



{ Flowering Dogwood
by William Bartram }



{ Longleaf Pine
by Georg D. Erhet }

Fire Adaptive Landscaping

for Native
Habitats
and Wildlife in the
Southern Coastal Plain

A project of the
Georgia Forestry Commission
U.S. Fish and Wildlife Service
Coastal WildScapes

Illustrations

The Southeast has long been recognized for its biological richness and diversity. Illustrations for this publication were taken from the works of early naturalists and illustrators exploring the Southeast and scientific illustrators, based in Europe. Below are seven naturalist who spent time in the Southeast and the years they spent here documenting plants and animals of this region. Most of the illustrations in this book are from their works. All of the plants depicted are native to the Southern Coastal Plain.

John White: 1585-1586 & 1590

Mark Catesby: 1712-1719 & 1722-1726

William Bartram: 1773-1776

John Abbot: 1773-1841

Andre Michaux: 1785-1796

John James Audubon: 1803-1842

Philip Henry Gosse: 1838

Legacy of Abundance

We have in our keeping a legacy of abundant, beautiful and healthy natural communities, many of which were shaped by fire. Plant your garden to support this biologically rich region, let native habitats inspire your landscape, and design with Firewise Principles in mind.



{ Red Maple & Bobolink
by John James Audubon }

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For Native
Habitats
and Wildlife in the
Southern Coastal Plain

2013

Christa Frangiamore Hayes

Georgia Forestry Commission
U.S. Fish and Wildlife Service
Coastal WildScapes

Acknowledgments:

This slender volume evolved from a previous publication, *Landscaping in Coastal Habitats {with a Firewise Approach}* that was sponsored by the Georgia Forestry Commission. Two wonderful interns, Meghan Injaychock and Brett Walker, from the University of Georgia's School of Environment and Design were integral to the success of that first publication. To my delight, Meghan agreed to revive aging files and helped bring this book to fruition. Thank you, Meghan.

By happy circumstance, Linda Lamb, with Coastal WildScapes, and Eric Mosely, with the Georgia Forestry Commission, crossed paths some years after the first book was published. From that happy meeting, and the addition of Terri Jenkins, U.S. Fish and Wildlife Service, came the energy and vision to create another book with a larger geographic scope, a fresher look, and more informed content. The following people joined in at various times, providing knowledge and insight. I could not ask for a better team.

Thomas Angell

M. Forbes Boyle

Scott Coleman

Cecil Frost

Agustina Hein

Terri Jenkins

Linda Lamb

Eamonn Leonard

Eric Mosley



{ Pine Lily
by Mark Catesby }

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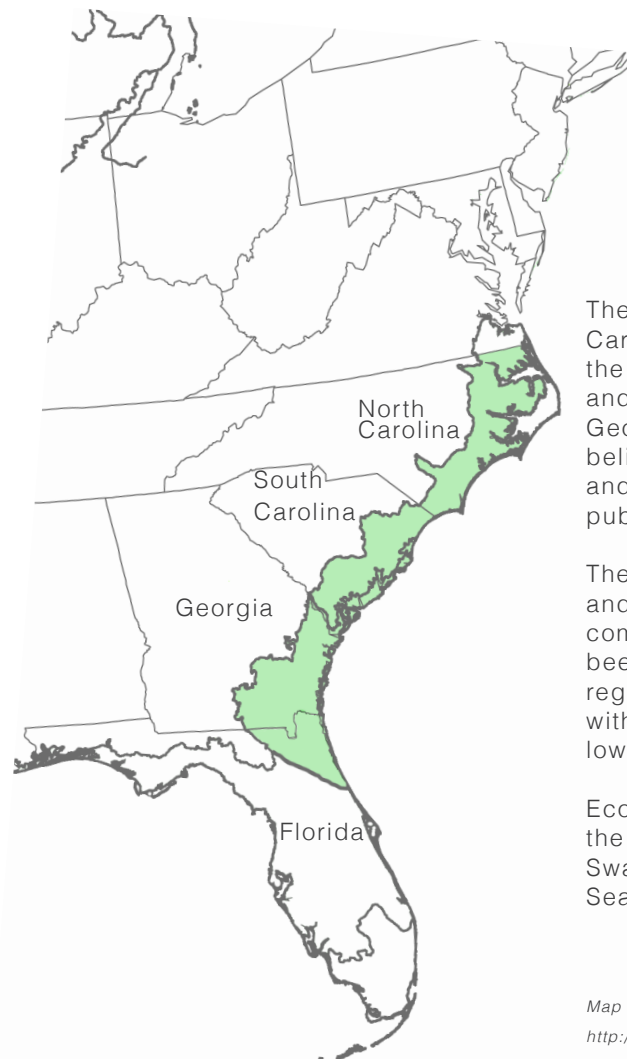
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Introduction

The Southern Coastal Plain of the southeastern United States is a region that has been shaped by fire from people and nature for thousands and millions of years.

Many residents of this region live in or near areas of wildland-urban interface where natural fire and hydrologic systems have been altered. These alterations, in concert with climate change, can increase the risk of damaging fires. It requires forward thinking people to incorporate fire management and fire safety into their landscaping decisions.

Every resident and business owner has the opportunity to enhance wildlife habitat and natural ecological systems by maintaining, or where necessary, restoring connectivity to the surrounding forests and other natural communities through landscaping and gardening activities. They can also address the very important issues of water conservation and loss of habitat from invasive species by using native plants and avoiding exotic plants when deciding what to plant. We invite all coastal plain individuals and communities to emphasize creative solutions to protect native habitats and wildlife while connecting with nature and achieving Firewise principals. This publication was created to give everyday people and everyday businesses guidelines to landscaping with these goals in mind.



Getting Started

Eco Regions

The Southern Coastal Plain ecoregion extends from South Carolina and Georgia through much of central Florida, and along the Gulf Coast Lowlands of the Florida Panhandle, Alabama, and Mississippi. This book covers the areas of South Carolina, Georgia and North Florida adjacent to the Atlantic coast. We believe it will also be helpful to people along the Gulf Coast and North Carolina shores, although some of the plants in this publication may not be found beyond the three targeted states.

The entire ecoregion is typically low in elevation with wet soils and high water tables. Once covered by a variety of forest communities that included longleaf pine, slash pine, pond pine, beech-magnolia, and mixed upland hardwoods, land cover in the region is now predominantly slash and loblolly pine plantations with cypress-gum, bay swamp, and bottomland hardwoods in low lying areas.

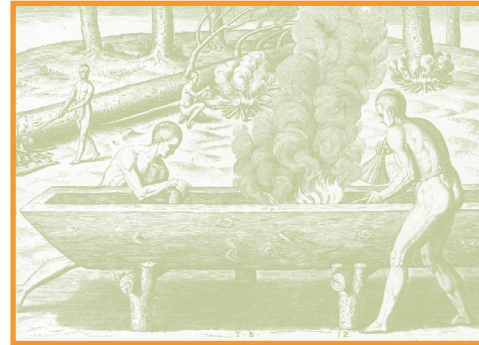
Ecoregional subdivisions of the Southern Coastal Plain include the Okefenokee Plains, Sea Island Flatwoods, Okefenokee Swamp, Bacon Terraces, Floodplains and Low Terraces, and Sea Islands/Coastal Marsh.

*Map graphic and text adapted from The Southern Coastal Plain Ecoregion:
<http://www1.gadnr.org/cwcsPDF/13SouthernCoastalPlain.pdf>*

The Historical & Natural Role of Fire in the Landscape of the *Southern Coastal Plain*

The direct application of fire was arguably Homo sapiens' first and most powerful tool in shaping the landscape of what is today the Southeastern United States. Early explorers and colonists consistently reported the use of fire by American Indians. They depicted fire being used to manage everything from clearing for cultivation, encouraging healthy and abundant crops from mast producing species, managing pest populations, hunting and boat building. Some mentioned the build-up of fuel after two or three years, implying that the American Indians did not return to the same place each year but would leave an area alone for periods of time, perhaps to allow game and fuel to regenerate. As time passed, a wide-ranging area would have been impacted by their fire strategies as they rotated seasonal migrations throughout the region over a span of time. The extent to which humans applied fire in the Pre-Contact era is supported by numerous historical, archaeological and anthropological studies.

The most telling proof, however, is the existence of extensive Longleaf and Flatwoods pine systems that covered most of the Coastal Plain until they were largely deforested between 1870 and 1930. Pine forests in the Southern Coastal Plain may well be remnants of dry grasslands and prairies formed during the Late Pleistocene and sustained by fire. Today, natural fires do not occur often enough to support the maintenance of such a system. Natural fire frequency ranges from 3 to 15 or even 20 years. As human populations increased around 10,000 years ago, so did pine species in this region. Crowdry, in *This Land This South, An Environmental History* noted: "Where the longleaves maintain themselves as the dominant tree, plant scientists adjudge them a "fire climax"— the product of an incomplete succession interrupted by fire...The supposition that millennia of Indian burning halted the forest succession over large areas is rational." Thomas Nairne, while traveling to the Mississippi River in 1708, reported: "Of all hunting diversions, I took most pleasure in firing rings...This sport is the more certain the longer the ground has been unburned. If it has not for 2 or 3 years there are so many dry leaves grass and Trash, that few Creatures within escape..." Such reports of Southeastern Indians burning at 2-3 year intervals supports the maintenance of a "fire climax" system by early inhabitants of the coastal plain, a system we greatly value for its biological diversity.



{ Fire used to shape dugouts
by John White circa 1585 }

"We travell'd about twenty Miles, lying near a Savanna that was over-flown with Water; where we were very short of Victuals, but finding the Woods newly burnt, and on fire in many Places, which gave us great Hopes that Indians were not far of."

"Tis then they burn the Woods, by setting Fire to the Leaves and wither'd Bent and Grass, which they do with a Match made from the black Moss that hangs on the Trees in Carolina, and is sometimes above six Foot long. Thus they go and fire the Woods for many Miles..."

John Lawson
(1701)



{ Longleaf Pine
by Georg D. Ehret }

Design With Fire In Mind

The Landscape is among the first elements of a home that people notice. It helps to establish a home's personality and it should also reflect the natural beauty and charm people look for when they visit the Southern Coastal Plain. This chapter will help you to maintain the traditional feel of southern landscapes while incorporating ideas that could also protect your home in the event of a wildfire.



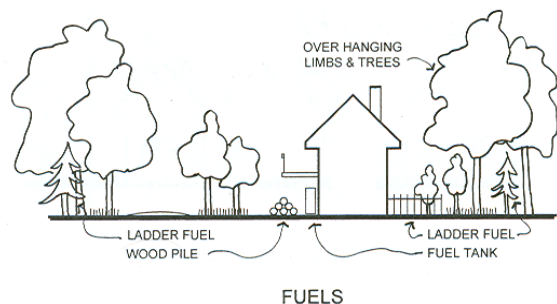
Coastal Wildfires

Our landscape and many of the native habitats within it evolved as fire driven systems. The Long-leaf Pine and Pine Flatwood forests are largely gone but pine plantations are abundant in the coastal plain. Many neighborhoods have been built in or adjacent to these fire prone plant communities. Typically, maritime and hardwood forests have not been as likely to burn as pine forests but man made changes, such as lower groundwater tables, ditching and draining, and rainwater runoff, have altered the hydrology of the Southern Coastal Plain making the soils drier than normal and fires more intense. Together with warmer temperatures and droughts, these factors lead to more destructive forest fires in all habitats, making fire a real force with which to contend. Your landscaping decisions become all the more important if you live in a fire prone plant community. Design your landscape with fire in mind.

Prescribed fire management is widely accepted and practiced today as a means of reducing fuel build-up and to replicate historical and natural fire regimes. This publication can help you to manage and design landscapes as buffers from potential fire.

The Home Ignition Zone

A home's ignition risk is determined by its immediate surroundings or its "home ignition zone" and the home's construction materials. According to fire science research and case studies, it's not where a home is located that necessarily determines ignition risk, but the landscape around it, often referred to as the "home ignition zone." The home ignition zone is defined as the home and its immediate surroundings up to 200 feet (60 m). In the following page it is broken down into *Firewise Home Zones*.



Three important factors that contribute to home fires.

Weather

Weather plays an important factor in the development of wildfire conditions. High temperatures, low humidity, and swift winds increase the probability of ignitions. Short and long-term droughts further exacerbate the problem.

Fuel

In its natural form, fuel consists of living and dead trees, bushes, vines and grasses. Too much fuel creates fires that are destructive. Under ideal conditions, there is only enough fuel for a forest to burn without serious damage to the canopy and midstory.

Hydrology

Water tables become lower as groundwater is depleted by withdrawals for industry, housing and agriculture. Rainfall is not able to replenish seasonal moisture levels of soils if the water table is too low causing fires to burn hotter.

Two important factors that contribute to home protection.

Community Effort

Your home ignition zone extends up to 200 feet and it is quite common to have neighbors whose home ignition zone overlaps yours. Buildings closer than 100 feet apart can ignite one another if they are in flames. In addition, many communities have commonly owned property, including natural or wooded areas that can pose fire risks to all. This means that to be most effective, neighbors need to work together and with their local fire service to achieve greater wildfire safety.

Prescribed Burning

Meadows and pine woods can be managed through annual prescribed burns. Prescribed burns mimic natural fires to reduce fuel loads. They can also help promote species diversity in meadows. If controlled burning is now allowed in your area, mowing annually is another management option.

Firewise Home Zones

Zone 1

This area encircles the structure for at least 30 feet on all sides including decks and fences, and provides space for fire suppression equipment in the event of an emergency. It should be well-irrigated with the capacity to leave sprinklers running in the case of evacuation. Lawns should be well maintained and mowed. Plantings should be limited to carefully spaced low flammability species. In particularly fire prone areas, non-flammable mulch should be considered.

Zone 2

This ideally irrigated area encircles the structure from 30 to 100 feet on all sides, including decks and fences. It provides space for fire suppression equipment in the event of an emergency. Lawns should be well maintained and mowed. Plantings should be limited to carefully spaced low flammability species.



Zone 3

This area encompasses 100 – 200 feet from the home. Place low-growing plants and well-spaced trees in this area, remembering to keep the volume of vegetation (fuel) low.

Zone 4

This furthest zone from the structure is a natural area. Selectively prune and thin all plants and remove highly flammable vegetation.

Prevention

Fire prevention techniques are vital to your Firewise landscape. Individuals and communities whose residents take steps to reduce their vulnerability have a greater chance of their property surviving wildfire events. Homeowners can and must take primary responsibility for wildfire safety precautions around the home. There are not enough fire fighting resources to protect every home during severe wildfires. Firefighters are trained to safely and efficiently suppress wildland fires, but their effectiveness is reduced when they must sweep decks, move wood piles and patio furniture while trying to fight a fire. According to fire science research, individual efforts do make a difference, even in the face of a catastrophic wildfire.

The following steps are outlined by the Firewise program to reduce home ignition risk, based on this principle that you can make a difference:

- ✓ Move woodpiles away from the home, keeping small amounts handy during winter months
- ✓ Screen or box in areas below patios and decks with wire screening no larger than 1/8 inch thick
- ✓ Keep flammable plants and mulches at least 5 feet away from your home's perimeter
- ✓ Sweep decks and porches clear of fallen leaves
- ✓ Bring doormats and furniture cushions inside when absent or an area is threatened by wildfire
- ✓ Close garage doors when leaving your home in the event of an evacuation
- ✓ Prune low hanging limbs to reduce ladder fuels
- ✓ Use low-growing, well pruned and fire resistant plants around the home
- ✓ Clean roofs and gutters of pine needles and dead leaves

Types of Fuels

Ladder Fuels are any type of vegetation or structure that bridges the gap between fuel on the ground and fuel in the treetops. They turn ground fires into crown fires.

Trees and shrubs that are higher than 18 inches are considered to be ladder fuels if they are beneath the canopy of taller trees.

Man made structures made of flammable materials can also act as ladder fuels. Trellises, walkways, awnings, and decks are a few examples.

Mark it!

Make sure your house and mailbox numbers are clearly marked and non-flammable. This ensures that the Fire Department can easily identify your property and potentially save your house. Numbers on your home and mailbox should be made of resistant materials, like brass or iron. Wooden and plastic numbers and mailboxes are prone to burning.

Rain Gardens

Function and beauty can coexist when controlling rainwater runoff. Don't settle for gravel and a jumble of boulders. Create a rain garden. Use water loving ferns, grasses, hibiscus, iris, reeds and sedges to evoke a natural wetland. Consider tabby or bricks instead of rock when structure is needed to channel water flow or for ornamental detail, but adorn them with native plants.

Rain Barrels

Capture your roof runoff and use it to water your garden, container plants or fill bird baths. Rain barrels come in different styles from basic utilitarian units to attractive solutions for visible locations.

Water for Wildlife

Create water features for wildlife throughout your property. Bird baths, misters, small ponds and rainwater gardens achieve multiple goals for Firewise protection and wildlife diversity.

Water

Water Wise Practices

Conserving water is already important and will be even more so as limited water resources are stretched to meet the demands of growing populations. Do what you can to target, and thus minimize watering. Create rain gardens to capture and slow down runoff. Utilize rain barrels and irrigation systems. Design with containers. They are not only attractive but are easily equipped with watering systems. Containers use considerably less water than large flower beds. Potted plants in Firewise Zone 1 can safely green up that bare space between the house and Zone 2.

Managing Stormwater

Several ways to slow down rainwater to keep appropriate moisture on site:

- Use pervious pavements where possible to allow water to infiltrate into the ground.
- Capture water with rain barrels.
- Create attractively planted and designed swales that guide stormwater runoff to bogs or rain gardens where the water can soak into the soil.
- Use ground covers, natural leaf litter as mulch on exposed ground to keep soil moist and keep out invasive weeds.



Design for Defense

Create spaces for wildlife viewing by pushing shrubs away from the windows, adding a bird bath and utilizing containers to frame a space. Replace foundation plantings with decorative containers. They can be moved if necessary and are easily equipped with watering systems. They allow you to target, and thus minimize watering. This will become more important as limited water resources are stretched to meet the demands of growing populations. Containers use considerably less water than large flower beds. Potted plants in Zone 1 can safely green up that bare space between the house and Zone 2 plantings.

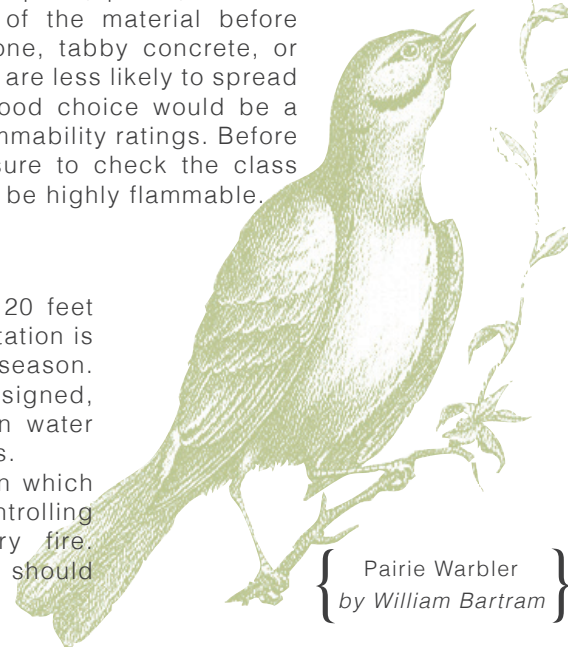
Large water features, such as ponds and pools, provide great wildlife habitat but can also serve as emergency water sources for firefighters.

Paving and Decking

If you are thinking about adding a patio, porch, or deck always consider the flammability of the material before making a decision. For patios, stone, tabby concrete, or brick are all good choices as it they are less likely to spread fire to your home. For decks, a good choice would be a composite decking that has low flammability ratings. Before you purchase the material make sure to check the class ratings of the material as some can be highly flammable.

Firebreaks & Fuelbreaks

- A firebreak is a strip of land, 20 feet or more wide, in which all vegetation is removed each year prior to fire season. Your driveway, if properly designed, can act as a firebreak, as can water features like streams and ponds.
- A fuelbreak is a strip of land in which fuel density is reduced by controlling plant material that can carry fire. Firewise Zones 1, 2 and 3 should function as fuelbreaks.



{ Parairie Warbler
by William Bartram }

Live Oaks:

Live oaks do not readily burn but you can do the following to reduce the risk of them carrying fire to your home structures.

- Trim dead twigs and branches on a regular basis
- Prune limbs that touch structures or are diseased

As it is difficult to prune live oaks without damaging the trees, we recommend you use a certified arborist with knowledge of coastal species.

Pine Trees:

Pine trees readily ignite.

- Do not plant in Zone 1
- Replace young pines near your structures with native oaks, maples or other less flammable trees
- Trim limbs 10-15 feet up from the ground
- Remove limbs that hang over structures
- Thin so the crowns are 10 to 15 feet apart

Design with Containers

Use containers near the house and move hedges to the edge of Zone 1. Hedges, ornamental clusters of shrubs and small trees can act as screens for open areas around the house to define the outer edges of Zones 1 and 2. The plantings will shield you from traffic noise and unwanted views, and allow you to define view-sheds.

Watering Needs

The number one killer of many container gardens is over watering. A good rule of thumb is to water twice a day during warmer months if a pot receives 8 or more hours of sun a day. Moisture meters are helpful tools to gauge the amount of water a pot is holding. Once a plant seems to have adapted to its new home, watering every day may not be needed. The moisture meter can be used as a guide to getting you and your plants on a watering schedule that works.

