delineate a boundary, or filter light. You can train vines to climb on a support to serve as a screen, especially where space is limited.

Ornamental Deciduous Vines

Deciduous ornamental vines can bring vertical interest and flowers to an outdoor space and are great choices, especially if year-round screening is not your primary goal.

Terms

LIGHT: the plant's optimal sun exposure per day.

Full sun - 6 or more hours

Part shade - 6 hours

Deep shade - less than 2 hours

SOIL: the plant's optimal water/moisture level in the soil.

Dry - normally dry, drains quickly

Moist - retains moisture but drains well, “average” soil

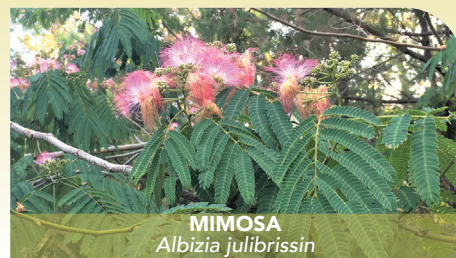
AVOID THESE TREES



CALLERY PEAR
Pyrus calleryana 'Bradford' and other cultivars



POPCORN TREE/ CHINESE TALLOW
Triadica sebifera



MIMOSA
Albizia julibrissin

PLANT THIS INSTEAD



SERVICEBERRY *Amelanchier canadensis*

This deciduous tree or small shrub features slightly fragrant white flowers that appear before the leaves in early spring. In late spring, tasty purple-red berries appear, which songbirds and various mammals eat. Its early blooms are important to pollinators, and the *Amelanchier* genus supports over 94 species of butterflies and moths. Its attractive fall foliage is yellow to bright orange-red.

TIP A dark foliage backdrop helps to highlight this tree's attractive flower, leaf, and bark.

LIGHT: Full sun to part shade **SOIL:** Moist
HEIGHT: 10'-20' **WIDTH:** 15'-20'



REDBUD *Cercis canadensis*

In early spring before foliage emerges, this deciduous, multi-trunked understory tree blooms profusely with stunning pea-like rose-purple edible flowers which cover the bare branches. Its heart shaped leaves turn pale yellow to greenish yellow in the fall. Bean-like seed pods often remain through the winter. This tree is a larval host plant for 12 species of Lepidoptera, the insect group that includes butterflies and moths. Birds feed on redbud seeds.

LIGHT: Full sun to part shade **SOIL:** Occasionally dry to moist
HEIGHT: 20'-30' **WIDTH:** 25'-35'



FRINGETREE *Chionanthus virginicus*

A showy, deciduous, multi-trunked tree with an abundance of softly fragrant fringe-like white flowers that appear in spring. The leaves turn yellow in autumn. The tree is used for food and shelter by many animals including birds, bees, and other pollinators. It is a host plant to the Fawn Sphinx and Rustic Sphinx moths.

TIP Plant it in a mass (large group) or as a specimen.

LIGHT: Full sun to part shade **SOIL:** Occasionally dry to moist
HEIGHT: 12'-30' **WIDTH:** 12'-20'

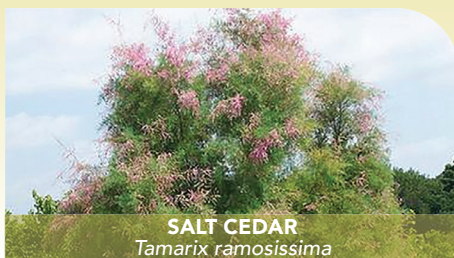
MORE SPECIMEN TREES

Flowering Dogwood *Cornus florida*
Sweetbay Magnolia *Magnolia virginiana*
Blackhaw *Viburnum prunifolium*

Red Mulberry *Morus rubra*
Sparkleberry *Vaccinium arboreum*
Red Buckeye *Aesculus pavia*

Carolina Cherry Laurel *Prunus caroliniana*
Hawthorn *Crataegus phaenopyrum*
Red Maple *Acer rubrum*

AVOID THIS TREE



SALT CEDAR
Tamarix ramosissima



SALT CEDAR
Tamarix ramosissima (close-up)

PLANT THIS INSTEAD



EASTERN RED CEDAR *Juniperus virginiana*

This dense evergreen tree is fast-growing and versatile. It is actually a juniper rather than a cedar and has berry-like cones that ripen in autumn that are eaten by songbirds and small mammals. The foliage provides winter cover to wildlife and it serves as the larval host for the Juniper Hairstreak butterfly. Birds and squirrels use the bark for nesting material.

TIP This tree works well in a rain garden and is also highly tolerant of salt spray.

LIGHT: Full sun to part shade **SOIL:** Dry to Wet
HEIGHT: 30'-40' **WIDTH:** 10'-20'



TOOTHACHE TREE, PRICKLY ASH *Zanthoxylum clava-herculis*

This tree has unique spiny-tipped projections on the bark. Its leaves have a fragrant odor, and it bears fruit in late summer. The tree also attracts pollinators and butterflies (in particular, as a larval host for the Giant Swallowtail butterfly). Songbirds and small animals eat its seeds.

LIGHT: Full sun to part shade **SOIL:** Moist
HEIGHT: 30'-40' **WIDTH:** 12'-15'



NORTHERN BAYBERRY *Morella pensylvanica*

A densely branching deciduous and sometimes evergreen shrub with aromatic leaves. It is a "nitrogen fixing" plant, which means it contributes nitrogen to the soil, thereby assisting the growth and production of other plants. Its fruits are grayish white, can persist through the winter, and are eaten by many birds species including songbirds and waterfowl. Female and male plants are necessary for fruit.

TIP This plant performs best in the northernmost counties of our state. Excellent in borders, mixed with broadleaf evergreens, or in a large group, and for erosion control. It also has high salt tolerance.

