Native Plants *for* Coastal North Carolina Landscapes

"We can each make a measurable difference almost immediately by planting a native nearby. As gardeners and stewards of our land, we have never been so empowered—and the ecological stakes have never been so high."

Dr. Doug Tallamy

INTRODUCTION

This landscaping guide aims to provide information about using native plants in coastal landscapes and to encourage environmentally responsible landscaping practices on North Carolina's barrier islands and beaches. The use of native plants is strongly encouraged for several reasons:

1) Native plants provide food and shelter for many animals, including birds, mammals, and insects. By planting native species, you not only add beauty to your garden or home—you also create vital habitats that sustain our native wildlife.

2) Native plants are uniquely adapted to local environmental conditions. As such, they often require less pesticide, fertilizer, water, and overall maintenance compared to exotic species.

3) Unlike some exotic species, native plants do not become invasive. Plant them, therefore, with a clean conscience!

4) Simply put: Many of our native plants are amazingly beautiful. Why not plant them?

This guide presents an array of excellent, native landscape plants. Collectively, the species within each category—trees, shrubs, herbs, graminoids, and vines—tolerate a wide range of growing conditions, and coastal residents should be able to find several species of each type that will thrive in their home environments. However, only a small sample of the many native plants that are suitable for coastal landscapes are presented in this guide. Information about additional native species can be found in the many resources listed on page 27.

LEGEND

LEAF PERSISTENCE

EVERGREEN SEMI-EVERGREEN DECIDUOUS

[NOTE: PROVIDED FOR WOODY PLANTS ONLY]

LIGHT REQUIREMENTS

SUN PARTIAL SHADE SHADE

SOIL MOISTURE REQUIREMENTS

WET MOIST WELL-DRAINED DRY

SALT-TOLERANCE

LOW MODERATE HIGH

MARKET AVAILABILITY

LOW MEDIUM HIGH

PHENOLOGY

FLOWERING DATES; FRUITING DATES

[NOTE: ONLY ONE DATE RANGE PROVIDED FOR SPECIES THAT FLOWER AND FRUIT SIMULTANEOUSLY OR NEARLY SO]

PHOTO BY A. KRINGS

Wild olive, devilwood

(Cartrema americana/ Osmanthus americanus)

Apr–May; Aug–Oct.

A common component of our maritime forests, wild olive grows as a flat-topped shrub on dunes but reaches the stature of a small tree (to 30 feet tall) in protected areas. Its open growth form and leathery, glossy-green leaves make it an ideal landscaping plant. Small flowers are sweetly fragrant.

PHOTO BY D. SUITER

Eastern red-cedar

(Juniperus virginiana)

(in var. *silicicola*)

Jan–Mar; Oct–Nov.

This familiar tree, one of the most prized conifers in the eastern U.S., grows to 40 feet or taller in sheltered areas but remains dwarfed on exposed sites. The prickly, juvenile leaves soon give way to soft, scale-like, adult foliage. Female trees produce aromatic, blue-green "berries" (actually fleshy cones) that provide food for at least 68 bird species. Two varieties are sometimes recognized: the widespread var. *virginiana*, which has low salt tolerance, and the coastal var. *silicola,* which is highly salt-tolerant.

See page 3 for explanation of symbols.

PHOTO BY A. KRINGS

Laurel cherry

(Prunus caroliniana)

Mar–Apr; Sep–Oct.

An excellent shade tree or privacy screen, laurel cherry grows to 40 feet tall in sheltered areas and 10 to 15 feet tall on exposed sites. Small white flowers in early spring yield a bounty of shiny black fruits, readily eaten by a variety of songbirds in the fall. Scratched twigs emit a pleasant, sweet-almond fragrance.

PHOTO BY D. SUITER

Live oak

(Quercus virginiana)

Apr; Sep–Nov.