Prevention with Container Gardens

Replace foundation plantings with decorative containers. They can be moved away from the foundation if necessary and are easily equipped with watering systems. Potted plants in Zone 1 can safely green up that bare space between the house and Zone 2 plantings while luring birds and butterflies to window views.

Plant Selection

Plant selection is key to a successful container garden. Always evaluate the amount of sunlight your chosen area receives before you decide what you are going to plant. Make sure the varieties you choose are compatible in the amount of sunlight and water they need. The right combination can lessen the amount of maintenance and lead to a more satisfying end result.

Colors that Compliment

Choosing complementary colors in plants will bring your container garden to life. Try blues and yellows, pinks and bright greens, or go for a subtle effect with silvery greens, mauve and a bit of purple. Use only 2 – 3 colors per pot depending on the size of the container.

Fillers

A filler plant is always needed to provide a neutral backdrop to the flowering varieties. These can be evergreens, ferns, grasses or any plant that has a neutral texture and color.

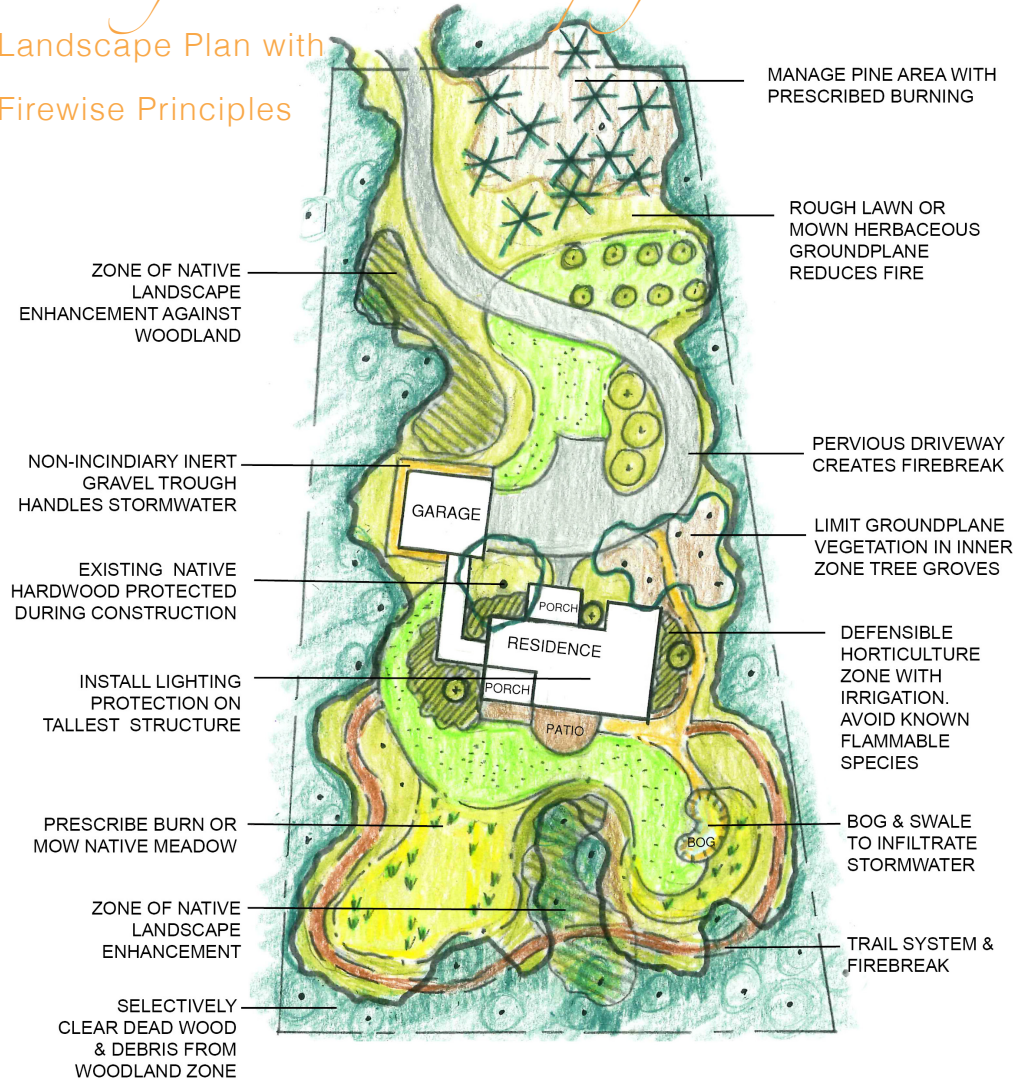
Spillers

Use native plants that spill over the edge of containers for added depth and softness. Try Climbing Aster, Butterfly Pea, Partridge Berry or Lady Fern and Creeping Verbena. Experiment with native morning-glories, vetches and sages, such as Scarlet Sage.



Planting Zones and Landscaping Ideas

Landscape Plan with Firewise Principles



Coastal Plain Landscaping Ideas

Plant your hedges and ornamental shrubs away from walls and foundations. Use paving materials, shell or gravel between the hedges and the house to create outdoor living spaces. Soften walls with irrigated planters and add water and wildlife feeders. From inside, you will have a better vantage point for viewing wildlife while enhancing fire protection for your home.

Design Notes

- Maintain an irrigation system and retain stormwater on site.
- Keep Zone 2 mown with limited ground plane vegetation.
- Driveways and trails can function as firebreaks and fuelbreaks.
- Special landscape areas are maintained with annual prescribed burns.
- Understory vegetation increases in density as you move further from homes and structures.

Defensible Space

Zone 1:

Select less flammable native shrubs for within the defensible space.

- Azalea
- Beautyberry
- Blueberry
- Hydrangea
- Sweetshrub

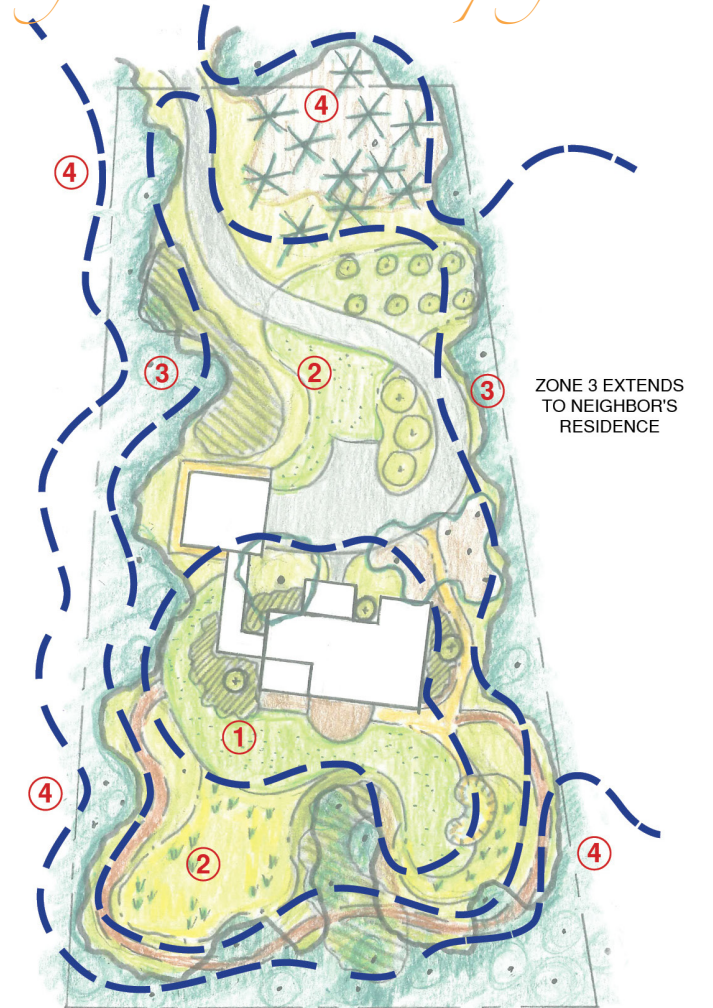
Create a defensible space in Zone 1 by using inert materials, such as gravel, near structures, reducing flammable species, and keeping the ground plane generally clear of fuel.

Zones 2, 3, & 4

Less flammable large trees are good choices for zones near the home.

- Bald Cypress
- Blackgum
- Longleaf Pine
- Red Maple
- Hickory
- Southern Red Oak
- Sycamore
- White Oak

Planting Zones and Landscaping Ideas



THIS DIAGRAM DEMONSTRATES HOW FIREWISE HOME ZONES ARE ADAPTED TO EACH SPECIFIC LANDSCAPE

Plans provided by Verdant Enterprises

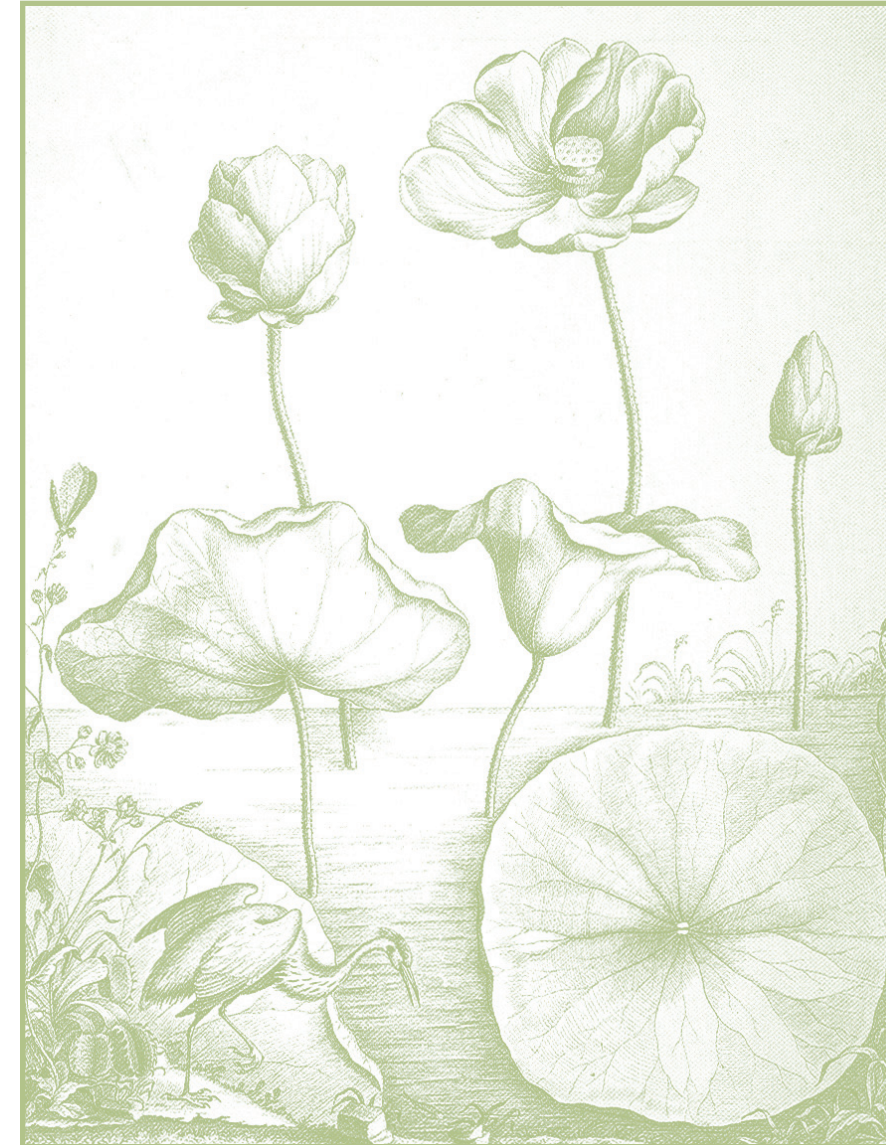
The Value of Native Habitats



{ Dragonfly
by John Abbot }

Plants and animals depend on healthy habitats to complete their life cycles. They also need the ability to shift to suitable locations if outside pressures force them to move. We tend to think of plants as sedentary species, and indeed, an individual plant cannot move its roots on its own accord beyond the means of a creeping root or rhizome. However, populations of plants do move. Seeds and nuts disperse at a landscape level by wind and water, birds and mammals, but they must land in a congenial place to survive. Landscape fragmentation breaks habitats and natural communities into smaller pieces that are no longer connected to one another. Your garden, landscape, or managed piece of property can become a vital link from one natural community to another and reweave habitats, even if it is in a developed area.

Since habitats cannot quickly shift, fragmentation is a serious ecological issue that will only become more critical as human populations continue to grow. Preventing the further loss of native habitats is something everyone can do. It does not matter if you rent or own the land surrounding your home, if you have twenty acres to landscape or only a container garden, you can participate in a positive way by planting native species. Our goal is to help you maintain the integrity and continuity of Southern Coastal Plain habitats and natural communities. Plants native to the Southern Coastal Plain are, by and large, fire adaptive. They naturally help reduce fire intensity while providing necessary habitat structure.



Habitats are Homes

Plants and amphibians, birds and bees, dragonflies and frogs, may become isolated and perish if they cannot reach the next viable habitat.

Monarch butterflies working their way north across the North American continent during spring migration will not survive to reproduce without milkweeds for their caterpillars. They return to the same over-wintering locations each year.

Migratory songbirds depend on native berries, seeds and nuts and insects during each leg of their spring and autumn journeys.

Hummingbirds follow the bloom of various flowering species each spring.

Generations of turtles, frogs and salamanders seek the place of their birth for nesting and egg laying when they are ready to reproduce

All of these creatures depend on native plants and healthy habitats to complete their life cycles.

{ American Lotus
by William Bartram }

Beach & Dunes

Beach and dune systems are among the most dynamic landscapes on earth. Houses can no longer be placed in these coastal environments in the Southeast, but many homes were built before such regulations were enacted.

If your property lies within these systems or is poised at the edge, you have the rare opportunity to maintain or restore an important natural habitat. You are also faced with gardening in a tough environment. The beach and dune system has many beautiful plants, but it is by definition a sparsely elegant landscape. Instead of planting exotics, take an unexpected approach and see what you can do with the celadon green arches of Sea Oats, ephemeral mauve clouds of Sweet Grass or silvery clusters of the fragrant Wax Myrtle. For unparalleled stature and a sense of the exotic, use our native Moundlily (*Yucca gloriosa*). Plants that can survive the beach and dune habitats must be salt tolerant and wind resistant.



Protect Your Landscaping Investment

Native coastal plants evolved in this environment. They are more likely to survive storms and climatic conditions typical of the region.

Protect Your Property

Intact native habitats provide a natural defense against storms. After hurricanes Katrina and Sandy a number of studies found that native vegetation mitigates the negative impact of storm damage on human property. They found that healthy salt marshes, oyster beds and maritime forest protected homes by acting as:

- Buffers from storm surges
- Sediment traps
- Windbreaks

American Olive

The American Olive grows as a midstory tree or shrub in the Maritime Forest. This wild olive may not taste good to us but birds appreciate the dark blue drupes that happen to ripen in time for fall migration. On a sunny late winter day, you will love the fragrance of its early blooming flowers drifting through the garden or forest.



{ American Olive }
{ by William Bartram }

Maritime Forests

Maritime Forests run in a narrow band along the eastern edge of the Southern Coastal Plain. They boarder the expanse of marshes on the mainland and cover the upland parts of barrier islands and hammocks. Mainland maritime forests and barrier islands have sometimes been part of a contiguous land mass and sometimes isolated by water through the millennia. Over time, dunes and swales became inland ridges and wetlands. Today, Maritime Forests are one of the fastest disappearing yet most valued habitats in the Southeast.

At a fine scale, Maritime Forests are not just live oaks and palmettos, but a mosaic of dry upland, marsh, hammock and freshwater wetland vegetation types. The native plant guide section highlights species from each of these habitats, many of which adapt well to garden sites. Some will need the wet or dry soils to which they are accustomed but others will thrive under various conditions.

Two Hammock Butterfly Hosts

- Swallow-wort is used by Queen and Monarch butterflies.



- Sweadner's Hairstreak only uses Southern Red Cedar as its host.

Oak Maritime Forest

Live Oaks, Laurel Oaks, Magnolias, American Holly, Sparkleberry and Cabbage Palms may be what comes to mind for the Oak Maritime Forest, but micro habitats host diverse and often surprising species. Pignut Hickory may dominate a high spot with scattered populations of Bluff Oak. Large amounts of discarded shells from Indian sites along the coast have, over centuries of deposition, created a distinctive soil. Deposits of shell not only sweeten the highly acid soils typical of the Southern Coastal Plain, but also increase the moisture holding capacity of dry, sandy soil. Some of the plants growing on shell sites may need more basic soil, others appreciate the extra moisture. Forests bordering saline environments often transition into Sawtooth Palmetto fringes and fresh-water sloughs, adding more complexity to the Maritime Forest. These sites create a fabric of vegetation ranging from wet to arid. Low lying pockets of Swamp Tupelo, Dahoon Holly, Button Bush, Large-flowered Hibiscus and Shinning Fetterbush may be surrounded by drought tolerant Tough Bully, Hercules Club and Sand Live Oak.

Pine Maritime Forest

Both self perpetuating and successional pine communities interface with Oak Maritime Forests on the coast. Pine species, such as Spruce and Pond, are typical components of moist, low lying areas and Longleaf Pine may be found on high table lands of Maritime Forests of Pleistocene cores. Large areas of Loblolly and Slash Pine are found where wind, fire or agriculture opened the oak dominated forest to sunlight and on more recent Holocene areas of barrier islands. These pockets of successional pine will return to hardwoods over time harboring a few surviving "Grandmother Pines" to reseed new forest gaps. Unlike short-lived pine habitats, the long lived Longleaf Pine system is driven by adequate fire regimes and high water tables. Very few of the now rare maritime Longleaf Pine systems remain but some of the larger barrier islands, such as Cumberland and St. Catherines have residual communities. Once contiguous with mainland Longleaf Pine forest systems, they were long ago isolated as sea levels rose after the ice age.



Wren on Red Buckeye
by John James Audubon

Shell Deposits

Soil sweetened by shell supports plants such as:

- Southern Red Cedar
- Yaupon Holly
- Red Buckeye
- Tough-leaf Dogwood
- Redbud
- Cherry Laurel
- Shell-midden Morning-glory
- Four-angled Flatsedge

"This admirable beauty of the sea-coast-islands dwells in the humid shady groves, where the soil is made fertile and mellow by the admixture of sea shells."

William Bartram
(1773)

Longleaf Pine's Name

If you have seen a Longleaf Pine, you understand how the 10 to 18 inch needles inspired its common name. The scientific name, *Pinus palustris*, seems a bit of a paradox, as palustris is Latin for wet places and Longleaf Pines grow on dry sandy ridges and table lands. However, they grow where the water table is high and during rainy seasons are surrounded by wet savannas and freshwater wetlands in the Southern Coastal Plain. The Bartram family listed Longleaf Pine in their 1783 Garden Catalogue.

Bogs and Bays

The juxtaposition of bogs and bays next to dry, upland pine lands makes for high diversity and rare plants and animals such as pitcher plants and Spotted Turtles.

Pitcher plants and the diminutive Sundews grow in the highly acidic soils of bogs with low oxygen. In such environments, their roots cannot process nutrients so they derive their sustenance by dissolving insects.



Endemic Biota

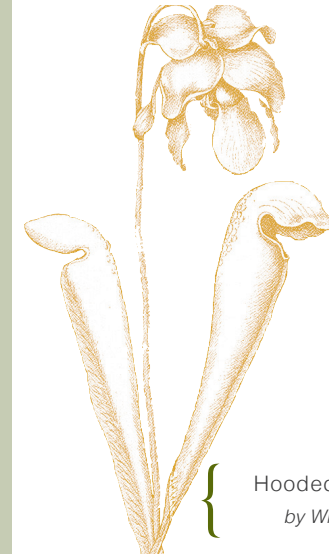
Biota is simply the flora (plants) and fauna (animals) of a region. Endemic species are those that are native to and only found in a region. Longleaf Pine is an endemic plant of the Coastal Plain. The Twin-spotted Skipper is part of the endemic fauna of the Coastal Plain.

Pine Flatwood Communities

Pine Flatwoods systems are climax forests driven by frequent fire regimes and high water tables. The counter intuitive combination of fire and water creates large open forests, know as savannas, with a host of wildflowers, grasses and sedges beneath the pines. Those diverse systems are largely gone and most of the expansive pine forests today are planted on soils drained by ditching. Still, remnants of Pine Flatwoods remain, harboring plant species from Longleaf and Pond Pines to Fleshy Milkweed and Hooded Pitcherplant.

Carolina Flatwoods

Carolina Flatwoods occupy a broad stretch of pine flatwoods, pine savannas, freshwater marshes, pocosins, pond pine woodlands, and some sandhill communities between the narrow coastal band of the immediate coast to the east and sandhills to the west. It is a low wet region, traversed by many rivers and punctuated with Carolina bays and pocosins. It is an area of significant rare and endemic biota and biological diversity. Using native plants in landscaping and improved forestry management practices can help sustain remaining natural communities and restore others.