LIGHT: Full sun to part shade **SOIL:** Dry to moist

MORE SPECIMEN PLANTS

Wax Myrtle *Morella cerifera*

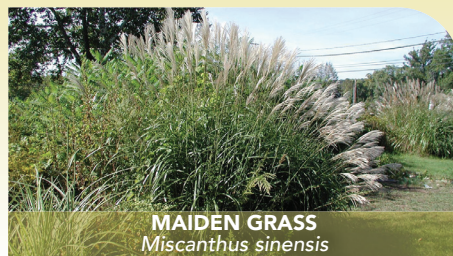
Yaupon Holly *Ilex vomitoria*

American Beautyberry *Callicarpa americana*

AVOID THESE GRASSES



PAMPAS GRASS
Cortaderia selloana



MAIDEN GRASS
Miscanthus sinensis

PLANT THIS INSTEAD



SWITCHGRASS *Panicum virgatum*
Taller cultivars like 'Heavy Metal' or 'Cloud Nine'

This perennial grass has an upright growth with an airy plume. The plant turns a golden color in autumn that persists through winter. Like other *Panicum* species, it has deep fibrous roots that provide erosion control. A variety of birds eat its seeds. It offers nesting sites and cover for birds and small mammals, and it serves as a larval host for various species of skipper butterfly and the Common Wood-Nymph.

TIP This grass has a high tolerance for saltwater flooding.

LIGHT: Full sun to part shade **SOIL:** Dry to moist

HEIGHT: 5'-8' **WIDTH:** 2'-3'



COASTAL PANICGRASS *Panicum amarum*
Taller cultivars like 'Dewey Blue' or 'Atlantic'

This perennial grass has strong stems that remain upright and an attractive inflorescence (flower head) from July to November. It naturally grows on dunes, where it helps with erosion control, and it is an excellent ornamental plant for any low-nutrient soil. It also serves as a larval host for various skipper butterflies and the Common Wood-Nymph larvae and provides an important food source for birds in autumn and winter.

TIP This grass has a high tolerance for salt spray and saltwater flooding.

LIGHT: Full sun **SOIL:** Dry to moist

HEIGHT: 3'-4' **WIDTH:** 2'-3'



INDIANGRASS *Sorghastrum nutans*

This bunchgrass has a narrow upright habit and remains green until the first frost. It takes on a pleasing yellow-orange color in the fall and has large seed heads that are a food source for songbirds and small mammals.

LIGHT: Full sun **SOIL:** Dry to moist

HEIGHT: 5'-7' **WIDTH:** 1'-2'

MORE SPECIMEN GRASSES

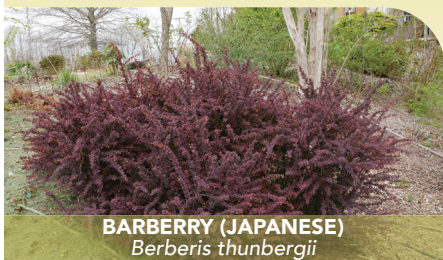
These shorter grasses are great choices if plant height is not a priority:

Switchgrass *Panicum virgatum*,
short cultivars like 'Cape Breeze'

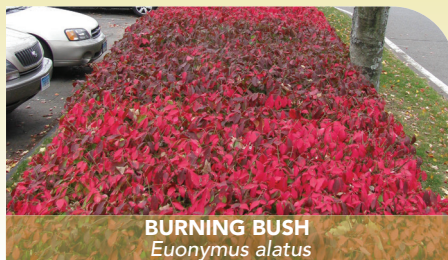
Muhly Grass *Muhlenbergia capillaris*

Little Bluestem *Schizachyrium scoparium*

AVOID THESE SHRUBS



BARBERRY (JAPANESE)
Berberis thunbergii



BURNING BUSH
Euonymus alatus



NANDINA
Nandina domestica

PLANT THIS INSTEAD



YAUPOH HOLLY *Ilex vomitoria*
Including dwarf varieties like 'Nana' or 'Schillings'

This evergreen shrub or small tree has small white fragrant flowers on pollinated female plants. It serves as a host plant for the Holly Azure butterfly. Fruit from the Yaupon holly feeds birds and other small mammals, and its foliage provides them cover. Dwarf varieties (pictured here) – are not usually fruit bearing.

TIP Yaupon holly has high salt tolerance. Dwarf varieties grow in a rounded manner and should not need pruning.

LIGHT: Full sun to part shade **SOIL:** Dry to wet

HEIGHT: 10'-20' **WIDTH:** 8'-12'

Dwarf varieties: **HEIGHT:** 3'-5' **WIDTH:** 3'-6'



WITCHALDER/DWARF WITCHALDER
Fothergilla major and *Fothergilla gardenii* (Pictured)

There are two species of this shrub to choose from: *Fothergilla gardenii* and the larger *Fothergilla major*. Both species are deciduous, form spreading clumps, and offer fall foliage in shades of yellow, orange and red – often all on the same plant. Fragrant white bottlebrush-shaped flowers appear in spring, attracting bees and butterflies.

TIP Great in a border planting of evergreen and deciduous shrubs.

LIGHT: Full sun to part shade **SOIL:** Moist

Fothergilla major: **HEIGHT:** 6'-10' **WIDTH:** 25'-35'

Fothergilla gardenii: **HEIGHT:** 3'-6' **WIDTH:** 2'-6'



DWARF PALMETTO *Sabal minor*

This winter hardy evergreen shrub has a tropical flair. Its fragrant white flowers bloom in May and June, followed by clusters of dark berries in autumn. Songbirds and mammals eat the berries.

TIP Works well under trees and adjacent to marshes.