The magnificent live oak thrives both on dunes, where constant wind maintains the tree in a gracefully molded, dwarfed stature, and in sheltered areas away from the ocean, where calmer conditions favor the development of its iconic, broad crown. Rejuvenates well after wind damage.

PHOTO BY D. SUITER

Sabal palm, cabbage palm

(Sabal palmetto)

Jul; Oct–Nov.

This icon of the south Atlantic coast reaches its northern limit in NC. The straight, unbranched trunk attains heights of 40 feet or more in protected areas and bears a crown of enormous (4–7 feet long!), fan-like leaves at its apex. Very resistant to salt and wind damage. Look for selections proven to be hardy in NC.

PHOTO BY D. SUITER

Hercules' club

(Zanthoxylum clava-herculis)

Apr–May; Jul–Sep.

A member of the citrus family, Hercules' club grows as a small tree (to 20 feet tall) in sheltered areas but retains an unkempt scrub form on dunes, where its unusual armor of stout prickles can effectively direct foot traffic. Unique, aromatic leaves bear translucent glands and produce a mild, numbing sensation when chewed, leading to the common name "toothache-tree."

PHOTO BY D. SUITER

Beautyberry

(Callicarpa americana)

Jun–Jul; Aug–Oct.

"Beautyberry"—what else could you call it? This short (2–6 feet tall) shrub produces small clusters of flowers in early summer that soon give rise to brilliantly colored fruits. Technically not berries but drupes, the violet to magenta (or, in some varieties, white) fruits persist well into the winter, long after the leaves have fallen, and are relished by many bird species.

PHOTO BY W. COOK

Coastal sweet-pepperbush

(Clethra alnifolia)

Jun–Jul; Sep–Oct.

In the heat of summer, when few other shrubs are blooming, coastal sweet-pepperbush boasts up to one-hundred tiny flowers on each of its bottlebrush-like inflorescences. The richly fragrant, nectar-laden flowers persist up to 6 weeks and are sought after by hummingbirds and butterflies.

See page 3 for explanation of symbols.

PHOTO BY A. KRINGS

Yaupon

(Ilex vomitoria)

Mar–May; Oct–Nov.

Decorated with inch-long, glossy leaves and brilliant red drupes, yaupon is among our most ornamental native shrubs, often used as a border plant or a low hedge. Young leaves contain caffeine and are brewed into a tea by some coastal residents. Fruits borne on female plants only.

PHOTO BY D. SUITER

Wax-myrtle

(Morella cerifera/ Myrica cerifera)

Apr; Aug–Oct.

A hardy shrub, wax-myrtle typically grows 8–10 feet tall, though it may reach the stature of a small tree in protected conditions. Its gland-dotted leaves, a festival of orange and yellow under magnification, are strongly and pleasantly aromatic. Small, wax-covered fruits, produced on female trees in early fall and persisting well into the winter, are a dependable source of food for many species of birds.

PHOTO BY D. SUITER

Dwarf palmetto

(Sabal minor)

May–Jul; Sep–Nov.

Among the hardiest and most northern-ranging palms, dwarf palmetto is a distinctive, low-growing shrub (1.5–6 feet tall) whose thick stem usually remains underground. The large leaves, still sometimes used in basket-weaving, resemble those of Sabal palm but have a shorter midrib and do not fray into threads along their edges. Fruits eaten by robins and raccoon, among many other species of birds and mammals.

PHOTO BY D. SUITER

Curlyleaf yucca

(Yucca filamentosa)

Apr–Jun; Sep–Oct.

Nearly or entirely stemless, this short shrub boasts a rosette of ascending, stiff, spine-tipped leaves whose margins fray into long, curly threads (hence the common name). Large, creamy-white, bell-shaped flowers terminate tall stalks in mid-spring and yield erect, capsular fruits in autumn. Hardy and easily transplanted; suitable for dunes.