Hooded Pitcherplant
by William Bartram

Sea Island Flatwoods

Sea Island Flatwoods are poorly drained flat plains situated in Georgia and North Florida in much the same position as Carolina Flatwoods. They have also been drained extensively for timber with Loblolly and Slash Pine plantations covering much of the region. However, the broad floodplains of the Altamaha River covers a sizeable portion of it in Georgia. This grand river contributes a third of the fresh water entering the Atlantic Ocean on the east coast from a watershed that is entirely contained within Georgia state borders. Healthy natural communities in this area are critical to healthy and abundant seafood.

Salt Marsh

South Carolina and Georgia hold almost two-thirds (over to 800,000 acres) of the Atlantic coast's remaining tidal salt marshes, one of the most biologically productive natural systems on Earth. They produce nearly twenty tons of biomass to the acre. This enormous productivity supports primary nursery areas for blue crabs, oysters, shrimp, and other economically important fish and shellfish. They filter pollutants from the water and act as buffers against offshore storms. An abundance of otters, minks, raccoons and birds, from the secretive Clapper Rail to the tiny Marsh Wren, rely on our salt marshes for sustenance year round. The Salt Marsh and its hammocks also provide critical recharge and breeding habitat for many species of migratory birds and a multitude of local creatures. *Spartina alterniflora* almost forms a mono culture in the salt marshes but marsh edges support a rich natural communities of insects, birds and plants.

Brackish Wetlands

Many homes are built along tidally influenced creeks. A resilient and important suite of plants grow on the edges of these creeks and on the fingers and flats of high marsh that connect salt marsh with upland habitats. If you live along a tidal creek, maintain a healthy border of native trees, shrubs and understory plants. Painted Buntings, Monarch and Queen butterflies, and a host of other creatures count on marsh edge plants for their homes, protection and food. Clear only enough for that perfectly framed view and a breeze to the porch. If your vegetation edge is gone, rebuild with natives.

What is Brackish Water?

Brackish water is a mix of freshwater and saltwater. Saltwater, such as seawater, has 30 to 50 parts per thousand (ppt) of dissolved salts in it. Freshwater has less than one-half ppt of dissolved salts in it. Brackish water, then, has less salt than seawater and more than fresh, ranging from 30 to 0.5 ppt.

{ Marsh Wren
by John James Audubon }

Hammocks

Hammocks are a priority habitat for conservation. Georgia, alone, has over 17,000 acres of hammocks within its salt marshes. Many wading, shore and migratory birds depend on these pieces of high ground imbedded in the marsh system for resting, nesting and feeding. The image below shows a nest woven from *Spartina* by Marsh Wrens who rely on this habitat for shelter and food.

Salt Marsh Edge Native Nectar Plants

Butterflies also depend on healthy marsh edge habitats.

- Eastern Baccharis
- Hempvine
- Hercules-club
- Pepper-vine
- Saltmarsh Fleabane
- Saltmarsh Morning-glory
- Sea Oxeye Daisy
- Sea Lavender
- Seashore Mallow
- Swallow-wort

Bartram on Hibiscus

Bartram described these three great garden options of hibiscus species while traveling in the Southern Coastal Plain.

Comfortroot

(Hibiscus aculeatus)
“...the leaves palmated, the flowers large and expanded, pale yellow and white, having a deep crimson eye; the whole plant, except the corolla, armed with stiff hair.”

Scarlet Hibiscus

(Hibiscus coccineus)
“This most stately of all herbaceous plants grows ten to twelve feet high, branching... so as to form a sharp cone... embellished with crimson flowers...at once several hundred of these splendid flowers. They continue to bloom in succession all summer and autumn...”

Eastern Rose-mallow

(Hibiscus moscheutos)
“...embellished with ovate lanciolate leaves, covered with fine down on their nether surfaces: the flowers are very large, and of a deep incarnate colour.”

Freshwater Wetlands

Freshwater wetlands vary from vast cypress swamps to ephemeral intertidal pools. Most of the mainland areas along the coast are former wetlands. They have been altered by ditching and fill, but many still hold important wetland habitats. Deeper into the mainland Southern Coastal Plain, wetland types become more diverse, from stream and river floodplains to bogs and pocosins. If you have natural wetlands on your property, you have a wonderful landscape to enjoy. Even if all that remains is a low lying spot with drainage issues, you have the makings of a rain garden, bog or reconstructed wetland. Buckwheat Tree and Loblolly Bay, pitcher plants, hibiscus, ferns and reeds are all wonderful options for your landscape design.



{ Scarlet Hibiscus
by William Bartram }

Importance of Freshwater Wetlands

Wetland areas are natural buffers for pulses of water from rain events. They effectively filter normal sediment loads and reduce water velocity and erosion. Natural wetlands are richly diverse in animal and plant species. They are key for healthy amphibian populations and provide critical nesting habitat for egrets, herons, snipe, ducks and the endangered Woodstork. Some of our most beautiful flowers reside in freshwater wetlands. Orchids, Climbing Aster, Blue-eyed grass and Water Lilies are a few species native to our freshwater wetlands and perfect for sunny rain gardens and watery landscape features.

Exotic

Invasives

In many cases, plants from other parts of the world are welcomed, manageable additions to our gardens. However, in some situations these non-native species cause serious ecological disturbances. This puts extreme pressure on native plants and animals, and threatened species may succumb to this pressure. Ultimately, invasive plants alter habitats and reduce biodiversity.

-The United States National Arboretum

{ Privet }



Invasive Species:

Any species (including eggs, spores, or other material capable of reproduction) that is not native or indigenous to a given region. These species are highly aggressive and disrupt natural reproductive cycles of fauna and flora of the communities they invade.

Characteristics of Invasive Plants:

- Not native to your region
- Spreads rapidly
- Deep roots
- Reproduces quickly and easily
- High germination rate
- Long seed dormancy
- Able to reproduce asexually
- Matures quickly
- Efficient at seed dispersal
- Thrives on disturbed sites
- Grows in a variety of habitats
- Shades out native plants
- Out competes native plant species

Blood Grass!

Cogon Grass is a serious threat to Southern Coastal Plain ecosystems. It is often sold as an ornamental in the nursery trade as Blood Grass. Do not buy or use it. It is highly flammable and aggressive.

Exotic Invasive Plants

Exotic invasive plants are most threatening in ecosystems such as wetlands, sand dunes, fire adapted areas, and barrens where rare native plants are often found. They thrive where the continuity of a natural ecosystem is breached, such as disturbed sites like construction areas, spoil piles and road cuts. Even foot traffic can create a temporary void that is quickly invaded. Some national parks have restricted the areas where visitors are allowed to walk in an effort to protect sensitive ecological systems.

The Southern Coastal Plain, like any other region, possesses an inherent and dynamic balance of plants and animals. This is what keeps nature in check. Most of the plants that fall in the category of exotic invasive are species that have been transplanted from their native habitats, usually to fill an aesthetic or agricultural need in another place. In general, many introduced species are nothing to worry about. Gardenia, Crape Myrtle, camellias, figs and citrus are plants we rightfully associate with Coastal Plain Gardens. Other exotics, however, are aggressive species that endanger our native natural communities and the flora and fauna that depend on them. Play it safe and plant natives, using only exotic species that are proven to be well behaved garden favorites.

Why Should We Care?

When invasive plants are taken out of their original environments, they are liberated of native pests and plant competitors. Without these natural controls, invasive plants are free to seed, grow, and spread virtually unchecked. Their numbers increase rapidly, taking over less aggressive native plants and eventually dominating a once diverse landscape. Birds, Insects, and other wildlife, which are dependent on the native plant communities for food and habitat suffer great losses. Invasives are economic pests as well. People spend millions of dollars a year eradicating invasive species from their yards, roadsides, and farms. The agricultural industry is especially hard hit by invasive species that infest and contaminate crops.

Fire Hazards

Some exotic invasive plants, Cogon Grass being a good example, increase the intensity and the spread of wildfires.

Exotic Invasive Plants of the Coastal Plain

Trees

Camphor Tree (*Cinnamomum camphora*)
Chinaberry Tree (*Melia azedarach*)
Chinese Tallow Tree (*Triadica sebifera*)
French Tamarisk (*Tamarix canariensis*)
Mimosa (*Albizia julibrissin*)
Princess Tree (*Paulownia tomentosa*)
Tree-of-heaven (*Ailanthus altissima*)
Tung-oil Tree (*Vernicia fordii*)

Shrubs

Autumn Olive (*Elaeagnus umbellata*)
Beach Vitex (*Vitex rotundifolia*)
Chinese Privet (*Ligustrum sinensis*)
Coralberry (*Ardisia crenata*)
Glossy Privet (*Ligustrum lucidum*)
Japanese Ligustrum (*Ligustrum japonicum*)
Nandina (*Nandina domestica*)
Privet (*Ligustrum vulgare*)

Perennials

Bicolor Lespedeza (*Lespedeza bicolor*)
Castor Bean (*Ricinus communis*)
Lantana (*Lantana camara*)
Mexican Milkweed (*Asclepias curassavica*)
Rattlebox (*Sesbania punicea*)
Water Hyacinth (*Eichhornia crassipes*)

Grass like

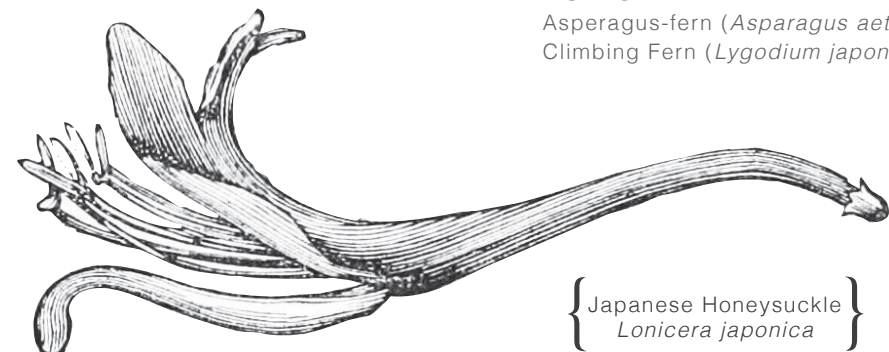
Bamboo (*Phyllostachys aurea*)
Cogongrass (*Imperata cylindrica*)
Common Reed (*Phragmites australis*)
Giant Reed (*Arundo donax*)
Pampas Grass (*Cortaderia selloana*)
Zebragrass (*Miscanthus sinensis*)

Vines:

Chinese Wisteria (*Wisteria sinensis*)
English Ivy (*Hedera helix*)
Japanese Honeysuckle (*Lonicera japonica*)
Kudzu (*Pueraria montana*)

Ferns

Asperagus-fern (*Asparagus aethiopicus*)
Climbing Fern (*Lygodium japonicum*)



{ Japanese Honeysuckle }
Lonicera japonica

Native Substitutes

Trees:

For evergreen specimens use Red Cedar or Bald Cypress instead of Deodor Cedar, Atlas Cedar, Cryptomeria, Leyland Cypress or French Tamarisk.

Replace Mimosa, Chinaberry and Tree of Heaven with Redbud, Fringe Tree or Hercules Club.

Red Maple, Black-gum and Basswood are wonderful substitutes for Tung-oil Tree, Camphor and Princess Tree.

Shrubs:

Use Dahoon Holly, Sweetleaf and Sparkleberry instead of Coralberry, Autumn Olive or Ligustrum.

Use Devil's Walkingstick or native Viburnum to replace Nandina.

Perennials:

For colorful beds, use Wingstem, Scarlet & Azure Sage, Goldenrods, White Snakeroot and native Hibiscus.

Instead of Beach Vitex, plant Yucca, Beach Sunflower and Seaside Goldenrod.

More Native Substitutes

Vines & Ferns:

Use American Wisteria instead of Chinese Wisteria and Coral Honeysuckle or Climbing Hydrangea in lieu of Japanese Honeysuckle.

Use native ferns and partridge berry for shady ground cover areas instead of English Ivy and exotic ferns.

Grasses:

Use native Bushy Bluestem, Giant Plumegrass, Giant Foxtail, River-oats, Sand Cordgrass, Slender Woodoats, and Starrush Whitetop for moist locations.

Little Bluestem, Longleaf Woodoats, Lovegrass, Muhly Grass, Saltmeadow Cordgrass and Seaoats do well in dry to normal soils.

Monitoring

Wooded areas are also vulnerable to infestation and should be monitored for any seedlings or plants. An easy way to predict a spread of invasives onto your property is to check your neighbors. If they have Bamboo growing as a screen, chances are its roots will spread and grow into your yard given time.

Solutions

Many exotic invasive species have been widely planted in gardens for years and are readily available at local garden centers. Since most of these plants were brought over for their ornamental value they have become common place in our landscape. Plants like Japanese Honeysuckle, Chinese Wisteria, and Bamboo are sold everywhere despite being highly invasive species that are taking a toll on coastal plain environments. Support nurseries that specialize in native plants. Inspire change by asking for our beautiful natives when shopping at the garden center. Do your part at home.

Education

Before you buy, do your research! Look up potential invasive and aggressive species in your region.

Inspection

Invasive plant species thrive on bare or disturbed soil where the existing ecosystem has been destroyed by construction or abandonment. Disturb natural areas as little as possible. To minimize the spread of invasive plants, manage disturbed areas with a careful eye, checking up on them regularly. Fill empty places with natives!

Removal & Replacement

If an invasive is found on your property remove it before it can become a problem. By taking immediate action you may also save yourself time and money. If a plant is caught early enough, it is easy to remove with a shovel or by hand. Just remember to check the area regularly for seedlings. Larger populations may need to be removed by a professional with the use of heavy machinery or chemicals.

Are all non-natives invasive?

The answer is no, but they have a high potential to become one. While most are well behaved growers, some exotics stay under the radar for years until they hit a population spike and become invasive. An example of this is Chinese Privet, which was a staple for southern gardeners for years. Its population was slow to grow, but once it gained enough plants to seed higher numbers, its aggressive nature became an invasive problem.

Design

for Southern Coastal Plain Conditions



{ Southern Magnolia
by Georg D. Ehret }

Characteristics of Fire Tolerant Plants

- High Moisture Content
- Wide, Flat Leaves
- Open & Loose Branches
- Deciduous

Heritage Ornamentals

Here are a few fire-tolerant favorites of southern gardens that are not native but have proven over time not to pose danger to natural communities.

- Camellias
- Gardenias
- Hydrangeas

Firewise Tip

In the event of evacuation from wildfire, turn on your sprinklers before leaving.

Plan in advance and have extra hoses and sprinklers ready to spray structures and foundations.

Less Flammable Native Trees & Shrubs

Any plant that is exposed to enough heat or is already stressed by drought or neglect will burn. Keep the plantings near your house well watered and equipped with a watering system. The trees and shrubs listed below are less likely to burn than others and are attractive landscaping plants.



{ Oakleaf Hydrangea
by William Bartram }

Trees

- Bald Cypress
- Basswood
- Flowering Dogwood
- Hickory
- Live Oak
- Red Buckeye
- Red Maple
- Southern Magnolia
- Southern Red Oak
- Swamp White Oak
- Sweetbay Magnolia
- Tulip Poplar
- White Oak

Shrubs

- Beautyberry
- Bottlebrush Buckeye
- Elderberry
- Hearts-a-bustin
- Native Azaleas
- Oakleaf Hydrangea
- Summersweet
- Sweetshrub
- Viburnum
- Virginia Sweetspire
- Witchhazel
- Yucca

Salt Tolerant Natives

Salt spray in the air and occasional saltwater flooding are normal conditions on the coast. Whether you live right on the beach or in a wooded inland area this is something all coastal gardeners must deal with. The welcome sea breezes we experience also carry salt spray that settles on vegetation. Salt from the ocean affects a plant's growth as well as its lifespan. Plants respond with leaf loss, burned foliage, stunted growth, or death. In order to avoid these gardening casualties, use plants that naturally grow in salt laced environments. The plants listed below also withstand heavy winds and poor, sandy soils, additional challenges to gardening on the coast. One of the beauties of landscaping with native plants is that they are preconditioned to survive the rigors of our coastal habitats.

Trees

American Holly
American Olive
Bald Cypress
Black Cherry
Cabbage Palm
Sand Live Oak
Southern Magnolia
Southern Red Cedar

Shrubs

Beautyberry
Saltbush
Viburnum
Wax Myrtle
Winged Sumac
Yaupon Holly

Vines

Carolina jessamine
Saltmarsh Morning-glory
Purple Passionflower
Swallow-wort

Perennials

Beach Croton
Cucumber-leaf Sunflower
Mound-lily Yucca
Sea Lavender
Seashore Mallow
Seaside Goldenrod
Spanish Bayonet

Grasses

Muhley Grass
Salt Meadow Cordgrass
St. Augustine Grass
Sea Oats



{ Manroot Morning-glory
by William Bartram }

Salt-spray Tolerant

Species that are inherently equipped for surviving salt drift and occasional inundation by saltwater are called salt tolerant.

Where to Plant?

Make sure the species with the highest salt tolerances are placed closest to the salt source. If your yard borders the beach, plant highly tolerant species such as Sea Oats or Moundlily on the ocean side and less tolerant ones, such as Black Cherry, where they are protected by structures or masses of salt tolerant species.

Leave as many existing trees and shrubs, such as oaks and hollies, in place at marsh edge to protect other plants from prevailing salt laced winds.

Firewise Tip

Site your house far enough away from the marsh edge to allow for a natural border of native shrubs and trees and still have a defensible space around your home. You and the birds will be happy.

Drought Survival

Periods of drought are typically coupled with restrictive outdoor water use. To avoid the loss of your plants here are a few suggestions.

- Use leaf litter to mulch your plant beds to retain moisture.
- Xeriscape and use more shrubs and native ground covers in your landscape design to reduce lawn space.
- Replace water demanding turf with strategically placed perennial beds of native plants.
- Use container gardening for water loving plants.

Xeriscaping

Xeriscaping refers to landscaping with plants that do not require supplemental irrigation. It is promoted in areas that do not have easily accessible supplies of fresh water and experience seasonal drought. It is catching on in other areas as climate patterns shift and as a means of conserving water. The word xeriscaping combines xeros (Greek for "dry") with landscape.

Goldenrod is a great native for late summer and fall color in dry places. It does not cause allergies, as insects pollinate this genus.

Drought Tolerant Natives

Seasonally dry conditions and prolonged drought are a part of life for coastal gardeners. Native plants of the region have evolved to handle this hot climate and cyclical dry soil conditions. They are able to survive periods of restricted moisture once established. Usually one full year of deep regular watering will do it. The plants listed below are native to dry conditions and do well in the harsh environments found along the coast. This does not mean that these plants will thrive during droughts but they will survive and rebound when the rains return.

In this region, trees and shrubs planted in late winter or early spring tend to establish more readily and perform better under dry conditions.

Trees

Bald Cypress
Ironwood
Live Oak
Longleaf Pine
Red Buckeye
Red Cedar
River Birch
Sand Live Oak
Southern Magnolia
Southern Red Oak
Sugarberry
White Oak

Shrubs

Bristly Locust
Indigo Bush
Inkberry
Wax Myrtle
Witchhazel

{ Carolina Jessamine
by John James Aududon }



Perennials

Adam's Needle
Beebalm
Black-eyed Susan
Cucumberleaf Sunflower
Gayfeather
Lanceleaf Coreopsis
Mist Flower
Rose Verbena
Scarlet Sage
Seaside Goldenrod
Wild Lupine

Grasses

Longleaf Spikegrass
Muhley Grass
Purpletop
Spartinas
Splitbeard Broomgrass

Vines

Cross Vine
Carolina Jessamine
Purple Passionflower
Trumpet Creeper

Moisture Loving Natives

The preponderance of wetlands in coastal Georgia has generated a wonderful selection of native plants, many of which adapt well to drier sites. If you have a moist area with dismal drainage, take delight in the abundant native plant species and exciting landscaping potential at hand. Native moisture loving plants span from shade loving to sun worshipping species. There is nothing more beautiful or generous than the Loblolly Bay in bloom from July through October. It thrives in wet soils and at wood's edge. For full sun, mallows presents spectacular bloom displays. Turn drainage problem areas into rain gardens to catch that runoff from your patio or driveway. Enhance a natural wetland that has lost its native flora with shrubs that will attract birds and butterflies. Native Azaleas at the edge of wet areas will provide early color to the landscape and nectar for hummingbirds and Swallowtail butterflies when little else is available.