LIGHT: Full sun to full shade **SOIL:** Moist to wet

HEIGHT: 2'-7' **WIDTH:** 4'-6'

MORE FOUNDATION/BORDER SHRUBS

Adam's Needle *Yucca filamentosa*
Winterberry Holly *Ilex verticillata*
Inkberry *Ilex glabra*
Red Chokeberry *Aronia arbutifolia*

Dusty Zenobia *Zenobia pulverulenta*
New Jersey Tea *Ceanothus americanus*
Smooth Hydrangea *Hydrangea arborescens*
Native Azalea *Rhododendron atlanticum*

American Beautyberry *Callicarpa americana*
Blueberry Bushes *Vaccinium species*
Ninebark *Physocarpus opulifolius*

AVOID THESE SHRUBS



PRIVETS: JAPANESE, GLOSSY & CHINESE
Ligustrum japonicum, lucidum (inset) & sinense



THORNY OLIVE & AUTUMN OLIVE
Elaeagnus pungens & umbellata (inset)

PLANT THIS INSTEAD



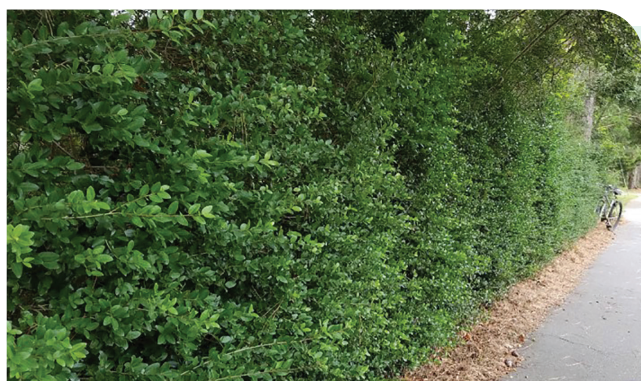
WAX MYRTLE *Morella cerifera*

A hardy and fast growing evergreen shrub or small tree that bounces back quickly if it incurs storm damage. Wax myrtles attract honeybees and pollinators. Its fruit feeds small mammals and various birds – including Carolina wrens, tree swallows, and migratory warblers. It also serves as a larval host for many butterflies, provides cover for birds and other wildlife, and as a nitrogen fixer contributes nitrogen to the soil, helping other plants to grow.

TIP This plant is tolerant of salt spray.

LIGHT: Full sun to part shade **SOIL:** Dry to wet

HEIGHT: 6'-12' **WIDTH:** 10'-20'



YAUPOH HOLLY *Ilex vomitoria*

This evergreen shrub or small tree is fast growing. The plants are either male or female, with the pollinated females bearing fruit from small, white flowers. Yaupon holly is a host plant for the Holly Azure butterfly. The evergreen's fruit feeds birds and other small mammals, and the foliage provides them cover. Root sprouts can form a thicket.

TIP For berries, plant a female holly, and also a male for pollination if one is not nearby. This plant has high salt tolerance.

LIGHT: Full sun to part shade **SOIL:** Dry to wet

HEIGHT: 10'-20' **WIDTH:** 8'-12'



CAROLINA CHERRY LAUREL *Prunus caroliniana*

In the spring, this evergreen tree or large shrub has fragrant, creamy white flowers. Its leaves are glossy, and its blooms attract bees and butterflies. Small mammals feed on its fruit, foliage provides winter cover, and it serves as a host plant for several butterfly species: Coral Hairstreak, Red-spotted Purple, Spring/Summer Azures, Viceroy, and Eastern Tiger Swallowtail.

LIGHT: Full sun to part shade **SOIL:** Moist

HEIGHT: 20'-40' **WIDTH:** 15'-20'

MORE SCREEN/HEDGE SHRUBS

Dahoon Holly *Ilex cassine*
Devilwood *Cartrema americana*
Eastern Red Cedar *Juniperus virginiana*
Winterberry Holly *Ilex verticillata*

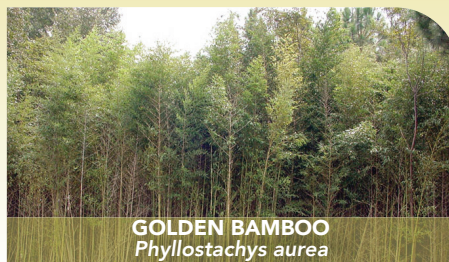
Witchalder *Fothergilla major, F. gardenii*
Southern Magnolia *Magnolia grandiflora*
(smaller cultivars)
Inkberry *Ilex glabra*

Dusty Zenobia *Zenobia pulverulenta*
Sweetbay Magnolia *Magnolia virginiana*
Rabbiteye Blueberry *Vaccinium virgatum*
cultivars

AVOID THIS WOODY GRASS



GOLDEN BAMBOO (CLOSE-UP)
Phyllostachys aurea



GOLDEN BAMBOO
Phyllostachys aurea

PLANT THIS INSTEAD



RIVER CANE *Arundinaria giganteum*

A native bamboo, this giant cane grows quickly into dense clumps, providing cover and food for birds and butterflies. It occurs naturally in floodplains, but has declined due to changes to the banks along rivers and streams. River cane also serves as the larval host plant for the Southern Pearly-Eye, Creole Pearly-Eye, and various species of skipper butterfly.

LIGHT: Full sun to deep shade **SOIL:** Moist
HEIGHT: 4'-25' **WIDTH:** 8'-20'



SUGARCANE PLUMEGRASS *Saccharum giganteum*

This tall, coarse, erect, clump-forming grass displays clusters of flowers before fluffy, peach-colored seed heads in autumn. It has a look similar to bamboo and the clumps will grow larger each year. The species attracts butterflies and serves as a larval host plant for various skipper butterflies and the Common Wood-Nymph.

