

Native Shrubs for South Florida¹

Alan W. Meerow²

A shrub may be defined as a multi-stemmed woody plant of small size (less than 10 feet tall at maturity). In some cases, the distinction between "tree" and "shrub" breaks down, since some large shrubs can be trained to a single trunk and used as a small tree, while some small trees can produce several stems and appear shrublike in the landscape. Shrubs fulfill many important roles in landscape horticulture. Hedges, foundation plantings, accent, and specimen plantings are all uses for which shrubs are well suited. It is usually a combination of tree and shrub plantings that sets the tone of the landscape and defines the outdoor living space.

South Florida's various plant communities contain many native species of shrubs suitable for landscaping. In recent years, interest in the use of native plants for Florida landscaping has greatly increased. Some of the reasons for this include the loss to development of natural areas in the state, coastal deterioration due to disturbance of native vegetation, and concern about water use to support exotic landscapes composed of introduced species with greater irrigation requirements than some native species. The introduction of exotic plants that naturalize and, in some cases, out compete native

species, has become of great concern in various parts of Florida. Considerable amounts of time, money, and energy are now spent eradicating such plant pests from many areas of the state. Many counties are considering landscape ordinances that require a percentage of native plant materials to be used in all future developments. Several have already implemented such ordinances. This will result in a need for wider availability of native plant materials. Woody landscape plant producers, landscape architects, and home gardeners in Florida need to become informed about and prepared for the production and cultural needs of this type of plant material.

Native plant materials are often better adapted to Florida landscape conditions than some commonly used exotic species. This is especially true if the site conditions duplicate closely those experienced by a particular species in its natural environment. Some native shrubs (for example, wax myrtle, *Myrica cerifera*) show wide latitude in their adaptation to very different conditions, while others fail if planted in conditions not sufficiently similar to their natural home.

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Coastal South Florida Vegetation Zones

When choosing native shrub species, it is important to understand both the conditions at the planting site and the conditions in the original habitat of the species being considered. In south Florida, the majority of the population is concentrated within a 10- to 12-mile-wide coastal area. Moving shortly inland from the coast, three vegetation zones are encountered: the pioneer, the scrub, and the forest zone.

The pioneer zone occurs on the primary dunes that build along the beach front with wave action. Few plants are adapted to this harsh environment, and of these, even fewer are shrubs. Well-adapted species function as sand binders. Sea oats, *Uniola paniculata*, a perennial grass, is the most important species in the pioneer zone. Many of the plants typical of the pioneer zone are discussed in detail in the companion publication, *Native Ground Covers for South Florida* (EES 60). Where wave building is absent, mangroves and saltwater marshes replace the pioneer zone. Mangroves are woody plants especially adapted to withstand intense salinity and saltwater flooding and are extremely important in stabilizing and building south and central Florida's coastlines. The maintenance or replanting of mangrove associations requires special care outside the scope of this publication. Ask your cooperative extension agent about Florida Sea Grant and Department of Natural Resources publications that address the replanting of mangroves.

The scrub zone occurs where dunes have stabilized, some organic matter has accumulated, and the salinity of the soil is lower. It often intergrades with the pioneer zone. Scrub is rich in shrubs. Some typical members include: sea grape (*Coccoloba uvifera*), wax myrtle (*Myrica cerifera*), saw palmetto (*Serenoa repens*), cocoplum (*Chrysobalanus icaco*), sea lavender (*Mallotonia gnaphalodes*), and bay cedar (*Suyiana maritime*). Scrub also occurs further inland on ancient dunes that formed when much of coastal Florida was underwater, but inland scrub will usually include several tree species as well as shrub species not found in the coastal scrub. Scrub formations support a number of rare, threatened, or

endangered species. Little original coastal scrub remains in much of southeast Florida.

The forest zone occurs yet further inland where dunes have stabilized completely, salinity is yet further decreased, and soils have accumulated sufficient nutrients to support trees. The term "forest zone" is really a broad umbrella for various types of tree communities, including slash pine woods (*Pinus elliotii* var. *densa*) and hardwood hammocks. Little remains of mainland south Florida's unique coastal tropical hammocks composed of many tree species characteristic of the Caribbean islands. Many shrub species occur in the understory and at the margins of these pine and hardwood forests, including indigo berry (*Randia aculeata*), firebush (*Hamelia patens*), locustberry (*Brysonima lucida*), marlberry (*Ardisia escallonioides*), and various stoppers (*Eugenia* species).