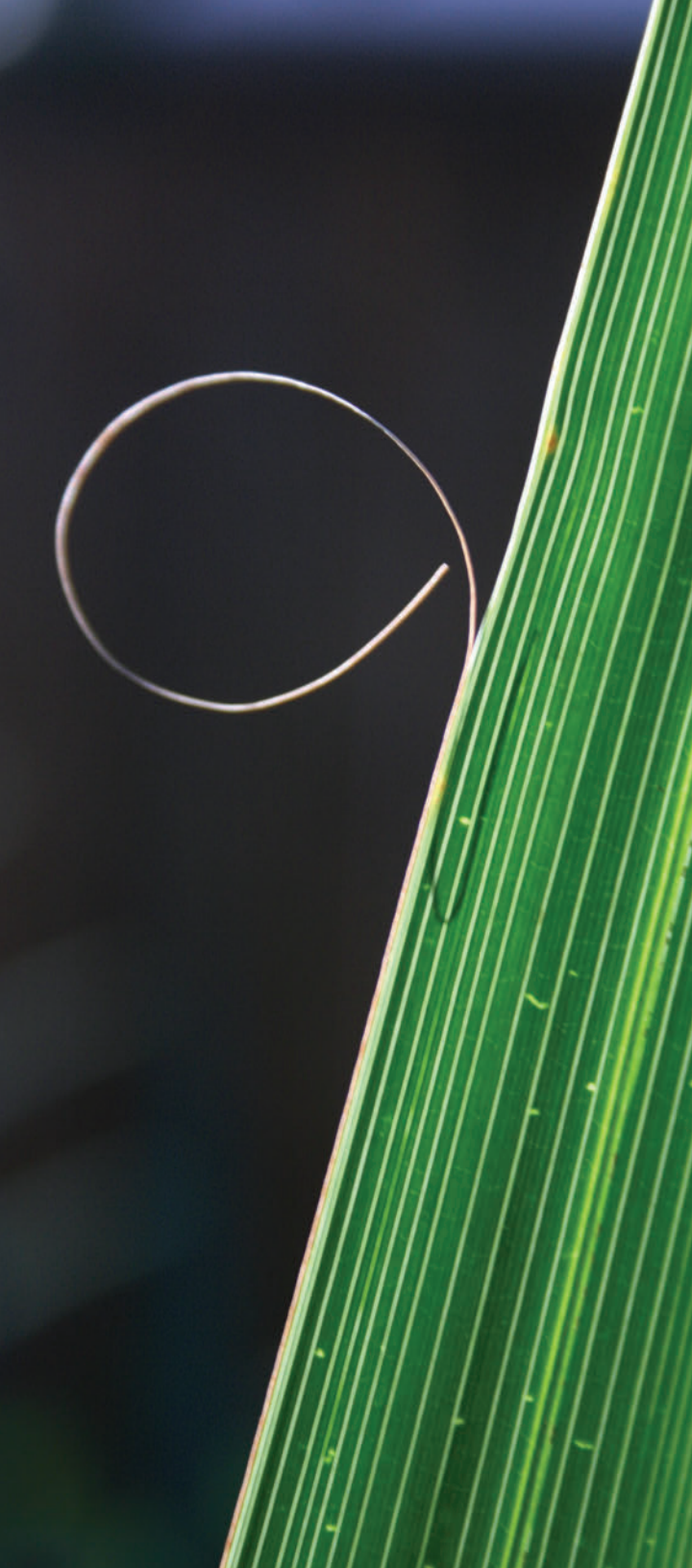

PHOTO BY L. LEE

Coral bean

(Erythrina herbacea)

May–Jul; Jul–Sep.

In foliage, flower, and fruit, coral bean is a most unusual and beautiful plant. High above the more-or-less triangular leaflets shoots a terminal cluster of stunning, scarlet flowers, beguiling to both humans and hummingbirds. The 3- to 6-inch long fruits—legumes as ornamental as the flowers, but longer-lasting—split to reveal several vermilion (but toxic!) seeds.