LIGHT: Full sun **SOIL:** Moist to wet
HEIGHT: 3'-8' **WIDTH:** 3'-4'

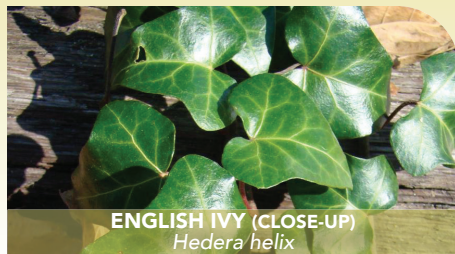
MORE PLANTS

Dahoon Holly *Ilex cassine*
Devilwood *Cartrema americana*
Eastern Red Cedar *Juniperus virginiana*

Winterberry Holly *Ilex verticillata*
Witchalder *Fothergilla major*, *F. gardenii*
Southern Magnolia *Magnolia grandiflora*

Inkberry *Ilex glabra*
Dusty Zenobia *Zenobia pulverulenta*
Sweetbay *Magnolia virginiana*

AVOID THIS VINE



ENGLISH IVY (CLOSE-UP)
Hedera helix



ENGLISH IVY
Hedera helix

PLANT THIS INSTEAD



CROSSVINE *Bignonia capreolata*

This semi-evergreen perennial vine climbs by tendrils and has special adaptations that enable it to cling to bark, stone, bricks, and fences. The vine has showy, orange-red, fragrant, trumpet-shaped flowers, which bloom in late winter to early spring. The tubular flowers attract hummingbirds. Leaves are a dark glossy green and may change to a reddish-purple in winter.

TIP This is a vigorous vine and may occasionally need pruning.

LIGHT: Full sun to part shade **SOIL:** Moist

HEIGHT: 15'-20' **WIDTH:** 10'-12'



CAROLINA JESSAMINE *Gelsemium sempervirens*

In the spring, expect sweetly scented, canary-yellow flowers on this perennial evergreen vine, which grows quickly. Flowers attract bees, hummingbirds, and butterflies — and it provides winter cover for birds.

TIP Carolina jessamine can also be used as a mounding groundcover. Fullness can be increased with pruning.

LIGHT: Full sun to part shade **SOIL:** Dry to moist

HEIGHT & WIDTH: 10'-12'



CORAL HONEYSUCKLE *Lonicera sempervirens*

This woody, semi-evergreen vine — our native honeysuckle — blooms both in spring and autumn. Various songbirds feed on its red berries including cedar waxwings, catbirds, and cardinals. Hummingbirds seek coral honeysuckle nectar, and the plant also serves as a larval host to the Hummingbird Clearwing moth.

TIP Mix with other vines to provide a denser screen.

LIGHT: Full sun **SOIL:** Moist

HEIGHT: 15'-20' **WIDTH:** 10'-12'

MORE SCREENING VINES

Leatherflower, Blue Jasmine *Clematis crispa*
Climbing Aster *Ampelaster caroliniana*

Wood Vamp, Climbing Hydrangea *Decumaria barbara*
Yellow Passionflower *Passiflora lutea*

AVOID THESE VINES



CHINESE WISTERIA & JAPANESE WISTERIA
Wisteria sinensis, Wisteria floribunda (Pictured)



AUTUMN CLEMATIS
Clematis terniflora



JAPANESE HONEYSUCKLE
Lonicera japonica

PLANT THIS INSTEAD



AMERICAN WISTERIA *Wisteria frutescens*

Unlike the invasive wisteria species, this deciduous woody vine is not aggressive. It has leaves and fragrant flowers that are similar to the invasive wisteria, but twines counterclockwise as it climbs, compared to the clockwise climb of the invasive species. American wisteria serves as a host plant for the Zarucco, Duskywing, and Long-Tailed Skipper butterflies.

LIGHT: Full sun to part shade **SOIL:** Moist
HEIGHT: 15'-40' **WIDTH:** 4'-8'



WOODBINE *Clematis virginiana*

This rapidly-growing perennial vine provides fragrant white flowers in late summer to early autumn and is the preferred native plant over the invasive Autumn clematis (*Clematis terniflora*). Woodbine serves as a food source for seed-eating birds, nectar-seeking butterflies, and insects.

TIP This vine needs ample support to climb, otherwise it will form a dense mat on the ground. It can also grow vigorously in ideal environmental conditions, making it great for natural areas on a property.

LIGHT: Full sun to part shade **SOIL:** Moist to wet



PASSIONFLOWER, MAYPOP *Passiflora incarnata*

The stunning summer flowers attract hummingbirds and butterflies to this perennial, climbing, woody vine. Its fruits appear in late summer, providing food for songbirds, small mammals, and even some larger mammals.

TIP This is a vigorous vine and may spread through underground stems. Great for naturalized areas.

LIGHT: Full sun to part shade **SOIL:** Moist
HEIGHT: 6'-8' **WIDTH:** 3'-6'

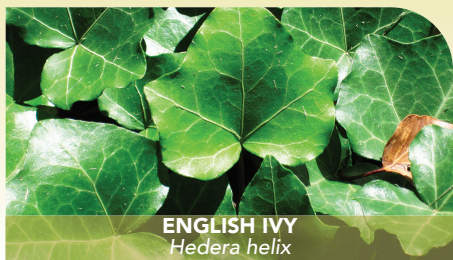
MORE ORNAMENTAL VINES

Leatherflower, Blue Jasmine *Clematis crispa*
Coral Honeysuckle *Lonicera sempervirens*

Climbing Aster *Ampelaster caroliniana*
Wood Vamp, Climbing Hydrangea
Decumaria barbara

Yellow Passionflower *Passiflora lutea*

AVOID THESE VINES



ENGLISH IVY
Hedera helix



PERIWINKLE
Vinca major, Vinca minor



WINTERCREEPER
Euonymus fortunei

PLANT THIS INSTEAD



PARTRIDGEBERRY *Mitchella repens*

An evergreen creeping vine, partridgeberry offers interesting foliage, flowers, and fruit. The flowers attract butterflies, bees, and other insects, while its red berries persist into winter and provide food for songbirds, ruffed grouse, turkeys, quail, and small mammals.