In recent years, urbanization in south Florida has moved steadily inland towards the Everglades, a unique wetland habitat often likened to a wide, shallow, slow moving river. The original vegetation of this area is dominated by sawgrass marsh, cypress swamps, and island hammocks of hardwood trees, rimmed by a ridge of slash pine woods. When developing these wetlands, the land is drained and dredged, and much of the muck soil is replaced by fill. Consequently, it may be difficult to reestablish the original vegetation of these inland areas.

Site Factors to Consider When Choosing Native Shrubs

Careful consideration must be given to the characteristics of the planting site before choosing native shrubs for landscaping. First, some questions relating to the past history of the site must be answered.

What was the original vegetation of the area? This knowledge will give an indication of which native plants will perform best on the site. Assuming that the answer to the next question is no, native species that once grew in a given location are likely to do best when replanted in comparison with species from very different types of native vegetation.

Have the native soil and/or water flow patterns been modified? During development, topsoil is often removed, and original drainage patterns are disturbed. Fill soil of very different quality may have been brought in to replace the topsoil removed. If such is the case, it may be impossible to reestablish the same species that once grew on the site, or it may require a great deal of site preparation and maintenance to do so.

Consider the present condition of the site. Does the site accumulate standing water? What is the soil type: muck? white sand? coral rock? Is the site exposed to salt spray? Will the landscape plants be integrated with turf, and possibly be subjected to irrigation best suited to turf? All of these factors will influence the degree of success with which particular native species will perform in a landscape. The size of the lot may also restrict the use of some species whose mature dimensions require a lot of space.

Planting Native Shrubs

Planting native shrub species is no different from planting exotics. Amending the backfill soil (the soil originally excavated from and then returned to the planting hole) is not recommended. Situate the root ball in the soil at the same level at which it grew in the field or the container. Large masses of circling roots in container stock should be slit lengthwise in a few places from the top to the bottom of the rootball to stimulate lateral root production. It may be necessary or desirable to reduce top growth; this should be accomplished by thinning out (removing one or several, well-distributed branches at their point of origin), rather than heading back (cutting all top growth back to approximately the same level). Thinning cuts will preserve the natural shape of the shrub.

The shrubs should be regularly irrigated after planting, and a mulch of organic material is recommended. A surface application of a slow-release fertilizer can be applied within the dripline of the shrub (the area of soil contained within the spread of the shrub's branches) before the mulch is put down. If rainfall is received regularly in the first few months after planting, this may be sufficient for the establishment of small container

stock (1-gallon size). If not, periodic irrigation will be necessary. In either case, careful monitoring of the new landscape is essential to make sure that the plants are not water stressed during the establishment period. Larger plants may require a year or more to properly establish in the landscape. The frequency of irrigation (weekly, to several times per week during the first month) will depend on temperature and the water-holding capacity of the soil. Irrigation frequency can be reduced in successive months. Generally, the production of new growth is the best indication that a shrub is becoming established. Supplementary fertilization 2-3 times per year may be desirable, at least during the first year after planting. Some native plant producers recommend using fertilizer formulations with micronutrients (trace minerals) traditionally designed for palms, particularly if the native shrubs are being planted on fill soils.

How to Use the Native Shrub Selection Table

The table of native shrub species (Table 1) suitable for use in south Florida will help in making the right choices for various landscape situations. The list is by no means a complete inventory of the subtropical or tropical shrub species native to the state, but it represents those native shrubs that have proven themselves in the landscape, are available from nurseries, or are judged worthy of wider use and availability. The table is arranged alphabetically by scientific name, accompanied by one or more common names. Special attention should be paid to environmental factors such as soil pH and light requirements, and drought and salt tolerances.

Drought tolerance refers to Florida conditions only and should be interpreted as follows: High - will not require supplemental irrigation after establishment; Medium - may require occasional irrigation during periods of unusual water stress; and Low - will require supplemental irrigation during periods of drought.

Salt tolerance should be interpreted as follows: High - will withstand direct salt spray and soil salinity; Medium - should be protected from direct salt spray but will withstand moderately saline conditions; and Low - sensitive to salt.