Trees

Bald Cypress
Buckwheat Tree
Flowering Hawthorns
Georgia Fevertree
Loblolly Bay
Red Maple
Silverbell
Southern Sugar Maple
Sweetbay Magnolia
Water Tupelo

Shrubs

Bottlebrush Buckeye
Button Bush
Dahoon Holly
Elderberry
Summer Sweet
Swamp Azalea
Sweetspire
Sweetshrub
Titi
Viburnum

Grasses & Sedges

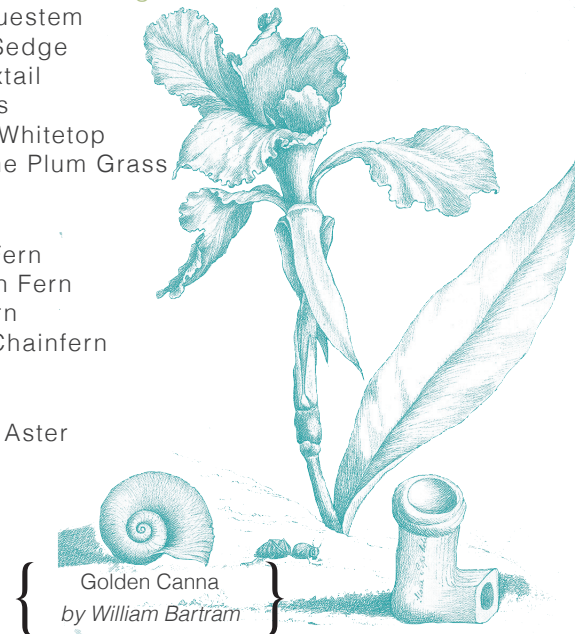
Bushy Bluestem
Fringed Sedge
Giant Foxtail
River-oats
Starrush Whitetop
Sugarcane Plum Grass

Ferns

Autumn Fern
Cinnamon Fern
Royal Fern
Virginia Chainfern

Ferns

Climbing Aster



{ Golden Canna
by William Bartram }

Rain Gardens

Rain gardens capture runoff from impervious areas such as roofs and driveways and allow it to seep slowly into the ground, preserving nearby streams and marshes by reducing the amount of runoff and filtering pollutants, including fertilizer, pesticides oil, heavy metals and other chemicals. Rain gardens also reduce peak storm flows, helping to prevent erosion and lowering the risk for local flooding.

Rain gardens should be beautiful landscape features. Do not top them off with unsightly gravel but plant them with wetland natives.

Blooming Rain Garden Perennials

- Atamasco Lily
- Blue-eyed Grass
- Cardinal Flower
- Carolina Spiderlily
- Eastern Rose-mallow
- Fewflower Milkweed
- Germander
- Hibiscus
- Large-flowered Hibiscus
- New York Ironweed
- Partridge Berry
- Red Milkweed
- Southern Blueflag Iris
- Seashore Mallow
- Swamp Milkweed
- Swamp Sunflower
- Yellow Canna

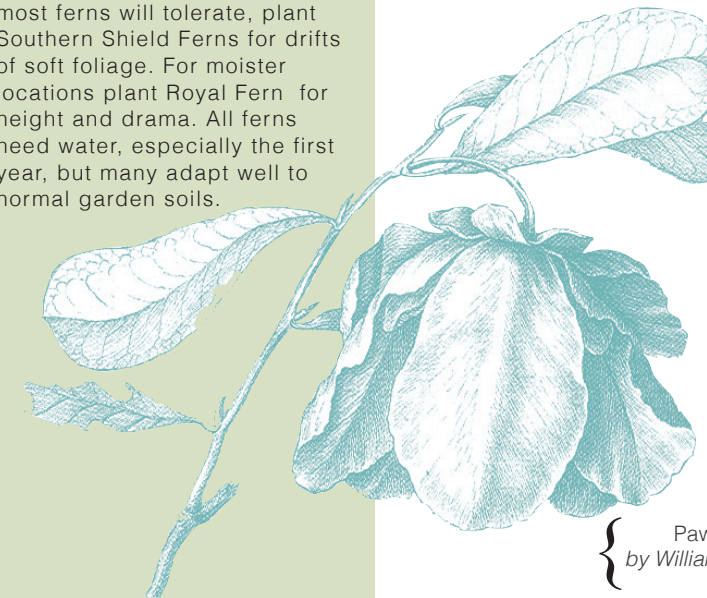
Loblolly Bay

This beautiful tree was much admired by William Bartram.

"The tall aspiring Gordonia lasianthus, which now stood in my view in all its splendor, is every way deserving of our admiration. Its thick foliage, of a dark green color, is flowered over with large milk-white fragrant blossoms..."

Classic Shade Lovers

All ferns do well in partial to full shade. Ferns just look right in the shade, so even if your shady spot is drier than most ferns will tolerate, plant Southern Shield Ferns for drifts of soft foliage. For moister locations plant Royal Fern for height and drama. All ferns need water, especially the first year, but many adapt well to normal garden soils.



{ Pawpaw
by William Bartram }

Shade Tolerant Natives

Shady spots on the coast present a distinct challenge to the coastal gardener. Here, they are likely to be dry and sandy with well draining soils or wet with no drainage to speak of. Shade loving plants typically found at the garden center need rich, moist, well drained soils. The opposite of what our landscape has to offer. What to do? Use natives. Our local species are adapted to the dichotomy of coastal soils and hydrology.

Trees

American Holly
American Hornbeam
American Silverbells
Black Gum
Buckwheat Tree
Cabbage Palm
Dahoon Holly
Dogwood
Eastern Redbud
Red Buckeye
Pawpaws
Possom-haw
Sweetbay Magnolia

Shrubs

American Beautyberry
American Olive
Bottlebrush Buckeye
Devil's Walkingstick
Native Azaleas
Oakleaf Hydrangea
Red Anise
Sparkleberry Bush
Staggerbush
Witchhazel
Yaupon Holly

Perennials

Atamasco Lily
Azure Sage
Beebalm
Frostweed
Germander
Green Dragon
Indian Pink
Lobelia
Red Columbine
White Snakeroot
Wingstem

Vines

American Wisteria
Carolina Jessamine
Climbing Aster
Climbing Hydrangea
Coastal Virgin's Bower
Morning-glory
Trumpet Creeper
Yellow Passionflower

Ferns

Cinnamon Fern
Maidenhair Fern
Netted Chain Fern
Royal Fern
Southern Shield Fern

Gardening for Birds

An abundance of birds breed, winter or migrate throughout the Southern Coastal Plain. Our gardens can bring them into our lives and save their lives. Provide clean water and trees, snags and shrubs for nesting and shelter. Leaf litter should be left alone or raked beneath shrubs and trees. It contains insects birds need for protein when raising young and snail shells that provide calcium for eggs. Many birds count on late ripening berries, drupes and seeds to fatten up on their fall migration routes. Hummingbirds follow the bloom of Buckeyes and other spring blooming plants northward in the spring. Plant as many bird-food bearing plants as you can. Below are attractive native plants used by birds for food.

Trees

Black Cherry
Blackgum
Flowering Dogwood
Persimmon
Red Buckeye
Red Cedar
Red Mulberry
Sassafras
Serviceberry
Southern Magnolia
Sugarberry
Sweetgum

Shrubs

Beautyberry
Blackberries
Blueberries
Devil's Walkingstick
Elderberry
Flowering Hawthorns
Hollies
Spicebush
Sumac
Virburnums
Waxmyrtle

Perennials

Asters
Yellow Thistle
Nuttall's Thistle
Coreopsis
Purple Coneflower
Swamp Sunflower
Black-eyed Susan

Vines

Carolina Coralbeads
Poison Ivy
Muscadine
Smilax
Summer Grape
Trumpet Honeysuckle
Virginia Creeper

{ Purple Coneflower
by William Bartram }



Goldfinches & Sunflowers

Plant native sunflowers near your windows to bring Goldfinches into view. Swamp Sunflower is a great one that, despite its name, performs well in the garden. You will see dozens of fall Goldfinches hanging upside down and every which way as they tear into the small but nutritious seeds.

Flowers for Hummingbirds

Hummingbirds follow the bloom of spring flowering species as they migrate north. Red Buckeye, Silver-bell, Tulip Poplar, Cross Vine, Carolina Jessamine and Indian Pink are a few spring favorites.

Hummingbirds add insects to their diet while rearing young but still depend on nectar for a large portion of their energy. Coralbean, Hibiscus, Trumpetvine, Morning-glories, Lobelias, Coral Honeysuckle, Monardas and Salvias bloom during the breeding season.

Perennials for Nectar

Spring:

- Carolina Jessamine
- Catesby's Lily
- Coreopsis
- Fleshy Milkweed
- Frogfruit
- Innocence
- Lyre-leaf Sage
- Phlox
- Pricklypear
- Queen's Delight
- Yellow Thistle
- Southern Blue Flag

Summer:

- Vanillaleaf
- Sunflowers
- Nuttall's Thistle
- Pickerelweed
- New York Ironweed
- Scarlet Hibiscus
- Camphorweed
- Scarlet Sage

Fall:

- Azure Sage
- Gayfeather
- Sea Lavender
- Swamp Sunflower
- Wingstem
- White Snakeroot

Importance of Leaf Litter

Some butterfly species spend a portion of their life cycle (as egg, larvae or pupae) in leaf-litter. Resist the temptation to blow away all the litter. Use low growing ground covers at the base of trees instead to protect butterflies.

Bring in the Butterflies

Butterfly plant resources fall broadly into two categories, host plants on which butterfly larvae feed and plants from which adults procure nectar, pollen, sap or juice. Reality, however, is not so concise or clearly delineated. Butterflies are most successful at reproducing when host plants and nectar plants are integrated into a healthy habitat structure that allows for butterfly resiliency as larvae, pupae (chrysalides), and adult. A habitat is most effective when it provides three general and very basic needs in close proximity to one another- food for larvae, protection for pupae and food for newly emerging adults. Below are a few host plants found in the Southern Coastal Plain with ornamental value and butterfly species that use them.

Host Plant

Asters
Black Cherry
Hairy Lespedeza
Hercules-club
Hickory
Hollies
Live Oak
Milkweeds
Partridge Pea
Passionflowers
Pawpaw
Red Cedar
Spicebush
Sugarberry
Switchcane
Vanillaleaf
Woodoats
Yuccas

Butterfly

Pearl Crescent
Eastern Tiger Swallowtail
Eastern Tailed-blue
Giant Swallowtail
Banded Hairstreak
America Holly Azure
Southern Oak Hairstreak
Monarch & Queen
Cloudless Sulphur
Heliconians
Zebra Swallowtail
Juniper Hairstreak
Spicebush Swallowtail
Hackberry Emperor
Southern Pearly-eye
Little Metalmark
Viola's Wood Satyr
Yucca Giant Skipper



Native Plant Guide



{ Gayfeather }

Native Index: Trees

Trees create the overarching structure of forests. They provide an infrastructure of limbs and roots, shady canopy and fallen organic matter that supports a host of Southern Coastal Plain species. The selection of trees below is by no means comprehensive. It does have an assortment of evergreen and deciduous species, tall and short varieties, those that delight us with extravagant blooms and others that lace the air with fragrance. Most of them, if not all, are important food sources for wildlife or host plants for winged insects, mammals and birds.

The framework of trees in your landscape will shape all your other choices. Take the time to learn about the native trees in your area. Identify the species on your property or those in natural areas nearby. Use that information with this manual to help you chose the best trees for your ideal landscape.



{ Flowering Dogwood
by William Bartram }

Tree Tips

- When placing trees, keep the attributes of a mature specimen in mind. Trees take longer to reach a good size, but they eventually make more of an impact on the landscape.
- Consider canopy, mid-story and understory plants collectively to create a complimentary vertical structure of layers in the landscape.
- Visualize the winter effect of trees in the landscape as well as spring and summer displays. It is then the structure of your design will become most apparent.
- Consider eventual height and spread in relation to existing structures such as roofs, pools and power lines.
- Hardiness, heat tolerance, soil type and moisture are factors that influence survivability. Chose plants native to the habitat in which you live.
- Foliage scale, color and texture are important design elements that can bring detail to the overall aesthetics of your landscape.
- Flowering time and color should always be taken into consideration. A large massing of Eastern Redbuds might clash with your house color or gracefully pick up the warm tones of a tile roof.
- Design with wildlife habitat, food and shelter in mind.
- Design with Firewise Principles in mind, using low flammable trees for areas near structures.

Acer barbatum {Southern Sugar Maple}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Can grow 40-60 feet tall. It has yellow fall color. Reported to be resistant to wind. Prefers sweet, less acidic, soil.

Landscape Uses: A useful medium sized garden tree or specimen tree in moist sites. Can also be used effectively at the edge of ponds. Good choice if you are looking for fall color along the coast. Like most Maples, shallow roots make gardening underneath difficult. Many of our shade loving native ferns will adapt well under its canopy. Avoid planting near pavings as roots will cause cracks in sidewalks.

Acer rubrum {Red Maple}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Can grow 60-90 feet tall. Named for its red twigs, buds and branches, the Red Maple is a great plant for seasonal coastal color. Leaves are shiny green in the spring and summer, turning bright red in autumn. Flowering occurs in late winter and is followed in the spring by pinkish, winged seed pods.

Landscape Uses: Its fast growth makes it a good choice for new landscapes and quick shade. Although naturally found in wet areas, this colorful species adapts well to any site when given adequate room for root development.

Aesculus pavia {Red Buckeye}

Light Requirement: Full sun to partial shade

Habitat: Found in rich upland areas and midden sites on the coast.

Information: Foliage appreciates some afternoon shade in a hot climate. Showy erect panicles of red-orange flowers appear in the spring. Prefers shell sites in maritime environments.

Landscape Uses: Palmately compound leaves create an interesting structure to the landscape. Dry conditions tend to scorch leaves.

Can be planted in groups as a screen or used as a specimen. Prefers moist fertile soils. Flowers add color to any garden and are important for the spring hummingbird migration.

Betula nigra {River Birch}

Light Requirements: Full sun

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Fast growth occurs in the first few years and can reach a mature height of 60-80 feet. Noted for its papery bark that ranges from a cinnamon brown to pinkish color. The trunk tends to fork close to the ground, but can be trained into a single base. Leaves are glossy dark green with a silver under side.

Landscape Uses: Does well when planted as a specimen tree. Bark draws attention to the long trunks and provides a detailed background to a perennial bed. Bark and shape also add interest to the winter landscape. Adapts well to drier sites.



Red Maple
from Andre Michaux

Carpinus caroliniana {American Hornbeam}

Light Requirements: Full sun to heavy shade

Habitat: Naturally found in wetland areas and along rivers and streams. Often found with Ironwood, *Ostrya virginiana*.

Information: Can grow up to 35 feet tall. Named for its blue grey trunk that resembles flexing muscles. It is long lived but a slow grower. Is noted for its attractive drooping seed pods that appear in late summer or early fall.

Landscape Uses: A good choice for a small to medium size tree in moist shady areas and wet sunny spots. The form of the trunk adds detail to any landscape and looks great as a specimen.

Carya glabra {Pignut Hickory}

Light Requirements: Full sun

Habitat: Found in upland areas and hammocks.

Information: Can grow from 70-80 feet tall with an equal canopy. Foliage has 5-9 leaflets and turns a spectacular yellow in the fall. Pear shaped nuts fall in early autumn and provide food for small mammals and turkeys.

Landscape Uses: Ornementally valued for its shade and tolerance of dry sites. Provides rich golden fall color. Planting an understory of shrubs is an attractive solution to mitigate litter left by nuts. Avoid planting in a small space. Best if planted in an open natural setting. Can tolerate some salt-spray.

Castanea pumila {Chinquapin}

Light Requirements: Full sun

Habitat: Grows naturally in dry sandy soils. Likes well drained soil.

Information: Small tree with broad spreading form and horizontal branches. Sharp, bristle-tip leaves resemble the legendary American Chestnut to which it is closely related. Pale yellow racemes appear in dense sprays in the spring, attracting many pollinators. The fruits are small, prickly burs with dense spines bearing a sweet nut.

Landscape Uses: Does well as a specimen tree or at the edge of a landscape. The fruit is enjoyed by many species of wildlife.

Celtis laevigata {Sugarberry}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Can grow up to 80 feet tall with rounded, fountain like branching. Trunk has corky nodules. Berry like fruit appears in the fall and is attractive to songbirds. Host to Mourning Cloak butterfly.

Landscape Uses: Sugarberry adapts well to most conditions including dry sites if not too acidic. They are desirable urban trees, doing well along streets and next to buildings. Creates great shade in the summer and spring months.

Cercis canadensis {Eastern Redbud}

Light Requirements: Full sun to light shade

Habitat: Found in upland areas, hammocks, and midden sites.

Information: Can grow from 35-40 feet tall. The heart-shaped leaves are a tender green in the spring. Pink and lavender blossoms appear before the leaves and provide an early nectar source.

Landscape Uses: Adaptable and dependable, it is the fastest growing of the redbuds. Plant for its spring color. Would be a good choice for wooded edge and does well when grouped. Can also be planted as an understory tree in a more natural garden setting. Any pruning should be done in the dormant season or after the tree has flowered.

Chionanthus virginicus {Fringe Tree}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Growth can range from a shrubby to open form. Reaches a mature height of 30 feet. Named for its narrow fringe like flowers that appear in pale, creamy green, lacy clusters. Blooms are slightly fragrant. Small olive-like fruit is favored by birds.

Landscape Uses: Excellent choice for a medium sized tree in a garden or yard. Showy flowers make it desirable as an ornamental. Needs sun to maximize flowering. It is slow to reach mature height, making a choice courtyard or patio specimen.

Cliftonia monophylla {Buckwheat Tree}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Multiple trunks create an erect form that grows 15-30 feet in height. Evergreen leaves are a glossy dark green with a silvery underside. Upright sprays of white to light pink blossoms attract Eastern Tiger Swallowtail butterflies in early spring.

Landscape Uses: When planted as an understory tree, flowers tend to brighten up shady areas. This is a good plant for moist areas with little light.

Cornus florida {Flowering Dogwood}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Can grow up to 30 feet tall. Leaves are oval and turn red in the fall. Showy white “blossoms” appear in mid-spring.

Landscape Uses: Grows in full sun if planted in moist fertile soil but prefers light shade. When planted in deep shade, the tree will not bloom. Referred to as the most beautiful tree in America by countless gardeners, it is widely planted for its profuse spring blooms and graceful form. Wonderful as a understory tree in a natural setting or as a medium sized specimen tree. Its low and horizontal branching creates a striking silhouette in the landscape.

Crataegus marshallii {Parsley Hawthorn}

Light Requirements: Full sun

Habitat: Grows in a variety of habitats.

Information: Foliage resembles parsley and has a fine texture. Known for its white showy flowers, the Parsley Hawthorn is a member of the rose family. Loose clusters of purple tipped white blossoms appear in early spring. Tiny, apple like fruit provide vibrant red color and wildlife food in late summer to early fall.

Landscape Uses: Multi-trunked shape provides dimension to small areas. Flowers are abundant and attractive. If you have a wet site, try planting *C. aestivalis*, source of the famed Mayhaw jelly.

Gordonia lasianthus {Loblolly Bay}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Can get up to 75 feet tall in moist sites. Evergreen leaves are dark green and leathery. Showy white blooms appear in June and continue until October. Flowers resemble Sweetbay Magnolia and Silky Camelia, which grow in similar environs.

Landscape Uses: Ornamental white blooms make an attractive display from mid summer well into fall. This a great choice for those difficult moist sites in gardens and yards. Adapts well to drier sites, but may not reach its full potential. Needs adequate sun to bloom. Form and foliage is similar to Sweetbay Magnolia but lacks a silvery under-leaf.

Ilex cassine {Dahoon Holly}

Light Requirements: Full sun to partial shade

Habitat: Grows at the edge of freshwater wetlands.

Information: Reaches 20 to 30 feet in height. Flowers in the early spring providing nectar for the first wave of pollinators.

Landscape Uses: The ideal holly for moist spots in the landscape. Glossy, evergreen leaves and scarlet to yellow berries make a lovely foil to bare branches of deciduous species in the winter garden.

Ilex opaca {American Holly}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of upland habitats.

Information: Can grow up to 70 feet tall. This coastal evergreen adds color and vitality to any landscape. It has a spiny leather leaf and can come in single or multi-trunked varieties. The festive red berries last until mid winter, providing needed food for birds. Numerous butterflies are attracted to its early blooming flowers.

Landscape Uses: An beautiful native evergreen with a noble pyramidal form, winter berries and shiny foliage. Take note that both sexes are needed for berry production. Berries are attractive to wildlife, especially birds.

Juniperus virginiana {Eastern Red Cedar}

Light Requirements: Full sun to light shade

Habitat: Grows in a variety of habitats. Is often found at the edge of agricultural fields where fertilizer amends the region’s typically acidic soil.

Information: Wonderful evergreen for the Southern Coastal Plain. Blue green berries have an attractive frosted look.

Landscape Uses: Very striking upright form when mature. Gives a formal feeling to a landscaped garden or lawn and can be pruned. Also used as a screen or windbreak. Avoid planting near irrigation heads or consistently wet areas. Roots will rot without good drainage. Berries are sought out by migrating Cedar Waxwings.

Juniperus silicicola {Southern Red Cedar}

Light Requirements: Full sun to light shade

Habitat: Grows on hammocks, middens, and spoil piles in maritime systems.

Information: The dark green, and sometimes blue-green, foliage and peeling bark is slightly fragrant. Blue berries have an attractive frosted look.

Landscape Uses: This potentially large evergreen tree may be shaped by salt exposure and wind into a natural bonsai form. It is a hardy, resilient tree for difficult marsh edge spots but is equally at home in a formal setting. Some individual trees are a soft blue-green while others are a bright emerald green. Keep this in mind while selecting accent trees. Sole host of Sweandner’s Hairstreak.