TIP This vine may be slow to establish, so be patient.

LIGHT: Full sun to deep shade **SOIL:** Moist but tolerates dry soil in shade

HEIGHT: 1"-3" **WIDTH:** 12"-16"



CAROLINA JESSAMINE *Gelsemium sempervirens*

In the spring, expect sweetly scented, canary-yellow flowers on this perennial evergreen vine, which grows quickly. Flowers attract bees, hummingbirds, and butterflies — and it provides winter cover for birds.

LIGHT: Full sun to part shade **SOIL:** Dry to moist

HEIGHT & WIDTH: 10'-12'



CREeping SEDGE *Carex laxiculmis*

This petite and finely textured perennial sedge is semi-evergreen with graceful, arching leaves that are a beautiful blue-green color. The plant forms clumps, and spreads slowly over time to form colonies. It supports various Satyr butterfly larvae.

TIP This sedge makes a great accent plant and combines well with other low-growing shade loving perennials like *Phlox divaricata*, *Iris cristata*, or *Heuchera americana*.

LIGHT: Part to deep shade **SOIL:** Moist

HEIGHT: 6"-14" **WIDTH:** 10"-18"

MORE GROUNDCOVERS

White Wood Aster *Eurybia divaricata*
Cherokee Sedge *Carex cherokeensis*
Blue Wood Sedge *Carex flaccospermum*

Christmas Fern *Polystichum acrostichoides*
Common Blue Violet *Viola sororia*
Lyre-leaf Sage *Salvia lyrata*

Green and Gold *Chrysogonum virginianum*
Golden Ragwort *Packera aurea*

AVOID THIS GRASS



WEeping LOVE GRASS
Eragrostis curvula



WEeping LOVE GRASS
Eragrostis curvula

PLANT THESE



ELLIOTT'S LOVEGRASS *Eragrostis elliottii*

Small whitish flowers on wispy panicles and silver-blue-green blades make this perennial grass distinct. Its seeds are tiny and prolific, providing food for invertebrates and small birds, and it offers cover for songbirds and small mammals.

TIP This grass is tolerant of salt spray but not saltwater flooding, and does well in nutrient poor soils. Allow it to reseed as it is a short-lived perennial.

LIGHT: Full sun **SOIL:** Dry to moist

HEIGHT & WIDTH: 1'-2'



SWITCHGRASS *Panicum virgatum* (*'Cape Breeze'* and other short cultivars)

This perennial grass has an upright growth with an airy plume. The plant turns a golden color in autumn that persists through winter. Like other panicum species, it has deep fibrous roots that provide erosion control. A variety of birds eat its seeds. It offers nesting sites and cover for birds and small mammals, and it serves as larval host for various species of skipper butterfly and the Common Wood-Nymph.

TIP This grass has a high tolerance for saltwater flooding.

LIGHT: Full sun to part shade **SOIL:** Dry to moist

HEIGHT: 2'-2.5' **WIDTH:** 2'



LITTLE BLUESTEM *Schizachyrium scoparium*

This warm-season bunch grass has a narrow upright habit. It provides year-round seasonal color, including fall seedheads and winter structure. A variety of birds eat its seeds, and little bluestem serves as a host plant for various skipper larvae and the Common Wood-Nymph (*Cercyonis pegala*).

TIP This grass is highly salt tolerant. Wait until just before spring to cut this plant back to the ground.

LIGHT: Full sun **SOIL:** Dry to moist

HEIGHT: 2'-4' **WIDTH:** 2'-3'

MORE GROUNDCOVERS

Narrowleaf Silkgrass *Pityopsis graminifolia*
Splitbeard Bluestem *Andropogon ternarius*
Purple Lovegrass *Eragrostis spectabilis*

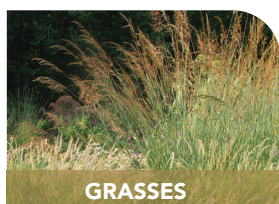
Blue Wood Sedge *Carex flaccosperma*
Cherokee Sedge *Carex cherokeensis*