Under the category of Hardiness Zone, subtropical refers to the transitional area between central and tropical Florida, an area where an occasional winter frost will occur. Tropical refers to southernmost mainland Florida and the Keys, an area where winter frosts are rare to nonexistent. Before installing a large scale landscape using native shrubs listed as tropical only, it is best to confer with your county cooperative extension agent about expected winter minimums in your area. If a particular species can be used in central and north Florida as well, this has been indicated.

Obtaining Native Plants

Native plants should not be transplanted from the wild without the permission of the landowner, and never from public lands. In general, it is best to leave wild populations intact, unless the plants face destruction from development. Superior individuals in native populations should be identified where possible, and nursery stock propagated vegetatively or by seed from them. The advantages of seed vs. cutting propagation is that a degree of the genetic diversity of the species is maintained in cultivation.

Table 1. Native shrub species suitable for use in south Florida.

Scientific Name Common Name	Mature Natural Height (in feet)	Growth Rate ¹	Soil pH ²	Hardiness Zone ³	Light Req. ⁴	Salt Tol. ⁴	Drought Tol. ⁴	Nutrition Req. ⁴	Plant Type ⁵	Flower Color	Flower Character- istics	Flower Season
<i>Acacia farnesiana</i> Sweet Acacia	8-10	M	W	C, ST, T	H	M	H	M	Ever	Yellow	Showy, fragrant	YR
Notes and Uses: A thorny, much-branched shrub. Flowers used to make perfume. Uses: Specimen plant; informal hedge.												
<i>Acelorrhaphe wrightii</i> Paurotis palm	15-20	S	W	C, ST, T	M, H	M	M	M	Palm	White	Insignificant	Sp
Notes and Uses: Can be used as a large screen. Petioles persistent and spiny. Uses: Specimen plant.												
<i>Amphitecna</i> (<i>Enallagma</i>) <i>latifolia</i> Black Calabash	20-30	M	W	ST, T	H	H	H	L	Ever	Yellow	Insignificant	Sp
Notes and Uses: Tolerates poor growing conditions. Uses: Specimen plant.												
<i>Amyris elemifera</i> Torchwood	12-16	S	W	ST, T	M, H	H	M	L	Ever	White	Insignificant	F
Notes and Uses: Green wood used as torches. Often tree-like in form. Uses: Specimen plant.												
<i>Angadenia berterii</i> Pineland Allamanda	2-4	S	Alk	ST, T	H	L	H	L	Ever	Yellow	Showy	YR
Notes and Uses: Well-adapted for alkaline soils. Uses: Specimen plant; informal hedge.												
<i>Ardisia escalloniaeoides</i> Mariberry	12-15	M	W	ST, T	L, M, H	H	M	L	Ever	White, pink	Insignificant, fragrant	Sp, Su, F
Notes and Uses: Shiny black fruit attracts birds. Uses: Specimen plant.												
<i>Asclepias tuberosa</i> Butterfly weed	3-4	M	W	C, N, ST	H	L	H	L	Ever	Orange	Showy	Su
Notes and Uses: Attracts butterflies to the garden. Uses: Specimen plant.												
<i>Baccharis halimifolia</i> Salt bush	5-7	M	W	C, N, ST, T	H	H	H	L	Ever	White	Insignificant	F
Notes and Uses: Good for wild gardens and seaside plantings. May become weedy; potentially a problem plant. Uses: Specimen plant.												
<i>Beaufortia racemosa</i> Tarflower	4-8	S	A	C, N, ST	M, H	L	M	M	Ever	White	Showy, fragrant	Sp, W
Notes and Uses: Attractive in mass. Petals sticky, once used as flypaper. Uses: Specimen plant.												