Magnolia grandiflora {Southern Magnolia}

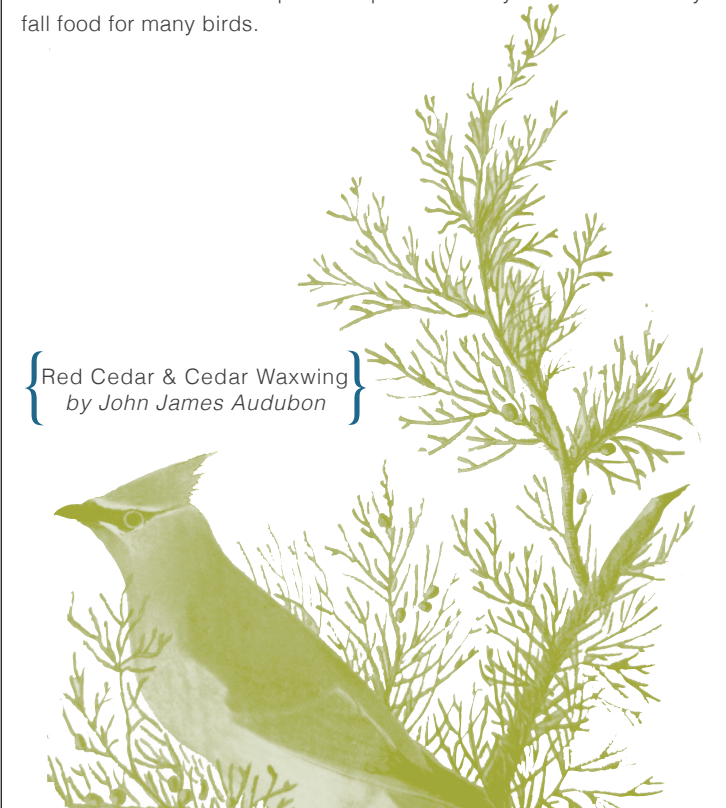
Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Generally associated with the southern half of the United States, this massive evergreen is noted for large glossy leaves and fragrant creamy blossoms. Can reach up to 80 feet tall and generally spreads 40-60 feet around. Grown as a multi-trunked tree or pruned to a single trunk. Fragrant flowers are large (8-10 inches) and bloom from early May into the summer.

Landscape Uses: Excellent shade tree, but dense shade coupled

with shallow roots make it difficult to grow turf underneath. Pruning should occur only when necessary. Left alone, limbs will naturally grow to the ground and hide unsightly leaf litter. Leaves drop year round so raking is necessary if the tree is limbed. Roots are sensitive to compaction so protect them from overuse, especially during construction. During early years, keep moist mulch over root system to promote growth. Do not plant near pavings, as roots crack and lift pavement and curbs. Brilliant scarlet seeds dangle from silken threads when the cones ripen in September. They are a favorite early fall food for many birds.



Firewise Tip: Both species of Red Cedar are very fire intolerant. Do not plant in Firewise Zones 1 and 2.

Magnolia pyramidata {Pyramid Magnolia}

Light Requirements: Full sun to partial shade

Habitat: A rare Coastal Plain species found on bluffs and ravines.

Information: It is named for its pyramidal shape. Generally reaches 50 feet in height with occasional multi-trunked form. Showy fragrant cream colored blossoms appear from April to May. Cones have a velvet texture and turn a bright magenta red in the late summer.

Landscape Uses: The overall form makes it a great choice for a specimen tree in a yard or garden. Used ornamentally for its large creamy flowers. Is a rare deciduous magnolia that has adapted to our coastal landscape. Closely Related to Magnolia fraseri which is endemic to the Southern Appalachians, some experts even refer to M.pyramidata as a variety of it. Fruit is eaten by wildlife.

Magnolia virginiana {Sweetbay Magnolia}

Light Requirements: Full to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Is an evergreen in the lower south. Can grow as tall as 60 feet, but is often much smaller. Foliage is rich green on top with silvery underside. Creamy white blooms appear in late spring through the late summer. Flowers are 2-3 inches in diameter and have a citrus fragrance.

Landscape Uses: Makes a wonderful landscape plant that should be used more often. Planted as a small tree or large shrub. Creates a great hedge or screen. Adapts well to shaping; can be espaliered against a wall or pruned. Ideal for moist areas with good drainage.

Nyssa sylvatica {Black Gum}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Large tree that can grow 60-100 feet tall. Is usually the first to change color in the fall, providing stunning color displays when the weather cooperates. Bluish, olive-like fruit appears in late summer.

Landscape Uses: Excellent choice for a shade or lawn tree. Growth is slow, making this a tree better suited for natural settings. Grows well in a variety of sites. Does well in soil with high organic content and does not tolerate pollution. Fruit enjoyed by birds. Near lakes or ponds, consider planting Water Tupelo, *N. biflora*, or Ogeechee Lime, *N. ogeche*, named for the beautiful Ogeechee River.

Ostrya virginiana {Ironwood}

Light Requirements: Full sun to partial shade

Information: Has a slow growth rate and can reach up to 30-50 feet high. Bark has a shag like appearance. Attractive fruit resembles hops and appears in the late summer.

Landscape Uses: Performs well in both dry and wet sites. Used in parking lot islands and is a great specimen for yards or parks. Bark adds textural detail to a landscape. Also used ornamentally for its pendent fruit clusters, which are appreciated by many birds.

Pinckneya bracteata {Georgia Fevertree}

Light Requirements: Partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Grows 10-20 feet tall. Is noted for its showy display when blooming in late spring. The profuse blooms range from creamy pink to burgundy.

Landscape Uses: Fevertree is a rarity but is receiving more attention as an ornamental in the nursery trade. Because of its rare status, this species should never be transplanted from the wild and should be bought from reputable sources. A word of caution though, the Fevertree is known to be difficult to grow as it must be in damp soils at all times. Excellent choice for adding height to rain gardens.



{ Georgia Fevertree
by William Bartram }

Pinus palustris {Long Leaf Pine}

Light Requirements: Full sun

Habitat: Grows naturally in dry sandy soils.

Information: Is a slow grower for the first five to ten years, but can reach 80-100 feet. Mature trees have a flat open crown with horizontal branching and needles averaging 10-18 inches in length. Large brown cones are 6-10 inches long. Upright buds are a pale white, adding to its ornamental value. Highly fire adapted.

Landscape Uses: Is among the longest lived pine species. Grows well in most sites, but especially useful for difficult dry sandy sites. Also resistant to wind breakage because of its open canopy and deep tap root. Young trees provide sculptural interest with their upright forms. Older ones have candelabra like branching and deep glossy needles, giving them a regal stature as single specimens or in groups. It was the original dominant tree species of the coastal plain, covering 92 million acres. Today, less than 3 percent of the historical range remains in Longleaf Pine.

Prunus serotina {Black Cherry}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Fast growing tree. Can reach 50-60 feet in height. Leaves are 5 inches long with a dark green top and light green underside. Fragrant, white, drooping flowers racemes appear in early spring. Fruit is a red to purple cherry that is used in jams and wines and sought after by birds.

Landscape Uses: Beautiful yellow leaves in fall. Particularly useful for beach side landscapes because of its salt tolerance. Is one of the few deciduous trees that can withstand the rigors of dune habitats. Fruits are attractive to wildlife and it is an important host plant for the Eastern Tiger Swallowtail. Planted for edible fruit but avoid planting near structures as fruit pulp stains. In the same genus, Cherry Laurel, *P. caroliniana*, is a popular evergreen ornamental. Particularly good for hedges. Distinguished by its shiny evergreen leaves, and the scent of almond when crushed.

Quercus alba {White Oak}

Light Requirements: Full sun

Habitat: Grows naturally in fertile upland areas.

Information: White Oaks are slow growers but highly valued trees. Height ranges from 80-100 feet. When young, possesses more of a pyramidal shape that rounds out as it matures. Bark is a light grey and with age acquires an attractive shaggy texture. The pale underside of the leaves creates a sliver shimmer in the wind.

Landscape Uses: Great shade tree for a yard or open space. Compared to other coastal oaks, leaves are a softer green. Grows best in deep, rich soils but adapts to any well drained site. Is widely planted as a memorial tree to mark occasions because of its durability and mature stature.

Quercus falcata {Southern Red Oak}

Light Requirements: Full sun

Habitat: Naturally found in dry upland forests

Information: Trees range in height from 70-100 feet. Form is rounded with spreading branches. Foliage is deeply lobed and pointed. Leaves tend to hold on until late autumn.

Landscape Uses: Planted to add height and shade. Southern Reds are highly tolerant of a variety of sites but are among the few coastal oaks that can tolerate dry sites. A good choice for urban and residential areas. Acorns are an excellent source of food for songbirds and wild turkeys.

Quercus michauxii {Swamp Chestnut Oak}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in bottom lands along rivers and streams.

Information: This member of the white oak family reaches 70-90 feet in height with a dense rounded canopy. Foliage has noticeably serrated margins. Acorns are sweet, and can be boiled and eaten.

Landscape Uses: Planted primarily for shade and size. Is the ideal oak for wet areas with poor drainage. Acorns are a coveted food source for deer and squirrels. Was once commonly referred to as the Basket Oak because strips of its wood were woven into baskets.

Quercus phellos {Willow Oak}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: A member of the Red Oak family. Grows to reach 90-100 feet in height with a straight trunk. Dense oval shaped crown when grown in full sun. Long, fine-textured, narrow willow-like leaves that are bright green in summer and turn yellow to russet in the fall.

Landscape Uses: Rare on the coast, but has great ornamental potential. Elegant, narrow leaves make this an oak with a delicate character and high ornamental quality. Grows well in moist soils. Fast growing and easy to transplant. Acorns are an important wildlife food.

Quercus virginiana {Live Oak}

Light Requirements: Full sun

Habitat: Grows naturally in most coastal habitats.

Information: Ranges in height from 40-80 feet. Leaves are simple with a short point at the tip. Like many evergreens, sheds its leaves in the late spring. Often seen draped with Spanish moss.

Landscape Uses: One of the trademark trees of the coastal south, it is the state tree of Georgia. Creates a picturesque form with its stately size and low, spreading limbs. Highly adaptive to a variety of sites, the Live Oak is both salt and drought tolerant. Excellent specimen tree for a yard or garden. Use as a shade tree in any coastal landscape. Creates dramatic tunnels of green when planted as an alley along a driveway or street. Is a relatively fast grower but long lived, making it a satisfying tree for new sites and near houses. When grown in an open area, lower limbs spread to touch the ground. Limbs are often coated with Resurrection Ferns and on occasion, with the rare Green Fly Orchid. Was widely sought after for ship building because of its naturally bent shape and resistance to water rot.

In dry, sandy maritime areas use Sand Live Oak (*Q. geminata*). Very similar but with leaf edges that roll under.



Willow Oak
by John James Aududon

Sabal palmetto {Cabbage Palm}

Light Requirements: Full sun to partial shade

Habitat: Naturally found along marsh edges and in maritime forests.

Information: Ranges in height from 8-60 feet. Trunk is upright and columnar when mature. Palmate fronds form a "V" at the stem. Growth rate is moderate but can grow up to 1 foot a year.

Landscape Uses: Adds a tropical feel to any garden or yard. Often seen as a street tree. It is highly valued as an ornamental. One of the best trees to add height to a beach landscape. Grows in a variety of soil types and light conditions. The arching fronds make this equally attractive as a shrub when cut back on a regular basis. Transplant only in spring or summer months and water well until established. If fallen seeds are not removed, unwanted seedlings can be a problem.

Sassafras albidum {Sassafras}

Light Requirements: Full sun to partial shade

Habitat: Found in woodland edges and in maritime forests.

Information: Ranges in height from 30-60 feet with a spread of 25 to 30 feet. It may develop multiple trunks creating a shrub like appearance. It is one of a few tree species that produces leaves of variable shapes, from single to lobed.

Landscape Uses: Grows in a variety of soil types and light conditions but prefers acidic, loamy, moist conditions with partial shade. Use as an understory tree at the edge of open areas. The pale underside of the leaves creates a pleasing effect with the slightest breeze.

Taxodium distichum {Bald Cypress}

Light Requirements: Full sun

Habitat: Naturally found in freshwater wetland areas and along rivers and streams.

Information: Generally a fast grower that reaches 50-140 feet tall. Has a narrow conical crown that flattens out in very old specimens. Foliage is made up of flat narrow green leaves that are feathery in appearance. Attractive rich bronze color in fall. Grown in extremely wet soils, it forms knobby growths on its trunk called knees.

Landscape Uses: Can grow in both extremely wet or dry soils and is drought and salt tolerant. Perfect to plant along pond banks, stream beds, or in marshy back yards but equally useful on drier sites.

Zanthoxylum clava-herculis {Toothache-tree}

Light Requirements: Full to partial sun

Habitat: Grows naturally in dry sandy soils.

Information: Grows 20-30 feet tall but can be considered a shrub in some cases. Most noted for its large thorns and corky growths covering the trunk. Leaves are thin and have a citrus scent when crushed. When eaten, leaves create a numbing sensation to the mouth. Native host plant for the Giant Swallowtail Butterfly.

Landscape Uses: In the fall, leaves have attractive red to yellow foliage. Great tree for shade in the harsh beach terrain. Interesting bark paired with an open oval crown give this tree a tropical appearance. Fine display of creamy flower clusters in late spring.



Sassafras & Tiger Swallowtail
by Mark Catesby



Native Index: Shrubs

For many wildlife species, the midstory matrix of shrubs and small trees provides a life line between tree canopies and forest floors. Typically we use shrubs to block unwanted views, create privacy, reduce noise, and provide a satisfying background for flowering plants.

Shrubs can also be used to enhance wildlife habitats in your garden or landscape. Brown Thrashers and Towhees are only a couple of the bird species that rely on shrubs for cover, food and nesting opportunities. Wax Myrtles and Yaupon Hollies are signature plants for the Painted Bunting, providing nesting spots and important cover as they forage in the marsh for insects.

Shrub Tips

- If you have native shrubs on your property use them as a point of departure for your midcanopy planting scheme.
- If you have a lawn and would rather bird watch than mow, plant clusters of shrubs and small trees away from foundations to define outdoor living spaces and animal viewing areas.
- Planting shrubs away from structures will decrease the risk of fire reaching your home.
- Edges of group plantings and borders can be used as a backdrop for perennials, ferns or grasses.
- Dense natural plant communities close to a house might be thoughtfully cleared to create a wildlife-viewing area visible from a patio or window.
- Plant shrubs at the same time as large trees to allow the smaller plants a chance to get established before tree roots out compete them.
- Match shrub selections to natural soil and moisture conditions.

Aesculus parviflora {Bottlebrush Buckeye}

Light Requirements: Full sun to partial shade

Habitat: This understory species grows in moist, well drained soils of open woodlands. Most of its natural range is in Alabama.

Information: Reaching 8 to 10 feet, it goes into a wide, highly ornamental shrubs

Landscape Uses: This great summer bloomer has the added value of compound leaves that turn bright yellow in the fall. The profuse blooms start at the bottom of each flowering spike, giving the appearance of tapers or bottle brushes. Native to the western part of the Southern Coastal Plain, it does well in gardens throughout the region. Plant in moist, well drained areas. This is a wonderful specimen plant and stunning when massed. Attractive to many pollinators and hummingbirds.

Aralia spinosa {Devil's Walkingstick}

Light Requirements: Full sun to partial shade

Habitat: Found along streams and rich forest soils.

Information: Can grow up to 25 feet in height. Erect, usually single stems, are covered with sharp spines and topped with umbrella-like leaf clusters. Large compound leaves, 3-4 feet long. Creamy white lacy flowers bloom in late summer and sometimes tower 4 feet above the foliage. Bears enormous clusters of purple berries.

Landscape Uses: Leaves are shaped like large shields adding a bold structural element to edges of wooded areas. Can be used as a specimen plant. Turns an attractive red-yellow color in the fall. Adapts well to both sunny or shady areas. Suckers readily and can form large thickets, making it a good choice for a large scale landscape. Can be easily propagated from seed or root cuttings. Fruit enjoyed by wildlife, blooms by pollinators.

Callicarpa americana {American Beautyberry}

Light Requirements: Full sun to light shade

Habitat: Grows in a variety of forest habitats

Information: A coarse, open shrub that can grow up to 6 feet in height and have a 5 foot spread. Small pink or lilac flowers in the

summer, followed by small round purple fruits that last into the winter.

Landscape Uses: The primary landscape appeal is the long lasting bright purple fruit. Ideal shrub for massing in the light shade. Grows well in most soils. The fruit's high water content makes it popular amongst wildlife. Reputed to be an insect repellent when rubbed on your clothing. Readily reproduces by seed, providing new plants that in a small setting may need to be relocated.

Calycanthus floridus {Sweetshrub}

Light Requirements: Full sun to light shade

Habitat: Found in a wide range of upland forest areas

Information: Can grow up to 10 feet tall. Purple-brown, sweet scented flowers bloom in the spring. These are followed by leathery pendant shaped fruits with brown seeds.

Landscape Uses: Makes a long lived specimen shrub or masses well for larger areas. Bears attractive, fragrant flowers. Small mammals tend to relish the seeds. Sweetshrub can be easily transplanted.

{ Sweetshrub
by Willaim Bartram }



Cephalanthus occidentalis {Button Bush}

Light Requirements: Full sun to light shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Has an open many branched crown that can grow anywhere from 3-15 feet in height with the same spread. Produces clusters of creamy white ball shaped flower heads that appear in the late spring. Highly attractive to butterflies and bees.

Landscape Uses: Flowers add unique detail to a landscape. Can be used in full sun, shallow waters of ponds, or in wet soil at the edges of water. Every few years it should be cut to the ground and rejuvenated. Was much admired and cultivated in Europe and can be very useful in a coastal landscape.

Clethra alnifolia {Summer Sweet}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Many branched form with exfoliating bark. The oval leaves may not appear until late spring, but achieve a rich yellow color in the fall. Small sweet-scented white or pink flowers bloom in the mid to late summer.

Landscape Uses: Makes an attractive ornamental in sunny, moist areas. Summer Sweet is moderately salt tolerant and can grow in moist soils. Great shrub for a naturalized garden. If possible, plant near house or walkway to enjoy its fragrance. Attracts butterflies and birds.

Cyrilla racemiflora {Titi}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Can grow up to 30 feet tall. Typically evergreen in the lower and coastal south. Titi is most noted for its gnarly branching pattern. Fragrant white flowers appear in early summer and dangle in 4-6 inch sprays of minute blossoms.

Landscape Uses: Bright white blooms add sparkle when used as an understory tree. Good choice for a moist or wet area and is able to withstand periodic flooding. Can form dense colonies and best used in a larger landscape.

Hamamelis virginiana {Witchhazel}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: A coarse-textured round shrub that can grow up to 30 feet. Leaves turn yellow in the fall. Blooms from October through December during warm spells. Fruits are egg-shaped capsules that eject seeds up to 30 feet in the air.

Landscape Uses: Chartreuse blooms add interest to the late winter landscape. Use in shrub borders, forest edge plantings, and naturalistic landscaping. Does not tolerate drought very well, but generally grows in a wide variety of sites.

Hydrangea quercifolia {Oakleaf Hydrangea}

Light Requirements: Partial to almost full shade

Habitat: Naturally found along rivers and streams.

Information: A deciduous shrub that can reach 6-10 feet in height and spread. Leaves turn red, bronze, and purple in the fall. Colors often persist well into the winter. Flowers are in cone-shaped creamy white clusters that age to pinkish and by fall and winter are a dry, papery rusty-brown.

Landscape Uses: Useful in sandy coastal soils and road banks. Deeply lobed foliage and sinuous limbs add a bold look to massed shrub borders. Likes well drained but moist soils.

Ilex decidua {Possom-haw, Deciduous Holly}

Light Requirements: Full sun to partial shade

Habitat: Naturally found along rivers and streams.

Information: Form is stout with low branches and seldom grows above 20 feet. Shiny red berries appear in the fall and continue through the next season.

Landscape Uses: Excellent tree for a winter color, red fruit looks great in the bare landscape. Plant away from walkways and outdoor living spaces to avoid messes left by birds. Berries are showy and can be used in holiday decorations.



Ilex vomitoria {Yaupon Holly}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: An evergreen tree that can reach 25 feet tall but often functions as a shrub. Has small leathery leaves with a distinctive serrated oval shape. Tiny white flowers appear in the spring and are followed by red berries that last through the fall and winter. Female berries are a beautiful translucent red. A favorite of Cedar Waxwings and many song bird species.

Landscape Uses: A valuable landscape plant for the coast as it adapts readily to a wide range of environments. Its drought and salt spray tolerance make it a perfect choice coastal gardens. Works well in natural plantings, but is great as a trimmed hedge, screen, or windbreak in more formal settings. Note that it does spread readily underground. If buying potted plants, look for a specimen with berries to ensure that it will fruit. The parched leaves were used as a sacred drink by Indians of the Southeast.

Illicium floridanum {Red Anise}

Light Requirements: Partial to full shade,

Habitat: Naturally found in wet soils along wooded streams.

Information: Can grow 6 to 10 feet in height. Has dark, maroon-red flowers. The fragrant blooms appear in March and April. Leaves are aromatic. Star shaped fruit dry and persist into the winter adding more ornamental value to this shrub.

Landscape Uses: An excellent choice for shady areas. Performs well in garden with regular watering. Group with Red Buckeye and Fringe Tree for a spring time show.

Itea virginica {Sweetspire}

Light Requirements: Full sun

Habitat: Naturally found in bottom lands along rivers and streams.

Information: Can grow up to 3-10 feet in height. Has creamy white flowers along single 4 inch racemes. The fragrant blooms appear from April into early summer. Has purplish or bright red leaves in the fall.

Landscape Uses: One of the few medium sized shrubs that does well in moist or wet areas. Tends to form colonies in loose soil, offshoots can be easily transplanted in the winter. Wonderful plant, deer tend to love it as well. Pair with Viburnum and Blue Flag Iris for a lovely spring display.