PLANT THIS: QUICK REFERENCE GUIDE



TREES



GRASSES



SHRUBS



VINES



GROUND COVER

TREES

COMMON NAME	SCIENTIFIC NAME	LIGHT	SOIL	HEIGHT/ WIDTH	WILDLIFE BENEFITS
Red Maple	<i>Acer rubrum</i>	Full sun to part shade	Moist	H: 40'-120' W: 30'-50'	Early nectar for bees, host plant for Imperial moth. Seeds/fruit are eaten by birds and mammals.
Serviceberry	<i>Amelanchier canadensis</i>	Full sun to part shade	Moist	H: 10'-20' W: 15'-20'	Small mammals and birds eat the fruit. Host for the Red-Spotted Purple and the Viceroy butterflies.
Red Buckeye	<i>Aesculus pavia</i>	Part shade	Moist	H: 15'-20' W: 15'-20'	Early spring flowers support butterflies, pollinators and hummingbirds. Seeds eaten by squirrels.
Devilwood	<i>Cartrema americana</i>	Full sun to part shade	Moist	H: 10'-30' W: 6'-15'	Provides cover during the winter and extreme weather. Fruits are eaten by birds and small mammals.
Redbud	<i>Cercis canadensis</i>	Full sun to part shade	Moist	H: 20'-30' W: 25'-35'	Host plant for 12 species of Lepidoptera. Songbirds and mammals eat the seeds.
Fringetree	<i>Chionanthus virginicus</i>	Part shade	Moist	H: 12'-30' W: 12'-20'	Food / shelter for many animals. Host to the Fawn Sphinx and Rustic Sphinx moths.
Flowering Dogwood	<i>Cornus florida</i>	Full sun to part shade	Moist	H: 15'-25' W: 15'-30'	Supports specialist bees and butterflies. Fruit provides food to birds and mammals.
Hawthorn	<i>Crataegus phaenopyrum</i>	Full sun to part shade	Dry to Moist	H: 25'-30' W: 20'-25'	Hummingbirds and butterflies use its nectar. Birds and mammals eat the fruit.
Dahoon Holly	<i>Ilex cassine</i>	Full sun to part shade	Moist to Wet	H: 20'-30' W: 10'-15'	Berries provide winter food for birds and small mammals.
Yaupon Holly	<i>Ilex vomitoria</i>	Full sun to part shade	Dry to Wet	H: 10'-20' W: 8'-12'	Cover and food for insects, mammals and birds. Larval host plant for Holly Azure butterfly.
Eastern Red Cedar	<i>Juniperus virginiana</i>	Full sun to part shade	Dry to Wet	H: 30'-40' W: 10'-20'	Provides cover and food for mammals and birds. Host plant for Juniper Hairstreak butterfly.
Southern Magnolia	<i>Magnolia grandiflora</i>	Full sun to part shade	Moist	H: 15'-80' W: 6'-50'	Supports pollinators and provides winter and severe weather cover. Its seeds are eaten by birds and small mammals.
Sweetbay	<i>Magnolia virginiana</i>	Full sun to part shade	Moist	H: 15'-100' W: 10'-20'	Provides winter and severe weather cover. Seeds are eaten by birds and small mammals.
Red Mulberry	<i>Morus rubra</i>	Sun to part shade	Moist	H: 25'-60' W: 35'-40'	Attracts pollinators and fruit is eaten by many birds.
Carolina Cherry Laurel	<i>Prunus caroliniana</i>	Full sun to part shade	Moist	H: 20'-40' W: 15'-20'	Host for Coral Hairstreak, Red-spotted Purple, Spring/Summer Azures, Viceroy and Eastern Tiger Swallowtail butterflies.
Sparkleberry	<i>Vaccinium arboreum</i>	Full sun to part shade	Moist	H: 8'-15' W: 4'-10'	Supports pollinators, including specialist bees.
Blackhaw	<i>Viburnum prunifolium</i>	Full sun to part shade	Moist	H: 12'-20' W: 6'-15'	Host plant for Spring/Summer Azure butterflies. Wildlife eats the fruit.

SHRUBS

COMMON NAME	SCIENTIFIC NAME	LIGHT	SOIL	HEIGHT/ WIDTH	WILDLIFE BENEFITS
Red Chokeberry	<i>Aronia arbutifolia</i>	Full sun to part shade	Dry to Wet	H: 6'-10' W: 3'-5'	Important late winter food for birds.
Beautyberry	<i>Callicarpa americana</i>	Full sun to part shade	Dry to Moist	H: 3'-8' W: 3'-6'	Feeds birds, butterflies, and small mammals.
New Jersey Tea	<i>Ceanothus americanus</i>	Full sun to part shade	Dry to Moist	H: 2'-3' W: 3'-5'	Host plant for Mottled Duskywing, Spring/Summer Azure butterflies. Supports pollinators including specialist bees. Birds eat the fruit.
Silky Dogwood	<i>Cornus amomum</i>	Full sun to deep shade	Moist	H: 6'-12' W: 6'-12'	Host plant for Spring/Summer Azure butterflies, supports pollinators including specialist bees, fruits feed birds.
Strawberry Bush	<i>Euonymus americanus</i>	Full sun to deep shade	Moist	H: 4'-6' W: 4'-6'	Small mammals and birds eat its seeds.
Dwarf Witchalder	<i>Fothergilla gardenii</i>	Full sun to part shade	Moist	H: 3'-6' W: 2'-6'	Spring flowers support butterflies and other pollinators.
Witchalder	<i>Fothergilla major</i>	Full sun to part shade	Moist	H: 6'-12' W: 6'-10'	Spring flowers support butterflies and other pollinators.
Smooth Hydrangea	<i>Hydrangea arborescens</i>	Full sun to part shade	Moist	H: 3'-5' W: 3'-5'	Flowers attract butterflies and other pollinators. Songbirds eat the seeds. Host plant of the Hydrangea Sphinx moth.
Inkberry	<i>Ilex glabra</i>	Full sun to part shade	Dry to Wet	H: 6'-8' W: 6'-8'	Birds love the berries. Host for Holly Azure butterfly.
Winterberry Holly	<i>Ilex verticillata</i>	Full sun to part shade	Moist to Wet	H: 3'-5' W: 3'-12'	Nectar supports specialist bees. Fruit feeds many bird species and mammals. Host for Henry's Elfin and Holly Azure butterflies.
Dwarf Yapon Holly	<i>Ilex vomitoria</i> , e.g., 'Nana'	Full sun to part shade	Moist	H: 3'-5' W: 3'-6'	Provides dense cover for wildlife.
Northern Bayberry	<i>Morella pensylvanica</i>	Full sun to part shade	Dry to Moist	H: 5'-10' W: 5'-10'	Fruits are eaten by songbirds, waterfowl, shorebirds and marsh birds.
Wax Myrtle	<i>Morella cerifera</i>	Full sun to part shade	Dry to Wet	H: 6'-12' W: 10'-20'	Supports birds and pollinators. Host for many butterflies.
Ninebark	<i>Physocarpus opulifolius</i>	Full sun to part shade	Moist	H: 5'-8' W: 6'-10'	Supports a wide array of pollinators and dense foliage provides good bird nesting habitat.
Coastal Azalea	<i>Rhododendron atlanticum</i>	Full sun to part shade	Moist	H: 3'-6' W: 3'-6'	Supports butterflies, specialized bees and hummingbirds.
Dwarf Palmetto	<i>Sabal minor</i>	Full sun to full shade	Moist to Wet	H: 2'-7' W: 4'-6'	Songbirds and mammals eat the berries.
Sparkleberry	<i>Vaccinium arboreum</i>	Full sun to part shade	Moist	H: 8'-15' W: 4'-10'	Supports specialized bees.
Highbush Blueberry	<i>Vaccinium corymbosum</i>	Full sun to part shade	Moist	H: 3'-12' W: 3'-10'	One of the best plants for insects (including pollinators), birds and small mammals.
Rabbit-eye Blueberry	<i>Vaccinium virgatum</i>	Full sun to part shade	Moist	H: 8'-15' W: 6'-8'	One of the best plants for insects (including pollinators), birds and small mammals.
Adam's Needle	<i>Yucca filamentosa</i>	Full sun to part shade	Moist	H: 3'-8' W: 3'-5'	Attracts hummingbirds and pollinators, and is a larval host for Skipper butterflies.
Dusty Zenobia	<i>Zenobia pulverulenta</i>	Full sun to part shade	Moist	H: 3'-10' W: 3'-7'	Supports mammals, songbirds and pollinators.