PHOTO BY D. SUITER

Blanket flower

(Gaillardia pulchella)

Apr–Dec.

Carpets of this plant, emblazoned with sun-yellow and flame-red flowers, are a common site on dunes, roadsides, and even sidewalks near the coast. In a slight breeze, the quaking flower heads invoke another of the plant's common names: "firewheels."

See page 3 for explanation of symbols.

PHOTO BY A. KRINGS

Seashore mallow

(Kosteletzkya pentacarpos/ K. virginica)

Jul–Oct.

Seashore mallow produces 4–6 feet tall stems that bear light- to dark-pink, showy (2–4 inches in diameter), *Hibiscus*-like flowers towards their tips. Though each flower opens for only one day, the plant's sequential production of numerous flowers means weeks of gardener's delight.

PHOTO BY N. DEBARROS

Sea lavender

(Limonium carolinianum)

Aug–Oct.

Native to salt marshes but well-adapted to coastal gardens, sea lavender sports a basal rosette of evergreen leaves and a profusion of dainty, light-purple and magenta flowers that appear collectively as a haze of violet. A good source of nectar for many insects, the small flowers retain their color when dried and are prized components of dried bouquets.

PHOTO BY R. THORNHILL

Horsemint/ Spotted beebalm

(Monarda punctata)

Jul–Sep; Sep–Oct.

This stunning herb produces whorls of creamy, purple-polka-dotted flowers subtended by several pink to violet leaf-like bracts. The flowers attract many insects, particularly butterflies. Entire plant is pleasantly aromatic.

PHOTO BY D. SUITER

Seaside goldenrod

(Solidago sempervirens)

Aug–Nov.

One of our largest-flowered goldenrods, this species is among the most robust and showiest of our coastal herbs, producing clusters of yellow flowers on stalks that can reach 6 feet tall. The thick, leathery leaves are unusual and ornamental in their own right. Easily propagated by separating the short, underground stems (rhizomes).

PHOTO BY D. SUITER

American beachgrass

(Ammophila breviligulata)

Aug–Sep.

Ammophila means "sand-loving" and suggests this plant's typical habitat: dunes. American beachgrass can be distinguished from other dune-stabilizing grasses by its nearly cylindrical, dark green leaves and narrow, snow-white seedheads. Considered native in NC only from Cape Hatteras and north, but commonly planted farther south.

PHOTO BY K. MITCHELL.

Purple hairgrass

(Muhlenbergia capillaris)

Aug–Nov.

Purple hairgrass forms dense clumps 20–40 inches wide that bear a profusion of slender, gracefully-arching leaves. Hundreds of dainty spikelets dance in the slightest breeze, creating a purple-pink mist in the fall. Some authors recognize dune hairgrass *(M. sericea)* as a separate species restricted to coastal marshes and dunes.

See page 3 for explanation of symbols.

PHOTO BY D. SUITER

Bitter panicum

(Panicum amarum)

Aug–Nov.

An ideal dune plant, bitter panicum has an extensive underground root and stem system that effectively stabilizes frontal dunes. Narrow seedheads are purplish at maturity and borne on solitary or loosely-tufted, often somewhat whitened stems ranging from 1 to 8 feet tall. Plants in rear dunes and protected areas tend to form denser clumps.

PHOTO BY J. STUCKY

Switchgrass

(Panicum virgatum)

Jun–Oct.

One of our most popular ornamental grasses, switchgrass is a handsome, robust perennial, forming clumps that can extend 3 feet wide and stems that can exceed 6 feet tall. Leaves turn a brilliant golden-brown in autumn. Abundant small seeds, borne in broad terminal arrays, are a valuable food source for birds.

PHOTO BY D. SUITER

Broadleaf whitetop sedge

(Rhynchospora latifolia)

May–Sep.