Lindera benzoin {Spicebush}

Light Requirements: Full sun to light shade

Habitat: Grows along stream banks and in swamps.

Information: An deciduous shrub that grows 6-12 feet in height. Flowers are aromatic when crushed as are the leaves. Simultaneously produces bright green and green fruit.

Landscape Uses: A very attractive specimen shrub with lovely spring blooms, yellow autumn leaves and red winter fruit. Highly ornamental in the spring with nicely articulated limbs and twigs tipped by tiny, chartreuse blossoms. It is a host plant for the iridescent blue and black Spicebush Swallowtail Butterfly and the giant Promethea Silkmoth.

Morella cerifera {Wax Myrtle}

Light Requirements: Full sun

Habitat: Grows in a variety of habitats.

Information: An evergreen shrub that grows up to 15-20 feet in height and spread. Oval leaves are aromatic when crushed. Produces a small, grayish white fruit that is coated with wax.

Landscape Uses: A very attractive specimen shrub, good for coastal gardens because it tolerates dry soils and salt spray. Fruit litter can cause a maintenance problem, best planted away from house and walkways. Cut back every 3 to 5 years to keep a full shape. Wax myrtle is not usually browsed by deer, but its seeds are eaten by a wide variety of birds. This species is flammable and should be planted away from structures.

Osmanthus americanus {American Olive}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: An evergreen shrub or a compact small tree that can grow up to 15-25 feet in height with an equal spread. In natural conditions can grown as high as 40 feet. Leaves are a lustrous deep green on the surface and pale olive green on underside. Small, but fragrant creamy-white flowers bloom in the late winter to early spring. Fruit matures to a dark blue drupe that persists into the winter.

Landscape Uses: American Olive is a desirable shrub, it is used in a naturalized landscape or in formal setting as a foundation plant. Can handle dry areas and is salt tolerant. It is a member of the olive family and related to the old, but exotic, garden favorite Teaolive. Try our native one. Produces fruit for fall bird migrations.

Prunus caroliniana {Carolina Laurel Cherry}

Light Requirements: Partial sun to shade

Habitat: Naturally found in maritime forest and on sandy hammocks

Information: Can grow up to 40 feet but preforms well as a garden shrub. Deep green, evergreen leaves and showy, white flower racemes make this a fine landscape plant.

Landscape Uses: Works well for hedges or single specimens. Its early spring bloom may attract woodland butterflies such as Viola's Satyr and Carolina Satyrs.

Rhododendron austrinum {Orange Azalea}

Light Requirements: Full sun to part shade

Habitat: Naturally found along rivers and streams.

Information: Can grow 8-10 feet tall. Possesses fragrant flowers that bloom in March and April. Flowers range from yellow to a deep reddish orange.

Landscape Uses: Works well with sandy soils and tolerates drought. This is one of the easiest natives to grow. Planted with its close relative, Flame Azalea, *R. flammeum*, flowering period can be extended from March to May. The Flame Azalea also adds melon flesh tones from soft gold to salmon to the garden palette.

Rhododendron canescens {Sweet Azalea}

Light Requirements: Full sun to partial shade

Habitat: Naturally found along rivers and streams.

Information: Can grow 8-10 feet tall. Fragrant, very showy, pale to deep pink flowers appear in early spring.

Landscape Uses: Bloom display and shape respond well to full sun. Flowers bloom before leaves emerge, creating a strong display of color. The early bloom is important for butterflies. Does best in slightly moist soils. For wet areas use Swamp Azalea, *R. viscosum*.

Sabal minor {Dwarf Palmetto}

Light Requirements: Sun to light shade.

Habitat: Naturally found in maritime forest and along rivers and streams.

Information: Grows 3-8 feet tall. Looks best with adequate water but is drought resistant. Long blooming spray extends above fronds in summer. Grows in maritime forests where shell has amended the soil.

Landscape Uses: For smaller gardens this palm provides the structure of a sawtooth palmetto without the sprawl. It remains compact with attractive fronds leaning to a bluer green than most palms.

Sambucus nigra {Elderberry}

Light Requirements: Full sun to light shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Possesses an umbrella like canopy that grows up to 8-12 feet in height and spread. Has attractive compact leaves and large white flower clusters. Flowers bloom in early summer followed by dense clusters of purple berries used in jams, pies, and wine. If that was not enough, it has cancer fighting antioxidants and can contain more vitamin C than an orange.

Landscape Uses: Flowers best in full sun. Beautiful massed next to water features. Use as a great addition to large landscapes with wet soils. Is an important wildlife food source.

Serenoa repens {Saw Palmetto}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: A small, evergreen palm that can grow 4-7 feet in height and spread. Has attractive fan shaped foliage and naturally forms colonies.

Landscape Uses: Adapts to a wide range of environments, from sand dunes to wetlands. An excellent choice for naturalistic landscaping. Looks good in foundation plantings or massed under tall trees. Easy plant to mass or use as a single specimen. Adds structural detail to large or small gardens. Produces, large, attractive sprays of flowers that are visited by many pollinators.

Styrax americanus {American Silverbells}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Can grow up to 6 feet in height and have a 9 foot spread. Blooms in the spring. Fragrant bell shaped white flowers curl upwards and expose yellow stamens. Has bright green leaves.

Landscape Uses: Tolerates a variety of soil types. Valuable in a deciduous understory for its showy white blossoms and upright form.

Vaccinium arboreum {Sparkleberry Bush}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Vase shaped trunks and twisted branches make an elegant form in the landscape. This shrub can grow up to 10-25 feet in height and in spread. Has distinctive glossy foliage that turns crimson red in the fall and persists through the winter. Showy clusters of small bell-shaped, white flowers are fragrant and followed by black berries in late fall.

Landscape Uses: Great ornamental with colorful autumn color and sculptural branching. Creates an interesting winter silhouette. The berries attract a wide range of wildlife. Popular spring nectar plant.

Vaccinium corymbosum {Highbush Blueberry}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Shrub can grow up to 6 feet in height and spread. Bright green leaves turn orange in the fall. Has clusters of waxy, bell-shaped, white flowers that bloom in the spring. The flowers are followed by blueberries, which ripen in the summer.

Landscape Uses: This is the "blueberry pie" plant! Equally wonderful as a landscape plant for low screens and borders. Plant more than one specimen to insure plenty of fruit. Grows best in moist, well-drained soil. After three years, prune the plant in the late winter of that year.

Viburnum dentatum {Southern Arrowwood}

Light Requirements: Full sun to partial shade

Habitat: Found in wetland areas and along rivers and streams.

Information: Can grow up to 5-6 feet in height and spread. Glossy serrated leaves turn yellow, orange or red in the fall. Clusters of white, fragrant flowers bloom in the spring followed by blue-black berries.

Landscape Uses: Straight single stems create an attractive upright umbrella like form, adding a sculptural element to the landscape. Is a very winter hardy and vigorous shrub. Prefers moist, well drained sites. Possum-haw, *V. nudum*, is an excellent choice for wet sites.

Yucca gloriosa {Moundlily}

Light Requirements: Full sun

Habitat: Naturally found in dune systems

Information: A huge rosette of stiff blades from 5-10 feet in height sends out a tall flowering spike that blooms in late summer or fall. Large bell shaped white flowers dangle from the stalk.

Landscape Uses: Large scale creates stunning display and structure in the landscape. Great for dry sandy sites but will grow well in all sunny spots. Spikes are very sharp. Plant together with summer blooming Spanish Bayonet, *A. aloifolia*, for similar features and extended bloom period.

Native Index: Perennials

Native perennials provide the coastal gardener with an abundance of colors and shapes, and pollinators with nectar and host plants. The list below was compiled to provide a selection of plants adapted to extremes from dry and sunny, to wet and shady. Using native flowers in the landscape helps to rebuild the vital matrix of blooming plants across our coastal habitats. Without a succession of blooms throughout the seasons, coastal dwellers would lose many species of pollinators and birds.



Fly Poison
by William Bartram

Ageratina jucunda {Hammock Snakeroot}

Light Requirements: Full sun

Habitat: Grows naturally in partial sun to light shade of maritime forests and pine systems.

Information: Can grow to 1-3 feet tall. Leaves are heart shaped and serrated. Prefers a slightly basic soil. Flat clusters of white blooms occur from early fall into winter. Flowers during fall butterfly migration. Landscape Uses: Attractive long lasting flowers can be massed in slightly shady locations. A prolific fall bloomer that can tolerate drought but thrive in garden conditions.

Amianthium muscitoxicum {Fly Poison}

Light Requirements: Full sun

Habitat: Grows naturally in seasonally wet areas of Flatwood Pine systems.

Information: Can grow to 1-3 feet tall. Single white flower spikes emerge from rosettes of narrow leaves. Blooms in the spring. All parts of the plant are poisonous.

Landscape Uses: Makes a very attractive display when massed. It does very well in garden soil but can tolerate wet soils that periodically dry out. An under used ornamental.

Arisaema dragonium {Green Dragon}

Light Requirements: Partial shade

Habitat: Grows naturally in rich forest soils with filtered light.

Information: Can grow to 1-3 feet tall. A single stem splits in two producing two sets of deeply lobed leaves. The spring bloom is similar to that of Jack in the Pulpit. It has brilliant red seeds in the fall.

Landscape Uses: Is has an unusual plant form with striking curved stems and attractive berries. Lovely mixed with ferns in moist, loamy areas. Also good for pond edges and rain gardens. This rare species should be bought from reputable sources and never gathered from the wild.

Asclepias humistrata {Fleshy Milkweed}

Light Requirements: Full sun

Habitat: Naturally found in dry sandy soils of Pine Flatwoods.

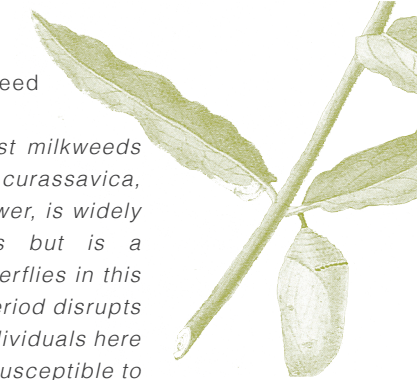
Information: For extremely dry sites consider planting this early flowering milkweed. Foliage is thick and leathery with grayish green leaves and pink and cream veins. Clusters of fleshy pink and cream flowers appear from early April to mid May.

Landscape Uses: Fleshy Milkweed is used by spring migrating Monarch Butterflies along the immediate coast. Although it is does not last long, this plant also provides much needed early nectar for many species of butterflies and native bees. Excellent for dry sites.

Alert!

Mexican Milkweed

Monarchs will use most milkweeds for hosts. Asclepias curassavica, also known as Bloodflower, is widely available at nurseries but is a danger to Monarch butterflies in this area. The long bloom period disrupts migration and keeps individuals here too long, making them susceptible to pathogens.



Asclepias incarnata {Swamp Milkweed}

Light Requirements: Full sun

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Can grow 2-4 feet tall with branching stems. Opposite narrow lance shaped leaves. Deep pink flowers cluster at the top of each stem. Blooms throughout the summer. Host plant to Monarchs.

Landscape Uses: Showy clusters of flowers are attractive to butterflies and hummingbirds. Perfect for rain gardens and naturally wet spots. As with all milkweeds, elongated seed pods provide added interest in the autumn garden. Plant with Red Milkweed, *A. rubra*, and Fewflower Milkweed, *A. lanceolata*, for scarlet accents.

Asclepias tuberosa {Butterfly Weed}

Light Requirements: Full sun to light shade

Habitat: Naturally found in dry upland forests.

Information: Foliage is prominent and hairy. Flat dense clusters of orange red flowers appear from May to August. Blooms are followed by attractive seed pods. Roots are poisonous

Landscape Uses: Found at the edge of oak forests, sandy woodlands, and along roadsides. On coast it prefers gaps in Maritime Forest with shell in soil. Prefers rich soils but is tolerant of drought. Perfect choice for a sunny garden and woodland edge. Stands out in a mixed perennial border or in a natural landscaped area. Once established, is easy to maintain and adds lively color to the garden. A must for attracting nectaring butterflies.

Baptisia alba {White False Indigo}

Light Requirements: Full sun

Habitat: Grows naturally in dry sandy soils.

Information: Can grow to 3 feet tall. Foliage is an attractive blue green with abundant white spikes of flowers. Blooms occur in early summer and can be pinched to encourage repeat blooming.

Landscape Uses: Has a deep tap root which makes transplanting difficult but allows it to survive harsh conditions. Plant for a mounding form with elegant sprays of flowers. Cut and use in an arrangement.

Canna flaccida {Yellow Canna}

Light Requirements: Full sun

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Unlike most cannas, leaves emerge from a common base. Bright green foliage will rise to 3-5 feet tall. Tropical yellow flowers are showy, and appear from May to July. Cutting stalks to the ground after flowering will allow for repeat bloom.

Landscape Uses: Large foliage adds drama and dimension to the landscape. Is useful as a backdrop for other plants. Most effective when grouped or massed. Prefers full sun and wet feet but is adaptable to dryer conditions. Host to the Brazilian Skipper.

Carphephorus odoratissimus {Vanillaleaf}

Light Requirements: Full sun

Habitat: Naturally found in Pine Flatwoods near wet areas.

Information: Rosettes of fragrant leaves support tall stalks, 14-24 inches, terminating in loose clusters of brilliant purple flowers. This lovely plant almost became extinct because the fragrant leaves were gathered to flavor pipe tobacco. The flowers appear in September and bloom into October. It is one of two host plant in this area for the rare Little Metalmark butterfly.

Landscape Uses: Beautiful color and hugely attractive to butterflies. Is useful in groupings behind other plants. Prefers full sun, damp soil but dry feet. Conditioned to survive periods of drought.

Cirsium nuttallii {Nuttall's Thistle}

Light Requirements: Full sun to light shade

Habitat: Naturally found forest gaps and meadows.

Information: This plant may be armed with prickly leaves but its flowers are a soft lavender of stunning beauty. Starts blooming in June and may do so all summer. It provides early summer color and nectar for many butterfly species- especially swallowtails and skippers. Leaves and stems are a soft green. It reaches up to 4 feet. Landscape Uses: Not recommended for a small garden but a wonderful addition to the edges of larger landscapes. If you have it already, treasure it from a distance. The earlier blooming Yellow Thistle is another native worth protecting on your property but at arm's length. Finches love thistle seeds.

Chrysogonum virginianum {Green and Gold}

Light Requirements: light shade

Habitat: Naturally found in rich woodlands.

Information: Mounds of bright green leaves grow up to 5 inches with stems of cheerful yellow flowers reaching up to a foot tall. Landscape Uses: This perennial does well as a ground cover in shady garden spots and edges of woodlands. Likes moist, organic soils and does well at the front of boarders or in rock gardens.

Conoclinium colestinum {Blue Mist Flower}

Light Requirements: Full sun

Habitat: Grows in a variety of habitats.

Information: Hardy perennial that can reach 2 feet in height. Flowers are grouped in flat, dense clusters of bright blue to light purple. Blooms put on a show from late summer into the fall and can be trimmed back to create a dense form.

Landscape Uses: One of the best plants for fall color and massing. Excellent choice for a butterfly garden or as a focal point for an autumn flowering bed. Will spread quickly if planted in rich moist garden soil. Drought tolerant and will bloom even in shade.

Coreopsis lanceolata {Lance-leafed coreopsis}

Light Requirements: Full sun to partial shade

Habitat: Grows naturally in dry sandy soils.

Information: Ranges in height from 1-2 feet tall with thin, erect stems. Flowers are bright yellow and resemble the shape of a daisy. Margins of the blooms are uneven and generally appear from late spring to mid summer.

Landscape Uses: Thrives when baking in the harsh beach environment. Beautiful if seeded in an open meadow or along the border of a wildlife garden. Plant where you want to achieve a natural look. Similar to the commonly known Large-flowered Tickseed, *C. grandiflora*. Grows best in hot, sunny areas with poor or well drained soil.

Croton punctatus {Beach Croton}

Light Requirements: Full sun to partial shade

Habitat: Grows naturally in dry sandy soils.

Information: Reaches 3 feet in height with a low mounding form. Leaves are a dusty silver green with soft brownish-grey stems. Landscape Uses: Commonly grows on or near the coastal beach dunes. Valuable for dry sunny spots, even sandy beach zones. Could be beautifully paired with a display of Sea Oats and Baccharis. Many fall migrating butterflies use it for nectar.

Eupatoriadelphus dubius {Coastal Joe Pye Weed}

Light Requirements: Full sun to light shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: This perennial giant is best known for its profuse pink fall blooms and towering form. Ranges in height from 3-10 feet. Foliage is lance shaped and arranged in a whorled pattern around the stem. Leaves have a vanilla scent when crushed. Large clusters of rounded flower heads debut from July through October. They vary in color from mauve pink to violet.

Landscape Uses: Flowers are more abundant if planted in moist, sunny areas. Plant alongside a pond for fall color or in a wild garden for a whimsical form. Can hold its own in a perennial bed and is a top choice for its burst of pink autumn hues.

Gaillardia pulchella {Blanket Flower}

Light Requirements: Full sun

Habitat: Grows in dry sandy soils of beach dunes and thin woods.

Information: Reaches 1-2 feet in height. It is biennial in this region. Bigths yellow petals become purplish-brown near the center. Landscape Uses: Valuable for dry sunny spots, even sandy beach zones. Wonderful for sunny wildflower meadows and roadsides.

Helenium flexuosum {Southern Sneezeweed}

Light Requirements: Full sun

Habitat: Grows in moist pastures, savannas and forest.

Information: Grows 1-3 feet high. Bright yellow petals surround a purple brown dome. Divide clumps periodically. Landscape Uses: Use in perennial borders, wildflower meadows in moist areas, and sunny rain gardens. Blooms all summer long with attractive, showy flowers. Plant the all yellow Common Sneezeweed, *H. autumnale*, to extend your bloom period into the fall. Plant this 3-5 foot tall bloomer in the back border or cut back in June for lower display.

Helianthus angustifolius {Swamp Sunflower}

Light Requirements: Full sun

Habitat: Grows in a variety of habitats.

Information: Tall, upright multi-branched perennial. Can grow to 12 feet tall with shiny needle like foliage. Prune back the top third of the stalk in early summer to encourage a denser form. The abundant golden flower display begins in midsummer and persists into fall. Landscape Uses: Does well in the back of a perennial border, adding height and mounding color bursts. Is tolerant of salt and dry sites. Blooms in time for fall butterfly migrations. For beach front property or a sunny dry site plant Cucumber-leaf Sunflower, *H. debilis*.

Hibiscus coccineus {Scarlet Hibiscus}

Light Requirements: Full sun

Habitat: Naturally found in swamps and wetlands.

Information: Can grow 4-7 feet tall. Upright to oval form. Deeply palmate leaves with prominent veins provide interesting detail. Deep scarlet flowers over 6 inches in width have an open star-like form. Blooms July through October. Great nectar plant for butterflies and hummingbirds.

Landscape Uses: A very showy species for sunny sites. Will form clumps creating an impressive display of color. Can tolerate standing water and be used by the edge of a pond but performs equally well in the garden. For pinks and white use Eastern Rose-mallow, *H. moscheutos*.

Hibiscus grandiflorus {Large-flowered Hibiscus}

Light Requirements: Full sun

Habitat: Naturally found in wet dune swales, tidal marshes and coastal wetlands.

Information: Can grow over 12 feet tall and forms clumps. Landscape Uses: For the large garden, rain gardens and even containers. This rare and truly dramatic flower has clear pink blooms with an 8-10 inch spread appear in the late summer. The leaves are soft and silvery gray-green. This is a magnificent ornamental. Visited by butterflies and hummingbirds alike.

Hymenocallis caroliniana {Carolina Spiderlily}

Light Requirements: Full sun

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Stems reach 2 feet tall. It needs well drained soil to thrive. Known for distinct white blooms that appear from April through June. Each blossom has whisker-like spikes emerging from each petal, giving the plant a "spider-like" appearance.

Landscape Uses: These unique blooms do wonders for the coastal garden. Easy to maintain once established, but regular watering is recommended to encourage flowering. In dry sites, foliage can become coarse and unsightly and is best planted with something in the foreground. Best grown in wet sunny or moist lightly shade spots.

Iris virginica {Southern Blueflag Iris}

Light Requirements: Full sun

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Grows 1-3 feet tall with bright green sword shaped leaves. Flowers range in color from blue to purple and appear in late spring. Blossoms are showy.

Landscape Uses: Use in low lying areas along streams or ponds. Can withstand periodic flooding so this is a great choice for an area that experiences constant moisture. Try it in rain gardens and at pond edges. Is highly deer resistant.

Kosteletzkya virginica {Seashore Mallow}

Light Requirements: Full sun to afternoon shade

Habitat: A variety of wetlands, from brackish to fresh.

Information: Grows from 4-5 feet tall and requires moist soil to grow to its full potential. 2-4 inch hibiscus-like blooms are a perfect pink with golden yellow centers. Flowers bloom all summer.

Landscape Uses: Attractive to hummingbirds. Should be used more widely in coastal gardens. Its multi-branched stems fill out the backdrop of a perennial border or an open spot in a natural wetland. Enjoyed by a variety of butterflies.

Liatris spicata {Gayfeather}

Light Requirements: Full sun

Habitat: Grows naturally in dry sandy soils.