VINES

COMMON NAME	SCIENTIFIC NAME	LIGHT	SOIL	HEIGHT/ WIDTH	WILDLIFE BENEFITS
Climbing Aster	<i>Ampelaster caroliniana</i>	Full sun to part shade	Dry to Wet	H: 10'-12' W: 10'-12'	Late nectar source for migrating monarchs and bees. Larval host of the Pearl Crescent butterfly. Seeds eaten by songbirds and small mammals.
Crossvine	<i>Bignonia capreolata</i>	Full sun to part shade	Moist	H: 15'-20' W: 10'-12'	Tubular flowers attract hummingbirds and butterflies.
Leatherflower	<i>Clematis crispa</i>	Full sun to part shade	Moist to Wet	H: 6'-10' W: 3'-6'	Feeds butterflies and other insects, as well as birds, including hummingbirds.
Woodbine	<i>Clematis virginiana</i>	Full sun to part shade	Moist to Wet	H: 15'-20' W: 3'-6'	Feeds birds, butterflies and other insects.
Wood Vamp	<i>Decumaria barbara</i>	Full sun to deep shade	Moist	H: 12'-36' W: 1'-3'	Attractive to bees, butterflies and other pollinators.
Carolina Jessamine	<i>Gelsemium sempervirens</i>	Full sun to part shade	Dry to Moist	H: 10'-12' W: 10'-12'	Food source for pollinators, hummingbirds and butterflies.
Coral Honeysuckle	<i>Lonicera sempervirens</i>	Full sun	Moist	H: 15'-20' W: 10'-12'	Various songbirds - including cedar waxwings, catbirds, and cardinals — feed on its red berries, and hummingbirds seek its nectar. Larval host to the hummingbird clearwing moth.
Partridgeberry	<i>Mitchella repens</i>	Full sun to deep shade	Moist	H: 1"-3" W: 12"-16"	Flowers attract butterflies, bees and other insects. Red berries persist into winter and are eaten by various birds and small mammals.
Passionflower	<i>Passiflora incarnata</i>	Full sun to part shade	Moist	H: 6'-8' W: 3'-6'	Summer flowers attract hummingbirds and butterflies. Late summer fruit are eaten by songbirds and mammals.
Yellow Passionflower	<i>Passiflora lutea</i>	Full sun to part shade	Moist	H: 10'-20' W: 2'-4'	Attracts hummingbirds, butterflies, bees and other pollinators. Host to the Gulf Fritillary, Zebra Heliconia, and Variegated Fritillary butterfly.
American Wisteria	<i>Wisteria frutescens</i>	Full sun to part shade	Moist	H: 15'-40' W: 4'-8'	Host for Zarucco Duskwing and Long-Tailed Skipper butterfly.

SEDGES

COMMON NAME	SCIENTIFIC NAME	LIGHT	SOIL	HEIGHT/ WIDTH	WILDLIFE BENEFITS
Cherokee Sedge	<i>Carex cherokeensis</i>	Full sun to shade	Moist	H: 1'-2' W: 1'-2'	Host for Satyr butterfly. Cover and nesting material for birds.
Blue Wood Sedge	<i>Carex flaccosperma</i>	Part shade to deep shade	Moist	H: 6"-12" W: 6"-12"	Attracts pollinators and butterflies. Provides nesting material and cover for birds and small mammals.
Creeping Sedge	<i>Carex laxiculmis</i>	Part shade to deep shade	Moist	H: 6"-12" W: 6"-12"	Supports various butterfly and moth species.