Notice: Not all sedges make drab garden plants! Dense stands of this plant and the related narrowleaf whitetop sedge *(R. colorata),* both arrayed with a whorl of bright-white and green bracts at the stem tips, put on a stunning performance that can last from late spring to the end of summer.

PHOTO BY D. SUITER

Seaside little bluestem

(Schizachyrium littorale)

Aug–Oct.

This small bunchgrass grows in discrete clumps on dunes and dry maritime grasslands. Bearing snowy seedheads atop silvery-blue stalks that reach to 1.5 feet tall, stands of this gorgeous grass conjure, in the words of Graetz (1973), a "frosted fairyland" when viewed in the slanted sunlight of an autumn afternoon. A host plant for the rare crystal skipper butterfly, found only on the central NC coast.

See page 3 for explanation of symbols.

PHOTO BY N. DEBARROS

Saltmeadow cordgrass

(Spartina patens)

Jun–Sep.

Very narrow (~1/8 inch wide), cylindrical leaves distinguish saltmeadow cordgrass from the two other cordgrass species common in our area. Reaching to 2.5 feet tall, the smooth stems are uniquely outfitted with a ball-and-socket-like joint at their bases that allows for bending without snapping in coastal breezes. Often forms dense stands in sand flats and other moist, near-ocean habitats.

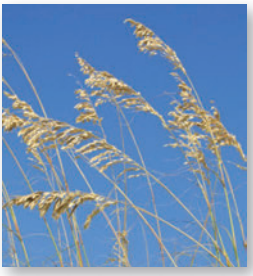

PHOTO BY D. SUITER

Sea oats

(Uniola paniculata)

Jun–Nov.

Bearing broad banners of yellow-brown, oat-like seedheads atop its tall (3–6 feet) stems, sea oats is our most conspicuous and perhaps beautiful dune grass. Its importance in stabilizing frontal dunes is recognized in state law, which prohibits picking or destroying any part of this robust grass.

PHOTO BY W. COOK

Crossvine

(Bignonia capreolata)

Apr–May; Jul–Aug.

The combination of unusual, semi-evergreen leaves and large, fragrant flowers make this tendrillate vine a popular landscaping choice. Copious nectar attracts hummingbirds and butterflies. An excellent choice for trellises and fences.

PHOTO BY D. SUITER

Virginia creeper

(Parthenocissus quinquefolia)

May–Jul; Jul–Aug.

A hardy and versatile vine, Virginia creeper utilizes small, adhesive disks at the tips of its tendrils to anchor to trees. It can also form an extensive ground cover when no support structures are present. The leaves are comprised of usually five serrated leaflets that radiate from a central point and turn a brilliant crimson in the fall. Blue-black berries are a choice food for many birds, including flycatchers, warblers, and woodpeckers.

See page 3 for explanation of symbols.

PHOTO BY W. COOK

Coral honeysuckle

(Lonicera sempervirens)

Mar–Jul; Jul–Sep.

Our most common native honeysuckle, this twining, semi-evergreen vine features terminal whorls of slender, trumpet-shaped, scarlet flowers—magnets for hummingbirds. Almost as striking is a unique feature of the blue-green foliage: the last few pairs of leaves on each branch fuse, encircling the stem and creating the illusion that the stem emerges from the leaves.

PHOTO BY A. KRINGS

Yellow jessamine

(Gelsemium sempervirens)

Mar–May; Sep–Nov.

When in bloom in the spring, this twining vine is often smelled before seen. Small clusters of lemon-yellow flowers create a sweet, nearly cloying perfume that attracts pollinators—and people. Dark green, evergreen leaves are attractive year-round.

PHOTO BY D. SUITER

Passionflower

(Passiflora incarnata)

May–Jul; Jul–Oct.

"Spectacular, exotic"—such descriptions barely invoke the stunning beauty of this plant's unusual flowers. Not just for show, however, the flowers give rise after 2–3 months to tartly sweet, egg-sized fruits, whose edible, pulpy interior blends the flavors and aromas of pineapple and citrus.