Information: Grows 3-4 feet tall and is most noted for its spikes of lavender flowers that appear from June through August. Spikes of blooms can be dense and tend to put on a show.

Landscape Uses: One of the better known Liatris species. Attracts butterflies and hummingbirds. Useful to plant in a sunny perennial border or for color in a container arrangement. Can be somewhat drought tolerant and easily maintained after established. To extend seasonal bloom, plant Elegant Blazing Star, *L. elegans*, behind it. This 5 foot tall relation blooms September through October.

Lobelia cardinalis {Cardinal Flower}

Light Requirements: Full sun to part shade

Habitat: Grows naturally along streams and moist wooded areas.

Information: Grows 2-4 feet tall and produced showy spikes of brilliant scarlet blooms in late summer. Can spread from roots.

Landscape Uses: Plant is partial shade unless plenty of water is available for sunny locations. Divide clumps in the spring after a couple of years. Very attractive to butterflies and hummingbirds. For a brilliant blue under similar conditions, plant Glade Lobelia, *L. glandulosa*.

Lilium catesbaei {Pine Lily}

Light Requirements: Full sun

Habitat: Grows naturally in sunny, wet locations.

Information: Grows 1-3 feet tall. Flame red flowers with yellow throats appear in late summer. It is native to Pine Flatwoods and needs plenty of water in spring and early summer but tolerates dry spells at other times. Landscape Uses: This stunning flower is a great nectar plant for areas with seasonal flooding. Incorporate into your rain-garden. Providing acidic soil should not be a problem in the coastal plain but should be considered in garden conditions.

Lupinus perennis {Wild Lupine, Sundial Lupine}

Light Requirements: Full sun to light shade

Habitat: Grows naturally in dry sandy soils.

Information: Erect form with pinnately compound leaves can reach 8-24 inches tall. Stalks are densely covered with deep blue and purple pea like blooms from March to May.

Landscape Uses: Thrives in loose sandy soils. Brilliant sky blue flowers brighten up early spring gardens. Usually established from seed, and can be picky about its soil. Does well when paired with the Crested Iris and coreopsis.

Mitchella repens {Partridge Berry}

Light Requirements: Does best in partial shade

Habitat: Grows naturally in moist upland areas.

Information: Grows low to the ground in a vinelike manner. Reaches only about 2 inches in height but one plant can spread up to a foot wide. White funnel shaped blooms arrive in the summer and are fragrant. Bright red berries stand out among the dark green foliage and are sometimes interlaced with lingering blossoms.

Landscape Uses: Great choice for a flowering ground cover under the shade of trees or shrubs. Try adding it to a container for a low growing plant to weep over the edge. Thrives in rich soil high in organic matter. The berries are attractive to birds.

Monarda punctata {Spotted Beebalm}

Light Requirements: Full sun to partial shade

Habitat: Grows naturally in dry sandy soils.

Information: Grows between 3-4 feet tall. Leaves and stems are light green and hairy. Flower heads are showy spikes of pink to lavender and appear on the tips of the upper stems. Blooms from late summer until fall. Nectar plant for hummingbirds and butterflies.

Landscape Uses: It is drought tolerant and useful for sandy coastal sites, including beach landscapes, but will flourish under normal garden conditions. Excellent as a border plant in a wild flower bed or butterfly garden. For sunny moist sites, try Wild Bergamot, *M. fistulosa*, for its showy lavender bloom and heat tolerance.

Nelumbo lutea {American Lotus}

Light Requirements: Full sun

Habitat: Fresh water ponds.

Information: Grows in water to the depth of 3-6 feet. Pale yellow flowers reach 8-12 inches in diameter and rise above the water surface. Large waxy leaves can be 2 feet across and also emerge above the waterline.

Landscape Uses: This unusual plant is the only lotus native to North America. It provides a large scale presence in water features from ponds to garden pools. Beautiful fragrant flowers, massive green leaves and attractive seed pods make for a stunning landscape addition. Blooms June through September.

Nymphaea odorata {American Waterlily}

Light Requirements: Full sun

Habitat: Fresh water ponds sluggish waters.

Information: Grows in water to the depth of 3-6 feet. Fragrant white flowers rise slightly above bright green, floating leaves.

Landscape Uses: Beautiful flowers reach to 6 inches across and are wonderfully fragrant. Perfect for the naturalized pond but can be aggressive in small bodies of water. Plant in flower baskets to contain in garden ponds.

Phlox carolina {Carolina Phlox}

Light Requirements: Full sun to little shade

Habitat: Grows naturally in wet sunny areas

Information: Upright stems grow to 3 feet in height. Produces showy clusters of pink blooms from late spring into the summer.

Landscape Uses: Adds drama when planted in masses. Color variations do well to accent a small perennial bed or a container arrangement. This is ideal for a sunny wet spot with good drainage. Provides nectar for various pollinators.

Rhexia virginica {Handsome Harry}

Light Requirements: Full sun to partial shade

Habitat: Grows in wet meadows, pond edges and savannas.

Information: Grows 1-2 feet. Bright pink flowers with four petals.

Landscape Uses: Blooms on loose terminal clusters. The bold pink blooms sport prominent yellow stamens that add to their ornamental value. Narrow leaves arch off angular stems. Very good rain garden or wetland plant.

Rudbekia hirta {Black-eyed Susan}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Grows 1-3 feet in height and has stiff upright stems and profuse golden blooms. Daisy like petals surround a prominent dark cone. Flowers appear from mid to late summer.

Landscape Uses: Highly attractive to butterflies. Great plant for a splash of color in a container or butterfly garden. Arrange in a mass for a drift of rich gold. A staple for any wildflower border or bed and does very well in summer heat with adequate moisture. Is also said to be very tolerant of high summer temperatures. For low wet soils use Cutleaf Coneflower, *R. laciniata*. Valued by the Cherokee as a edible green.

Sisyrinchium angustifolium {Blue-eyed Grass}

Light Requirements: Full sun

Habitat: Grows in wetlands.

Information: Grows 1 to 2 feet tall. Bright green , narrow blades resemble grass. Intense blue-violet with yellow centers just above the leaves. Blooms in the spring.

Landscape Uses: Swaths of vibrant blue can be attained at the edge of a wet meadow or pond with this relative of the iris. It loves moisture but needs good drainage. It also does well in a garden or along a path when well watered.

Solidago sempervirens {Seaside Goldenrod}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats, from beach to salt marsh.

Information: Grows to be 4-6 feet tall once mature. A statuesque plant with floral spikes clustering into an elongated pyramid. Blooms appear in the fall and are a rich golden yellow.

Landscape Uses: Named for its tolerance of the "seaside" environment. One of the best choices for adding fall color to a beach garden or marsh edge or any garden. The green foliage dominates through the summer but when the golden blooms arrive they become the focal point of any landscape. There are a number of other salt tolerant varieties that work in coastal gardens such as, Sweet Goldenrod, *S. odora* and Bluestem Goldenrod, *S. caesia*. For a great display and arching sprays of gold, try Goldenrod, *S. rugosa*.

Teucrium canadense {Wood Sage}

Light Requirements: Light shade

Habitat: Grows naturally in dry sandy soils.

Information: Grows 1-3 feet tall with spikes of pale lavender flowers that appear from June through August.

Landscape Uses: Useful for shady places in the perennial border or at the edge of open areas in the landscape. Can be somewhat drought tolerant but likes wet, well drained soils. Will spread happily in garden soils but is easy to pull out and share.

Tradescantia ohiensis {Bluejacket}

Light Requirements: Full sun

Habitat: Grows naturally wet sunny place.

Information: Grows up to 3 feet. Spreads readily in loamy, moist soils. Wonderful blue flowers.

Landscape Uses: Flowers are deep blue, tinged with purple and make showy clusters. The stamens are an intense dark color with glowing yellow pollen. Plant where it receives relief from the afternoon sun.

Spigelia marilandica {Indian Pink}

Light Requirements: Light shade

Habitat: Found in upland areas, hammocks, and midden sites.

Information: Grows between 1-2 feet tall and thrives in rich moist soil. Wide, spear shaped leaves give way for the unique red tubular flowers that open to expose pale yellow throats. Blooms appear from late spring into the summer.

Landscape Uses: Perfect for the woodland garden. Flowers provide spots of brilliant color to areas of light shade. Can be slow to establish but will eventually form sizeable clumps. Was once used to expel intestinal parasites but note that all parts are highly poisonous. Flowers attract hummingbirds.

Verbena canadensis {Rose Verbena}

Light Requirements: Full sun

Habitat: Grows naturally in dry sandy soils.

Information: Erect form grows from 4-28 inches. Wherever branches touch the ground, they will root to create large patches. Stiff pubescent leaves are topped by bright clusters of rosy purple flowers from March into July.

Landscape Uses: Perfect for those difficult dry sunny locations. Tolerant of heat and humidity. Does well if placed at the outer edge of a container. Will continue to bloom if pinched back. Attracts butterflies.

Verbesina occidentalis {Wingstem}

Light Requirements: Full sun to light shade

Habitat: Grows naturally in meadows and open forests.

Information: Erect stems grow from 3-6 feet. Stunning display of bright yellow flowers blooms from August to October.

Landscape Uses: Excellent bloomer, good for back boarder or wooded lots. Long bloom period makes it ideal landscape plant. Reseeds readily. Prefers slightly less acid soil and is often found where shell is in the soil on the cost. Bees and butterflies love it.

Vernonia noveboracensis {New York Ironweed}

Light Requirements: Full sun to light shade

Habitat: Naturally found at the edge wetland areas and ditches.

Does well under garden conditions.

Information: Tall and upright plant that can get 3-7 feet in height. Foliage is a rough and lance shaped. A flat cluster of rich purple flowers crown a dark green to purple stem. Blooms appear from mid summer through September.

Landscape Uses: This is a great choice if you are looking to add height to the back of a bed or in a mass planting. These fast growers are highly attractive to butterflies and bees.

Yucca filamentosa {Adam's Needle}

Light Requirements: Full sun to light shade

Habitat: Grows naturally in dry sandy soils.

Information: Spear like foliage creates large rosettes that frame the 10 foot tall flower stalks. Narrow clusters of showy white blossoms crown the stalk in late spring and summer.

Landscape Uses: Yuccas are often planted to add ornamental structure and height to an area. Useful when placed as a specimen plant or in the back of a planting bed to add height. Once flowers are spent, stalks require cutting to maintain a clean look but mostly requires little attention to do well. Depends on the Yucca Moth for pollination and is host to the Yucca Giant-Skipper.

Zephyranthes atamasca {Atamasco-lily}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in wetland areas and along rivers and streams.

Information: Slender stems are adorned with white single flowers from April to May. After blooms appear, grass like foliage fills in around the base creating a delicate form.

Landscape Uses: Easily maintained and will reward your garden with abundant blooms for several seasons. Great fix for a moist semi-shaded area.

Native Index: Vines

Vines bloom almost every season on the coast. Carolina Jessamine brightens up the winter woods, Crossvine draws hummingbirds north in the spring, morning-glories blossom throughout the summer and Muscadines weave golden threads into the autumn landscape. Like shrubs, they link the forest floor with the forest canopy. Most produce beautiful flowers and fruits that are important to wildlife. Before you plant know the personality of your vines. Is it a fast or slow grower, tidy or rampant? In the right location they are all wonderful. In the wrong place they can be unsightly, demanding, or a danger from fire.

Ampelaster carolinianus {Climbing Aster}

Light Requirements: Full sun to light shade

Habitat: Grows in fresh water wetlands and along streams.

Information: Can grow up to 20 feet. Abundant lavender blooms with yellow centers cover this climbing aster. Flowers from October well into November. Pollinators love it.

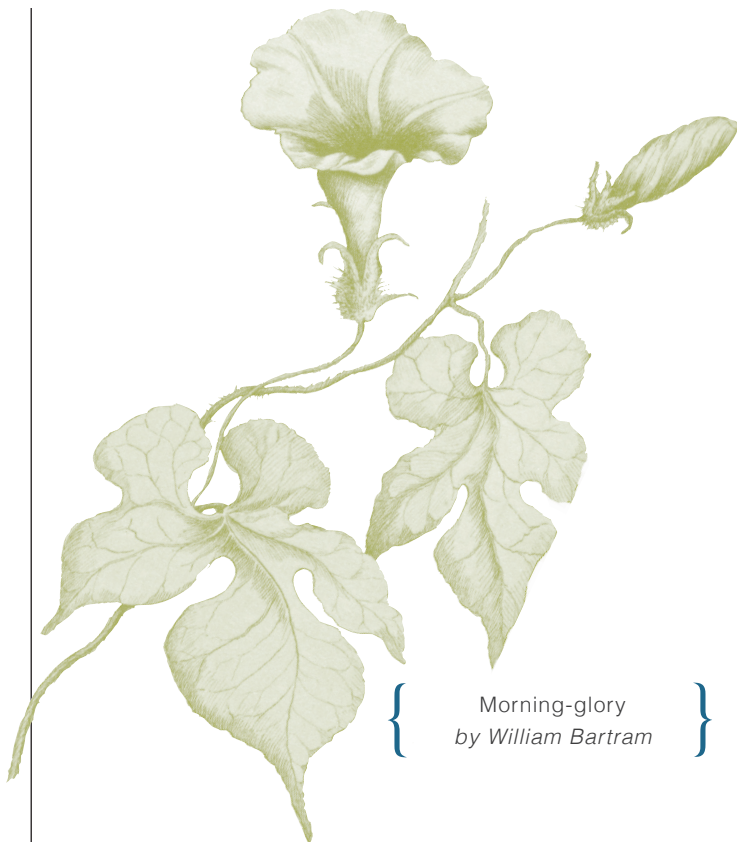
Landscape Uses: This plant will adorn a garden fence or use a tree to cascade over a pond or stream. Adapts well to garden conditions and makes a colorful fall display paired with Swamp Sunflowers in rain gardens or any place in the landscape.

Bignonia capreolata {Cross Vine}

Light Requirements: Full sun to light shade

Habitat: Grows in a variety of habitats.

Information: Can grow up to 30 feet in height or by length. In the spring, produces trumpet shaped, coral to burnt orange flowers. Landscape Uses: Does well at the base of trees, along fences, and trellises. Very fast growing and will grow to find sunlight. Good for dry sites. Hummingbirds use this vine during spring migration.



Campsis radicans {Trumpet Creeper}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Can climb up to 40 feet in height. Has clusters of flowers that look like red trumpets with orange centers that begin blooming in June, a hummingbird favorite. It has right green leaves and produces attractive long, flat pods.

Landscape Uses: Generally a fast growing plant, this vine can be quite vigorous. Usually found in upland woodlands and along fence rows. Ideal for fences or arbors and works well in dry sites.

Clematis virginiana {Virgin's Bower}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Can grow up to 12 -20 feet in height or by length. Offers a profuse show of sweetly fragrant white blossoms in the late summer on into the fall.

Landscape Uses: Best in a native garden where it can be allowed to scramble over the ground, through shrubs, or along a sturdy fence. Another close relative is the Leatherflower, *C. crispa*. Unlike Virgin's Bower, it is not very aggressive and does well in moist garden settings. Leatherflower has pendant, bell shaped, lavender flowers.

Cocculus carolinus {Carolina Coralbeads}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: An evergreen vine that climbs by tendrils and needs some type of support system. Can grow up to 10-12 feet. Blooms in the spring with greenish-white flowers followed by a pea size, glossy, red fruit that appears in the late summer and fall.

Landscape Uses: Bright green leaves and brilliant berries. Use for wooded areas and lightly shady fences. Can tolerate wet areas.

Gelsemium sempervirens {Carolina Jessamine}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: An evergreen climbing vine that can grow up to 20 feet in height. Produces fragrant yellow flowers that bloom in the late winter and early spring. Is persistently evergreen in this region.

Landscape Uses: Great choice to cover everything from mailboxes to large arbors. Can also be used as a ground cover. Very rapid growth, annual pruning can be necessary. Once established, Carolina Jessamine is drought tolerant. This vine needs a well drained soil. This a cheerful and dependable mainstay for southern gardens. All parts are poisonous including the nectar but Swallow-tail butterflies love it. Try Swamp Jessamine, *G. rankinii*, for wet locations.

Ipomoea pres-caprae {Beach Morning-glory}

Light Requirements: Full sun

Habitat: Grows naturally in dune systems.

Information: Leaves are shiny and shaped like goat's foot, hence the Latin name. Bright pink to purple flowers, bloom as long as it is warm. The funnel shaped blooms are 2 inches across and invite butterflies to crawl in and drink.

Landscape Uses: Easy to grow from seed or cuttings. A vigorous vine for dry, difficult locations and beach side property. Pair with Sea Oats along a fence. Crushed leaves used for jellyfish stings.

Lonicera sempervirens {Coral Honeysuckle}

Light Requirements: Full sun to partial shade

Habitat: Found in woodlands, hammocks, and midden sites.

Information: Twining vine that can grow up to 10-20 feet. Produces delicate orange-yellow to scarlet tubular flowers from late spring into the summer. Also produces red berries that are enjoyed by wildlife.

Landscape Uses: Can be found on fence rows and in woody areas. An excellent choice for a mailbox. When grown in a garden, the plant flowers abundantly if it is grown in full sun. Prefers slightly alkaline soils. To achieve heavy blooms, fertilize sparingly and do not over water. Watch for nectaring Cloudless Sulphur butterflies.

Passiflora incarnata {Passion Flower}

Light Requirements: Full sun to light shade

Habitat: Grows in a variety of habitats.

Information: Tendril bearing vine that can grow up to 15-20 feet, but is often much smaller. Has deeply cut three-lobed leaves and stunning, pale lavender flowers. The petals are covered by a finely fringed crown. The striking flower begins blooming in May and will bloom throughout the summer.

Landscape Uses: Grows well on fences and trellises. Once established can withstand drought and dry conditions. The Passion Flower is the host flower for a number Gulf Fritillary and Zebra Heliconian butterflies. Use Yellow Passionflower, *P. lutea*, for a delicate version and shady locations.

Native Index: Ferns

Ferns of the coast are woodland plants so it is not surprising they are the perfect solution for shady sites. They are typically found in wet or moist conditions surrounded by many species of frogs, salamanders and lizards. Some are evergreen while others die back in the fall. Ferns give the gardener freedom to create both satisfying lines and large areas of mass plantings. Use them alone as unique specimens, for ground covers or as a part of a container arrangement.

Athyrium filix-femina {Lady Fern}

Light Requirements: Full sun to partial shade

Habitat: Found in wetland areas and along rivers and streams.

Information: Can grow up to 4 feet in height and have a 2-3 foot spread. Delicate lacy fronds are wider at the base and narrow at the tip. Frond emerge in the spring and spread into an attractive arching shapes.

Landscape Uses: One of the most forgiving native ferns. This fast growing, vigorous plant adapts well to various sites and will tolerate more sun than most, if kept moist. Great choice for a massed ground cover.

Osmunda regalis {Royal Fern}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: These regal ferns can grow up to 6 feet in height with a 3 foot spread. Soft green foliage turns an attractive yellow in the fall. A large fern that likes light shade but with thrive in full sun if kept wet. The fertile stalks have golden clusters of spore cases.

Landscape Uses: Dramatic along streams and ponds. Performs very well in garden setting. Cinnamon Fern, *O. cinnamomea*, a close relative, provides a similar but lacier effect for smaller gardens or as an accent plant.

Polystichum acrostichoides {Christmas Fern}

Light Requirements: Partial sun to full shade

Habitat: Found in wetland areas and along rivers and streams.

Information: Glossy lance shaped fronds can grow up to 2 feet tall. Robust leathery fern that grows in clusters.

Landscape Uses: Evergreen foliage is a good contrast for deciduous plants. Works well at a large scale and naturalistic settings or as an accent in a small garden. Is also an effective edging plant. The silvery fiddle heads add a nice detail to the spring garden. Christmas Fern gets its name for staying green throughout the winter. Try under trees for shade loving ground cover.

Woodwardia areolata {Netted Chain Fern}

Light Requirements: Full sun to partial shade

Habitat: Naturally found in swamps and freshwater wetlands.

Information: Can grow from 1-2 feet in height. Glossy green foliage is deeply lobed. Emerging fronds are bronze in the spring.

Landscape Uses: Grow in moist to wet soils. First choice for groundcover under moisture loving plants such as Titi. Provides a compact tidy appearance. Works well at the edge of a shady pond. Try the similar *W. virginica* when more height is needed in the landscape. Its thick black stems can add interesting detail in the garden.

Thelypteris kunthii {Southern Shield Fern}

Light Requirements: Full sun to partial shade

Habitat: Naturally found along rivers and streams.

Information: The 3-4 foot tall fronds reach out in all directions. Individual fronds can get up to 1 foot wide and have a bronze cast in winter. Light to medium green fronds.

Landscape Uses: The chartreuse yellow green color contrasts well with darker plants. Easy to colonize in a soft mass. Prolific, but not aggressive. Takes a variety of soils but prefers wet to moist sites. The attractive winter fronds should be cut back before the new spring growth begins. The perfect undercover for emerging spring bulbs.

Native Index: Grasses

Ornamental grasses, with their narrow upright foliage and delicate flowering heads, create a satisfying contrast to surrounding broad-leaved plants. As a group, they are easy to grow, tough, free from pests, low maintenance, and simple to maintain. They can add a dramatic structural element or brush strokes of wild nature to your manicured landscape.