GRASSES

COMMON NAME	SCIENTIFIC NAME	LIGHT	SOIL	HEIGHT/ WIDTH	WILDLIFE BENEFITS
Splitbeard Bluestem	<i>Andropogon ternarius</i>	Full sun to part shade	Moist	H: 2'-3' W: 1'-2'	Supports various butterfly and moth species. Songbirds eat its seeds.
River Cane	<i>Arundinaria giganteum</i>	Full sun to deep shade	Moist to Wet	H: 4'-25' W: 8'-20'	Provides wildlife cover and food. Host plant for Southern Pearly-Eye, Creole Pearly-Eye, and various Skipper butterfly.
Elliott's Lovegrass	<i>Eragrostis elliottii</i>	Full sun	Moist	H: 1'-2' W: 1'-2'	Tiny and prolific seeds feed invertebrates and small birds. Cover for songbirds and small mammals.
Purple Lovegrass	<i>Eragrostis spectabilis</i>	Full sun	Moist	H: 8"-14" W: 10"-16"	Butterfly host. Birds consume seeds and use plant material for nests.
Path Rush	<i>Juncus tenuis</i>	Full sun to part shade	Moist to Wet	H: 6"-24" W: 6"-24"	Birds eat seeds and use foliage for nest construction.
Muhly Grass	<i>Muhlenbergia capillaris</i>	Full sun	Dry to Moist	H: 3'-4' W: 3'-4'	Attracts and supports butterflies and songbirds.
Coastal Panicgrass	<i>Panicum amarum</i>	Full sun	Dry to Moist	H: 3'-4' W: 2'-3'	Host for various skipper butterflies and the Common Wood-Nymph.
Switchgrass, tall	<i>Panicum virgatum</i> , e.g., 'Heavy Metal'	Full sun to part shade	Dry to Moist	H: 5'-8' W: 2'-3'	Wetland birds and songbirds eat its seeds. Host to various species of Skipper butterflies.
Switchgrass, short	<i>Panicum virgatum</i> , e.g., 'Cape Breeze'	Full sun to part shade	Dry to Moist	H: 2'-2.5' W: 2'-3'	Wetland birds and songbirds eat its seeds. Cover for birds and small mammals and butterfly host plant.
Sugarcane Plumegrass	<i>Saccharum giganteum</i>	Full sun	Moist to Wet	H: 3'-8' W: 3'-4'	Host plant for various Skipper butterfly species and Common Wood-Nymph.
Little Bluestem	<i>Schizachyrium scoparium</i>	Full sun	Moist to Wet	H: 2'-4' W: 2'-4'	Host of various Skipper butterfly species. Seeds feed songbirds and small mammals.
Indian Grass	<i>Sorghastrum nutans</i>	Full sun	Moist	H: 5'-7' W: 1'-2'	Provides year-round cover. Seeds eaten by songbirds and small animals.

PERENNIALS

COMMON NAME	SCIENTIFIC NAME	LIGHT	SOIL	HEIGHT/ WIDTH	WILDLIFE BENEFITS
Green and Gold	<i>Chrysogonum virginianum</i>	Part shade to deep shade	Moist	H: 1"-2" W: 1'-2'	Flowers attract bees & butterflies and seeds are eaten by songbirds.
White Wood Aster	<i>Eurybia divaricata</i>	Part shade to deep shade	Moist	H: 1'-3' W: 1.5'-2.5'	Seeds eaten by birds and small mammals. Host for the Pearl Crescent butterfly.
Golden Ragwort	<i>Packera aurea</i>	Full sun to part shade	Moist	H: 1'-2' W: 6"-2'	Flowers attract pollinators and seeds attract birds.
Christmas Fern	<i>Polystichum acrostichoides</i>	Part shade to deep shade	Dry to Moist	H: 1'-2' W: 1'-2'	Cover for many small animals. Songbirds use plant material for constructing nests.
Lyre-leaf Sage	<i>Salvia lyrata</i>	Part shade to deep shade	Moist	H: 1'-2' W: 6"-12"	Flowers are attractive to butterflies and other pollinators.
Common Blue Violet	<i>Viola sororia</i>	Full sun to deep shade	Moist	H: 6"-10" W: 6"-10"	Host for the Great Spangled Fritillary. Supports pollinators including specialist bees.

RESOURCES

Videos About Native Plants

Little Bluestem

go.ncsu.edu/bluestem

Yaupon Holly

go.ncsu.edu/yaupon-holly

American Beautyberry

go.ncsu.edu/beautyberry

Dwarf Palmetto

go.ncsu.edu/dwarf-palmetto

Red Buckeye

go.ncsu.edu/red-buckeye

Information on Native and Invasive Plants

Coastal Landscapes Initiative

go.ncsu.edu/CoastalLandscapes

Locating Eco-Friendly Plants

go.ncsu.edu/get-them-here

NC State Going Native

wildlifefriendlylandscapes.ces.ncsu.edu

National Wildlife Federation's Native Plant Finder

nwf.org/nativeplantfinder/

Controlling Invasive Plants (NC Botanical Garden)

go.ncsu.edu/controlling

A Field Guide for the Identification of Invasive Plants in Southern Forests

srs.fs.usda.gov/pubs/gtr/gtr_srs119.pdf

NC Native Plant Society

NCwildflower.org

Non-native Invasive Plants of Southern Forests

invasive.org/eastern/srs

Invasive Plant Atlas

invasiveplantatlas.org

References

Invasive Species Terminology: Standardizing for Stakeholder Education

archives.joe.org/joe/2020june/a3.php

Update on the Environmental and Economic Costs Associated with Alien-invasive Species in the United States

go.ncsu.edu/the-costs

Invaders for Sale

go.ncsu.edu/invaders-for-sale

NC Invasive Plant Council

nc-ipc.weebly.com

National Invasive Species Information Center, U.S. Department of Agriculture

invasivespeciesinfo.gov

Nonnative Plants Reduce Population Growth of an Insectivorous Bird

pnas.org/doi/full/10.1073/pnas.1809259115

NC State University Plant Toolbox

plants.ces.ncsu.edu

NC Coastal Landscaping: A Native Plant Guide

go.ncsu.edu/CoastalLandscapes

Center for Invasive Species and Ecosystem Health

bugwood.org

Lady Bird Johnson Wildflower Center

wildflower.org

Missouri Botanical Garden

missouribotanicalgarden.org

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Eremochloa ophiuroides: stolen by Shawn Banks, N.C. State University; seed head by Shawn Banks, N.C. State University; infestation by GFPutnam

Ailanthus altissima: seedlings by Leslie J. Mehrhoff, University of Connecticut, Bugwood.org; sapling by Chuck Bargerion, University of Georgia, Bugwood.org; tree by Chuck Bargerion, University of Georgia, Bugwood.org

Melia azedarach: foliage by Karan A. Rawlins, University of Georgia, Bugwood.org; immature fruit by Franklin Bonner, U.S. Fish and Wildlife Service (ret); flowers by Emily Earp, Bugwood.org

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