PHOTO BY A. KRINGS

Muscadine

(Vitis rotundifolia)

May–Jun; Aug–Oct.

The famous muscadine, the most prized of our native grapes, has a long history of cultivation in NC. Adapted to a wide range of environmental conditions, the tendrillate vine is a natural climber but may form dense ground covers in open areas, like dunes, that lack support structures.

GENERAL GARDENING TIPS

A major advantage of planting native species is that they are generally quite hardy in their native habitats; after all, native species have adapted to local conditions over thousands of years and have thrived without human assistance. Nonetheless, a little "love and care" and sound judgment can promote the successful establishment and growth of native plants. As when planting any species, careful consideration should be given to several important environmental factors that affect plant growth, including light and moisture availability, temperature, wind intensity and frequency, and degree of salt spray. The icons and abbreviations given for each species in this guide provide a general idea of the range of growing conditions each species will tolerate.

While a thorough discussion of best landscaping practices is beyond the scope of this guide, a few brief tips may be given. In general, woody species are best planted during the dormant season; February is ideal. Watering should always be scheduled for the coolest part of the day (early morning or evening) to avoid evaporative loss. To promote deeper, more drought-tolerant root systems, water thoroughly and completely but not too often. Using a soaker hose or drip irrigation system will conserve water and money. Coastal soils are generally very sandy, and the plants presented in this guide are adapted to such soils. However, some soil preparation can be quite helpful, especially when first establishing native plants.

More detailed information and advice regarding the cultivation of native plants can be found in the references listed at the end of this guide or by seeking the advice of county extension agents, garden clubs, or local nurseries.

INVASIVE SPECIES – NOT RECOMMENDED FOR PLANTING

Invasive species are plants, animals, or other organisms that have been introduced into an area in which they do not naturally occur and that have become nuisances. Because they lack the predators and diseases that naturally limit their population sizes in their native habitats, invasive plants grow and reproduce quickly, often forming dense stands in which native plants cannot survive. As native plant populations decline, so do populations of native wildlife, many of which rely exclusively on native plants for food and shelter. In addition to affecting the living components of ecosystems, invasive species can also alter the physical environment—for example, by increasing erosion along waterways (including shorelines), depleting the amount of nutrients in the soil, or even altering aspects of hydrology. Such environmental effects, when they can be remediated, are often very costly.

Not all exotic species are invasive; in fact, some exotic species cannot survive unless they are carefully tended. However, it is often difficult to tell whether an exotic species will become invasive in an area, especially since many exotic species exhibit a "lag phase" before becoming invasive. By choosing to grow native rather than exotic species, you not only benefit native wildlife—you also avoid the risk posed to ecosystems by potentially invasive plants.

Below is a small sample of invasive plants that are particularly noxious or are becoming so in coastal landscapes of North Carolina. These species are NOT recommended for planting!

A more thorough list (with excellent descriptions and photographs) can be found at http://www.se-eppc.org/northcarolina/NCDOT_Invasive_Exotic_Plants.pdf. A list of additional resources about invasive plants is available at http://www.fs.fed.us/database/feis/plants/weed/weedpage.html.

PHOTO BY D. SUITER

Beach vitex

(Vitex rotundifolia)

Horticulturists brought beach vitex to North Carolina from Korea in the mid-1980s and promoted it as a landscape plant. Many oceanfront homeowners planted beach vitex in the hopes of protecting their property from coastal erosion. Within a few years, it spread from maintained landscapes to natural beaches and undeveloped islands. Beach vitex has been found along the mid-Atlantic Coast from Georgia to Maryland and is considered a serious threat to native dune plants. Beach vitex now grows on beaches that are important nesting sites for sea turtles and foraging and nesting areas for shore birds. It is listed as a State Noxious Weed by the North Carolina Department of Agriculture and Consumer Services. In the coastal counties of North Carolina, it is now illegal to sell, distribute or move this species from one property to another. Populations of beach vitex should be reported to the Beach Vitex Task Force via their web page: www.beachvitex.org.