{ Grasses & Willet
by John James Aududon }

Andropogon glomeratus {Splitbeard Bluestem}

Light Requirements: Full sun to light shade

Habitat: Grows in a variety of moist habitats.

Information: Grows up to 4-6 feet in height. Forms clumps. Leaves are soft green, turning copper in the fall. Feathery, white flowers appear in late summer and are incased in salmon orange sheaths. Seed heads turn into billowing clouds of pale gold that last through the winter. Likes moisture but does well in normal soils.

Landscape Uses: Plant in masses for erosion control. Blooms at the same time as sunflowers and goldenrods. Shear dried stems to the base in late winter before new growth appears. Reseeds freely. Seeds are attractive to wildlife. For a grass with a blue hue and drought tolerance, try White Bluestem, *A. capillipes*, a native to dry pine forests.

Andropogon ternarius {Gray's Sedge}

Light Requirements: Full sun to partial shade

Habitat: Grows in dry places, thin woods, stable dunes and old fields.

Information: This vertical grass has silvery leaves in hairy, waxy sheaths. Turns lovely pale tan in fall and winter. Tufts of white seeds on the tips of flowering stalks persist well into winter. Beautiful in later afternoon light.

Landscape Uses: Drought tolerant and showy. It is a great addition to coastal meadows. Combine with other *Andropogons* and *Liatris* for stunning fall display.

Carex grayi {Gray's Sedge}

Light Requirements: Light sun to shade

Habitat: Found in bottomland forests

Information: Can grow up to 3 feet tall. Clump forming. Flowers in May.

Landscape Uses: Produces attractive flowering heads and leafy bracts. Wonderful rich green leaves can brighten any shady spot and rain garden or pond edge. Needs moisture.

Carex lupulina {Hop Sedge}

Light Requirements: Light sun to shade

Habitat: Found in swamps and wet woods.

Information: Grows to 2.5 feet tall. Clump forming. Flowers late spring into summer.

Landscape Uses: Similar to Gray's Sedge but with even more dramatic flower heads and bracts, making it a great ornamental alternative to Papyrus.

Chasmanthium latifolium {River Oats}

Light Requirements: Full sun or light shade

Habitat: Found along woodland rivers and streams.

Information: Can grow 2-5 feet in height with 2 foot spread. Showy oat like flowers and seeds. Blooms in August with persistent seed heads.

Landscape Uses: Lovely drooping flower heads on delicate, arching stalks makes an elegant statement. Bright green leaves turn copper in autumn.

Chasmanthium sessiliflorum {Longleaf Spikegrass}

Light Requirements: Light to deep shade

Habitat: Found in maritime and coastal plain forests. Drought tolerant.

Information: Leaves grow to 2 feet in height with flowering stems reaching up to 3 feet. Often called Woodoats in the trade.

Landscape Uses: Attractive, medium green, lightly clumping grass. Clumps have attractive fountain like form. Responds well to lime in the soil. For low, moist areas, use Narrowleaf Spikegrass, *C. laxum*. A slighter form and one that does very well as a garden specimen.

Eragrostis elliottii {Elliott's Lovegrass}

Light Requirements: Full sun

Habitat: Found in pines savannas, maritime forests and marsh edges.

Information: Grows 3-4 feet and equal spread. Fine arching leaves.

Landscape Uses: A beautiful native grass for garden accent or large landscapes. Fine texture and blue-gray cast are great attributes. Flowers are fine and create attractive winter display.

Eragrostis spectabilis {Purple Lovegrass}

Light Requirements: Full sun or light shade with well drained soil.

Habitat: Found in open forests, old fields and right-of-ways.

Information: Loosely-tufted perennial grass with clouds of purple panicles in late summer and fall. Seeds consumed by game birds and some song birds.

Landscape Uses: A lovely grass that makes loose clusters top by airy inflorescence and seed heads. It remains smaller than most native grasses. Use in masses with other grasses such as Muhley Grass. Dried panicles break off in winter and resemble light, tumbleweeds. They may be removed to prevent reseeding.

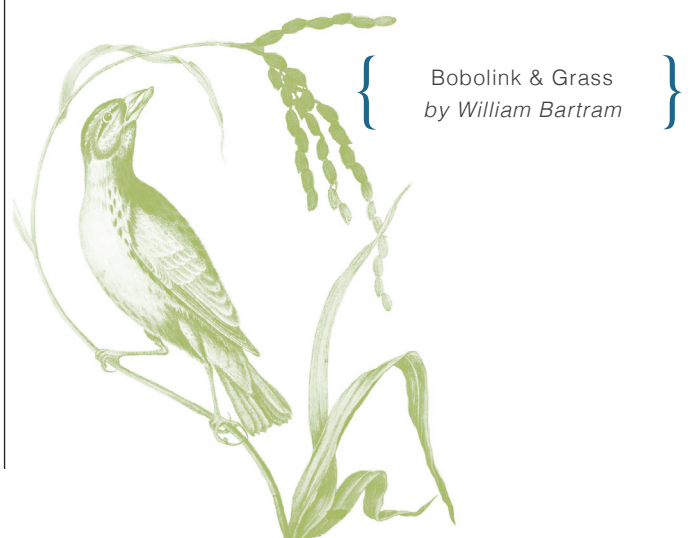
Juncus effusus {Common Rush}

Light Requirements: Full sun to light shade

Habitat: Naturally found wet savannahs and freshwater wetlands.

Information: Grows to 4 feet. Bright green, clump forming.

Landscape Uses: Clusters of rich green spikes make attractive plantings for wet spots, rain gardens and pond edges. Provides structure and stature in the garden and for water features. Small clusters of pale green flowers emerge just below the stalk tip. Beautiful in slanted sunlight.



Muhlenbergia capillaris {Muhley Grass}

Light Requirements: Full sun or light shade

Habitat: Found in coastal sands and dune systems.

Information: Can grow up to 3-4 feet in height and spread. Silvery green mounding foliage, slender yet eye catching, appears in late summer and fall. Showy pale mauve flower plumes rise 2 feet above the foliage in early fall and persist through winter.

Landscape Uses: Heat and drought tolerant grass, holds up well in large scale landscaping. Especially valuable for beach sites and sunny dry areas. Looks best in a smaller garden setting if given water. Cut nearly to the ground in late winter to encourage fresh new growth. Can be used effectively for the fall and winter container garden paired with ornamental cabbages and variegated ivy.

Panicum amarum {Bitter Switchgrass}

Light Requirements: Full sun

Habitat: Naturally found dune systems.

Information: Grows 3-6 feet. Spreads by rhizomes. Narrow but coarse, arching flower head. Leaves often have a gray-blue cast.

Landscape Uses: Ideal for sandy, hot garden locations and beach stabilization. Great garden potential for its soft green color and attractive arching leaves and stems. Use Common Switchgrass, *P. virgatum*, for delicate, billowing bloom displays and moist locations. Attractive as a specimen or massed.

Panicum virgatum {Switchgrass}

Light Requirements: Full sun to part shade; average to wet soil

Habitat: Naturally found on pond and stream margins, thin live oak woods and wet pinelands.

Information: Warm-season clump forming grass. Many garden cultivars available. Important seed source for song birds, game birds and small mammals.

Landscape Uses: Forms arching clumps. Panicles spread into delicate but large seed heads. Useful as accent specimens and for massing. Great when mixed with fall blooming flowers such as asters and goldenrods.

Rhynchospora colorata {Whitetop Sedge}

Light Requirements: Full sun to partial shade

Habitat: Naturally found wet savannahs and dune swales.

Information: Clusters of rich green spikes appear to terminate in bright white flowers that are in fact bracts. They attract insect pollinators.

Landscape Uses: A showy addition to a water garden and will also grow in a regular garden with plenty of water. Creates drifts of stars in wet areas. Try in rain gardens and difficult wet, sunny spots.

Saccharum giganteum {Giant Plum Grass}

Light Requirements: Sun to light shade

Habitat: Naturally found in open wetland areas.

Information: Can grow up to 6-10 feet in height. Large clusters of mauve seed heads reach above the cane-like grass.

Landscape Uses: Does best at the edge of ponds, streams, or water gardens. Highly attractive planted with dense, celadon green flower heads of Giant Foxtail. Good alternative for the invasive Giant Reed, *Arundo donax*, and Pampas Grass.

Schizachyrium scoparium {Little Bluestem}

Light Requirements: Full sun to partial shade

Habitat: Grows in a variety of habitats.

Information: Forms dense mounds that can reach up to 2 feet in height. Ornamental bunch grass with fine-textured foliage and slender blue-green stems in the spring. By September, the stems have become tawny gold with white seed tufts.

Landscape Uses: Remains attractive throughout the winter. Wonderful plant to mass. Tolerates a wide range of soils and is great for difficult dry areas. Will not tolerate wet soils. Not recommended for small gardens because it readily reseeds. Highly deer resistant and also a host plant for a number of Skippers.

Setaria magna {Giant Foxtail}

Light Requirements: Full sun

Habitat: Naturally found in open wetland areas.

Information: Can grow up to 6-10 feet in height. Large arching seed heads make a striking appearance from summer into winter.

The millet like seeds attract birds.

Landscape Uses: Does best at the edge of ponds, streams, or water gardens. Attractive, large bristles of soft green make a strong visual statement. Good companion for Sugercane Plume Grass.

Sorghastrum nutans {Indian Grass}

Light Requirements: Full sun in moist well-drained location.

Habitat: Found in open forests, forest margins, upland sites and sandhills.

Information: Attractive prairie native with blue-green foliage and narrow, golden-brown panicles in fall. Grows from 3 to 4 feet in height.

Landscape Uses: Graceful appearance and fine texture makes this grass work well in a mixed meadow or massed in borders. May be managed with mowing or controlled burning in late winter.

Spartina patens {Saltmeadow Cordgrass}

Light Requirements: Full sun

Habitat: Found in brackish marshes and dune swales.

Information: Can grow 1-3 feet in height. Has slender wire-like stems and long narrow leaves. Tends to form mats of slightly arching drifts.

Landscape Uses: Salt spray tolerant and useful for beach-side and costal landscaping. The delicate foliage grows as well in dry areas as wet. Equally useful for erosion control along roadways. The similar Sand Cordgrass, *S. bakerii*, is a good alternative for dramatic clumping and a large presence is desired but not salt tolerant.

Tridens flavus {Purple Top}

Light Requirements: Full sun to light shade

Habitat: Found in meadows and open woods.

Information: Clump forming and grows to 4 feet. Blooms August and September. Host plant for various grass skippers.

Landscape Uses: Massed together, the panicles create a lovely metallic, purple mist in the early fall garden or forest edge. Leaves are a medium green that get bronze and purple highlights in the fall. Tolerant of soil types and moisture levels.

Tripsicum dactyloides {Eastern Gamma Grass}

Light Requirements: Partial sun to partial shade

Habitat: Found in ditches, depressions and thin woods.

Information: Forms large, coarse, semi-evergreen clumps. Has attractive arching leaves. Flowering tassels of chartreuse spikelets appear in mid-summer. Male flowers range from yellow to burnt orange at the tip, with purple female inflorescence below. Ancient relative to corn.

Landscape Uses: A bold accent for the mixed grass border or lower areas of a meadow. May be used as singular accent or effective in large masses. Cut back in early winter to remove spent tassels and renew bright green foliage.

Uniola paniculata {Sea Oats}

Light Requirements: Full sun

Habitat: Found in coastal dune systems.

Information: Large clusters of thin leaves reach up to 2 feet. Graceful arching stems rise up to 6 feet, terminating in long flat spikelets. The flat seed heads are a soft celadon green in mid-summer and ripen to yellow gold. Will remain attractive through most of the winter.

Landscape Uses: Tolerant of salt spray and saline soils. Protected in its natural environment in Georgia, but can be cultivated and used ornamentally in the garden and for dried arrangements. Sea oats make a solid mass, propagating by runners. It is planted to stabilize sandy dunes and erosion.

Glossary

Annual: a plant that completes its life cycle in one growing season.

Autumn foliage: the colorful display of reds, oranges and yellows associated with cooler autumn temperatures; on the coast it may be in December and January.

Biennial: Plants that grow and die within 2 seasons. Typically biennials root and produce leaves in their first year, then flower and seed in their second.

Brush Fire: A fire burning in vegetation that is predominantly shrubs, brush, and scrub growth.

Burning ban: a declared ban on open air burning within a specified area, usually due to sustained high fire danger.

Canopy: the stratum containing the crowns of the tallest vegetation present (living or dead), usually above 20 feet.

Combustible: any material that, in the form in which it is used and under the conditions anticipated, will ignite and burn.

Companion plants: plants that tend to grow well when placed near each other and often compliment the other in color, texture or form.

Condition of vegetation: stage of growth or degree of flammability of vegetation that forms part of a fuel complex.

Container planting: growing a plant in a pot. This can mean growing potted herbs, annuals, fruit trees, or entire gardens. Containers can be anything from a window box to a wheel barrow.

Contain a fire: to complete control line around a fire, any spot fire therefrom, and any interior island to be saved.

Climate zones: another name for plant hardiness zones

Crown fire: a fire that advances from top to top of trees or shrubs more or less independent of a surface fire.

Cultivar: a man made or cultivated form of a plant. Often this process is done by horticulturists to produce a plant with certain characteristics like bloom color or disease resistance.

Cultivate: done in preparation for planting. Usually consists of breaking up the topsoil (allowing water and air to seep through) and removing weeds.

Deadhead: cutting or pinching off spent flowers. In some plants this can result in a repeat bloom or just tidy up your garden. This also discourages the plant from seeding.

Debris burn: in fire suppression, a fire spreading from any fire originally ignited to clear land or burn rubbish, garbage, crop, stubble, or meadows (excluding incendiary fires).

Deciduous: any plant whose leaves die or fall off to mark the end of its growing season. Fallen foliage is replaced at the beginning of the new season.

Defensible space: an area, typically a width of 30 feet or more, between an improved property and a potential wildfire where the combustibles have been removed or modified.

Detail: a design term referring to a plant's visual characteristics. For example, the River birch has a peeling bark that is a unique feature adding to the overall intrigue of a planting arrangement.

Dieback: occurs when the stems of a plant recede or die due to temperature extremes, lack of nutrients, chemical reactions, or pest infestation.

Drainage: the movement of water through soil. Poor or bad drainage means that water moves slowly through the soil. This typically occurs in low lying, moist areas. Good drainage means that the water moves quickly. Most plants require good drainage. Most coastal soils drain too readily and need added organic material.

Drip irrigation: a way of watering or irrigating your plants by feeding concentrated, small amounts of water into a plant's root system. This method helps reduce outdoor water use as it drips water slowly and closer to the ground, eliminating water waste, runoff, and evaporation.

Drought tolerant: an inherent ability for a plant to survive extended periods of little to no moisture.

Duff: the layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles and leaves and immediately above the mineral soil.

Escape route: route away from dangerous areas of fire; should be pre-planned.

Establishment: the period after a plant is placed in the ground or container during which it established root and leaf growth. Regular, deep watering is crucial. Depending on the species, a plant can take anywhere from 2-6 months to establish strong roots. Once established, natives need little maintenance.

Evergreen: a plant that does not lose its leaves at one time. Needles or leaves can drop periodically throughout the year.

Exotic: a plant that is not native to a region.

Exotic Invasive: a species that is not native to a region and that spreads rapidly disrupting naturally occurring environments.

Exposure: (1) property that may be endangered by a fire burning in another structure or by a wildfire. (2) direction in which a slope faces. (3) the general surroundings of a site with special reference to its openness to winds.

Fine fuels: fast-drying fuels, generally characterized by a comparatively high surface area to volume ratio, which are less than ¼ inch in diameter. These fuels (grass, leaves, needles, etc.) ignite readily and are consumed rapidly by fire when dry.

Fire behavior: the manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire front: the part of a fire within which continuous flaming combustion is taking place. Unless otherwise specified it is assumed to be the leading edge of the fire perimeter.

Fire hazard: a fuel complex, defined by volume, type condition, arrangement, and location, which determine the degree of ease of ignition and resistance control.

Fire prevention: activities including education, engineering, enforcement, and administration, that are directed at reducing the number of wildfires, the costs of suppression, and fire-caused damage to resources and property.

Fire proofing: removing or treating fuel with fire resistant retardant to reduce the danger of fires igniting or spreading (e.g., fire proofing roadsides, campsites, structural timber). Protection is relative, not absolute.

Fire protection: the actions taken to limit adverse environmental, social, political, and economical effects of wildfire.

Fire regime: periodicity and pattern of naturally occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity, and area extent. For example, frequent, low intensity surface fires with one to 25 year return intervals occur in the southern pine forests of the Southeastern United States, the sawgrass everglades of Florida, the mixed conifer forests of the western Sierras of California, and so forth.

Fire resistant roofing: roofing materials that vary in their ability to resist fire. Those made of composite shingles, slate, terra cotta, and metal are more resistant than wood. Check fire ratings of composite shingles and all roofing material as defined by the Uniform Building Code (UPC) Standard 32.7, such as the classification of roofing assemblies A, B, or C.

Fire resistant tree: a species with compact, resin free, thick corky bark and less flammable foliage that has a relatively lower probability of being killed or scarred by a fire than a fire sensitive tree.

Firebrand: any source of heat, natural, or human made, capable of igniting wildland fuel. Flaming or glowing fuel particles that can be carried naturally by wind, convection currents, or by gravity into unburned fuels. Examples include leaves, pine cones, glowing charcoal, and sparks.

Firebreak: a natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work.

Firewise Principles: developed by the Firewise Communities Program to help reduce a home's wildfire risk- see pages 10-12.

Freshwater wetland: an area consisting of soils saturated with water that is not salty. Swamps, Carolina bays and bogs are freshwater wetlands. Some have standing water all the time, others may not look wet on the surface, but the soils are wet most of the time. Freshwater wetlands support high biodiversity.

Fruond: scientifically refers to the form of fern leaves or branches. Commonly used to describe the palm or other fern like foliage.

Full sun: indicates a plant that does best when grown in full sunlight. This can mean all day sun exposure or a little shade during the early morning hours.

Genus: A group of plants exhibiting similar characteristics. This is identified in the first part of a plant's scientific name.

Ground cover: a low-lying dense plant that is used to blanket the ground and suppress weed growth. This category does not include turf grass.

Group: the placing of 2-3 plants of the same species together. Depending on the plant, this can create a statement in a garden or yard. Massing is a form of grouping, but requires larger quantities of the same plant.

Hammock: a back-barrier island surrounded by marsh that is the remnant of pre-existing mainland components or old barrier islands.

Hardiness: a plant's resistance or tolerance to cold temperatures. The US is divided into cold hardiness zones and it is important to know where your region falls before choosing your plants.

Herb: a plant grown for its culinary, medicinal, or fragrant qualities.

Herbaceous: a plant with stems that yearly die back to the ground.

Invasive species: a non-native species that spreads rapidly and disrupts naturally occurring environments. These plants can devastate local ecosystems.

Leaf scorch: a condition that affects leaves, turning ends and margins brown and dry. This occurs as a result of intense sunlight, lack of water, high winds or chemical burns. Often seen in Dogwoods (*Cornus florida*).

Mass: to plant 4 or more of the same species together.

Middens: refuse piles from Indian activities. On the coast, many are composed of discarded oyster shells. The calcium in the shells modifies our typically acidic soils, promoting a distinctive suite of native plants.

Native: any plant that is indigenous to the region in which it grows. Naturalize: a plant that has become established in a region to which it is not native.

Organic matter: materials that originate from a living organism. Examples are peat moss, manure, or compost. Adding this to sandy soil improves water and nutrient retention.

Ornamental: this term is used in gardening to refer to a plant that has a decorative characteristic. This can be in the form of leaf color, bark texture, unique shape, or flowers.

Partial shade: indicates a plant requiring shade for half of the day. This can also mean that a plant needs to be in the shade during the sunniest 3 hours of the day.

Perennial: a non-woody plant that has a life span of 2 years or more.

Prune: to trim or cut branches and limbs of a plant. This is done to remove dead or damaged wood, direct growth, increase flowering or foliage, enhance structural strength, and to lessen the risk of frost damage.

Raceme: arrangement of flowers in a cluster on a central stem. Each stem has its own short stalk.

Root ball: the network of roots and attached soil of a plant.

Salt-spray tolerant: species that is inherently equipped for surviving salt drift and high winds.

Semi-evergreen: when leaves are “persistent” or retained by a plant year round in warm climates but are dropped in colder ones.

Shade tolerant: a plant that thrives with little to no direct sunlight. This can mean placing a species under a tree canopy or on the north side of your home to shield it from the sun.

Species: A group of plants exhibiting common characteristics, capable of interbreeding and producing fertile offspring. The species names often describe a defining attribute such as color or location.

Specimen: refers to a single large plant or tree planted in a space that highlights its features. Can also be a tree or shrub that is unique enough to make a visual impact in a planting bed or container.

Spike: a long and narrow cluster of flowers.

Tap root: a thick, central root growing under a plant. Not all plants have a tap root, but they can create difficulties if you are thinking to transplant.

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<http://dnr.wi.gov/topic/ForestFire/documents/compatiblecommunities.pdf>

Firewise Communities: <http://www.firewise.org/information/brochures-and-booklets.aspx>

Florida Forest Service, Firewise Communities:
http://www.floridaforestservice.com/wildfire/firewise_index.html

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Georgia Forestry Commission: <http://www.gfc.state.ga.us/>

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Firewise Communities
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