PHOTO BY D. SUITER

Pampas grass

(Cortaderia selloana)

Long used as a landscape plant throughout the Carolinas, Pampas grass is native to Argentina. This fast-growing grass forms dense thickets with razor-sharp leaves. The flowering plumes produce thousands of lightweight seeds that are easily carried by the wind. Biologists have recently noticed Pampas grass naturalizing in dunes and along the edges of maritime forests and salt marshes.

PHOTO BY D. SUITER

Thorny-olive

(Elaeagnus pungens)

Native to China and Japan, thorny-olive (also known as Russian-olive) was first brought to the U.S. in the early 1800s as an ornamental plant. Its ability to tolerate a wide variety of soil and moisture conditions led to its widespread use as a hedge along highways and around homes. Unfortunately, it is now becoming invasive in natural habitats in North Carolina. The related autumn-olive *(Elaeagnus umbellata)*, an aggressively invasive species now found throughout the southeastern U.S., is similar to thorny-olive but lacks rusty-red glands on its leaves and stems. Autumn-olive flowers in spring and fruits in autumn, while thorny-olive flowers in autumn and fruits in spring.

PHOTO BY D. SUITER

Saltcedar

(Tamarix spp.*)*

Since the 19th century, several species of saltcedar have been imported into the U.S. for use as a wind break and ornamental hedge. They have since become troublesome weeds in many western states, particularly along stream margins, where they have spread quickly. Equipped with deep roots, saltcedars consume large quantities of water and gradually salinize (i.e., increase the amount of salt in) the soil. Though not yet common in NC, species of saltcedar should be avoided in landscaping.

The following resources were used in the development of this brochure and should be consulted for additional information regarding plant species native to coastal North Carolina.

LITERATURE RESOURCES

Duncan W.H. and M.B. Duncan. 1987. Seaside Plants of the Gulf and Atlantic Coasts. Smithsonian Institution Press, Washington, DC.

Graetz, K.E. 1973. Seacoast Plants of the Carolinas. University of North Carolina Sea Grant Program. Raleigh, NC. [While this reference provides excellent information about many native species, it also recommends the planting of numerous exotic species, many of which have become invasive. An updated version of this book will be published in 2014.]

Kraus, J.W. 1988. A Guide to Ocean Dune Plants Common to North Carolina. University of North Carolina Press. Chapel Hill, NC.

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Stuckey, I.H. and L.L. Gould. 2000. Coastal Plants from Cape Cod to Cape Canaveral. University of North Carolina Press. Chapel Hill, NC.

Tallamy, D.W. 2007. Bringing Nature Home: How Native Plants Sustain Wildlife in our Gardens. Timber Press. Portland, OR.

Weakley, A.S. 2012. Flora of the Southern and Mid-Atlantic States. University of North Carolina. Chapel Hill, NC. Available online at http://www.herbarium.unc.edu/flora.htm.

ONLINE RESOURCES

North Carolina Botanical Garden. Native Southeastern Plants for Your Garden. University of North Carolina at Chapel Hill. http://ncbg.unc.edu/plants-and-gardening/.

North Carolina Native Plant Society. http://www.ncwildflower.org/.

Pollinator Partnership. http://pollinator.org/index.html. [This website provides free regional planting guides with lists of native plant species and the particular wildlife they attract.]

Russell, A. Trees of the Maritime Forest. North Carolina State University. http://www.ces.ncsu.edu/depts/hort/consumer/factsheets/maritime/index.htm.

Sustainable Sites Initiative. Vegetation. American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center at The University of Texas at Austin, and the United States Botanic Garden. http://www.sustainablesites.org/vegetation/.

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