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<i>Borreria arborescens</i> Silver sea oxeye	2-4	S	W	ST, T	H	H	H	L	Ever	Yellow	Showy	Sp, Su
Notes and Uses: <i>B. frutescens</i> , with green foliage, is also available. Uses: Specimen plant; groundcover.												
<i>Bumelia reclinata</i> Slender buckthorn	20-30	M	W	C, N, ST	H	H	M	L	Ever	White	Insignificant	F
Notes and Uses: Can become a small tree. Uses: Specimen plant.												
<i>Byronima lucida</i> Locustberry	15-20	S	W	T	H	L	H	L	Ever	White, pink	Showy	Sp, Su
Notes and Uses: Sensitive to overwatering. Uses: Specimen plant.												
<i>Callicarpa americana</i> Beautyberry	4-8	F	W	C, N, ST	H	L	H	L	Ever	Lavender	Insignificant	Sp
Notes and Uses: Attractive purple fruits attract many birds. Uses: Specimen plant; informal hedge.												
<i>Calypttranthes pallens</i> Spicewood, pale lid-flower	10-25	S	W	T	M	M	H	M	Ever	White	Insignificant	Sp, Su, F
Notes and Uses: Good native hedge material: can be clipped. Uses: Formal, informal hedge.												
<i>Capparis cynophallophora</i> Jamaican caper	8-10	S	W	T	H	H	H	L	Dec	Pink-white	Showy	Sp
Notes and Uses: Undersides of leaves rust colored. Good hedge material. Uses: Specimen plant.												
<i>Casasia clusifolia</i> Seven-year apple	5-10	S	W	ST, T	H, M	H	H	L	Ever	White	Showy, fragrant	Su
Notes and Uses: Good for seaside plantings. Uses: Specimen plant.												
<i>Cephalanthus occidentalis</i> Buttonbush	15	M	W	C, N, ST	M, H	L	L	M	Dec	White	Showy	Su
Notes and Uses: Best in wet sites. Uses: Specimen plant; informal hedge.												
<i>Ceratiola ericoides</i> Rosemary	4-5	M	A	C, N, ST	H	H	H	L	Ever	Red, yellow	Insignificant	YR
Notes and Uses: Well adapted to the sand pine areas of Florida. Difficult to propagate. Uses: Specimen plant.												

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<i>Chiococca alba</i> Snowberry	6-9	M	W	C, ST, T	H	H	H	L	Ever	Yellow	Insignificant	YR
Notes and Uses: Attractive white fruit. <i>C. pinetorum</i> is pineland species. Uses: Specimen plant.												
<i>Chrusobalanus</i> <i>icaco</i> Cocoplum	6-8	M	W	ST, T	H	H	M	L	Ever	White	Insignificant	YR
Notes and Uses: New foliage red in some forms. Uses: Formal, informal hedge; specimen plant; edible fruit.												
<i>Coccoloba uvifera</i> Sea grape	15-30	M	W	ST, T	H	H	H	L	Ever	White	Insignificant	Su
Notes and Uses: Edible purple fruit. Good seaside plant. Uses: Specimen plant; informal hedge; edible fruit.												
<i>Colubrina</i> <i>arborescens</i> Coffee colubrina	15-20	M	W	ST, T	M, H	H	H	L	Ever	White	Insignificant	YR
Notes and Uses: Can become a small tree. Uses: Specimen plant.												
<i>Conocarpus</i> <i>erectus</i> var. <i>sericeus</i> Silver buttonwood	15-20	M	W	ST, T	H	H	H	L	Ever	Purple- green	Insignificant	Sp, Su, F
Notes and Uses: Excellent seaside plant. Medium-textured silvery leaves. Uses: Specimen plant; informal, formal hedge.												
<i>Dalbergia</i> <i>ecastophyllum</i> Coin vine	6-9	M	W	C, ST, T	H	H	H	L	Ever	White, pink	Insignificant	Sp, Su
Notes and Uses: Grows well in coastal landscapes. Uses: Specimen plant.												
<i>Dodonaea viscosa</i> Varnish leaf	5-12	S	W	ST, T	H	H	H	L	Ever	White	Insignificant	Su
Notes and Uses: Leaves very shiny. Winged fruit showy. Uses: Specimen plant.												
<i>Duranta repens</i> Golden-dewdrop	12-15	M	W	ST, T	M, H	M	M	L	Ever	Blue, white	Showy	Sp, Su, F
Notes and Uses: Yellow fruit is poisonous to humans. Uses: Specimen plant, informal hedge.												
<i>Erythrina herbacea</i> Coral bean	4-20	M	W	N, C, ST	M, H	L	M	M	Dec	Red	Showy	Sp
Notes and Uses: Attracts hummingbirds. Seeds poisonous. Uses: Specimen plant.												

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<i>Eugenia</i> spp. Stoppers	8-20	S	W	ST, T	M, H	H	H	L	Ever	White	Insignificant	Sp, Su
Notes and Uses: Many stoppers are slow growing but tolerate poor conditions. Uses: Specimen plant; informal hedge.												
<i>Forestiera segregata</i> Wild olive, Florida privet	5-20	M	Alk	N, C, ST	H	H	H	L	Ever	Green	Insignificant	Sp
Notes and Uses: Hedge plant with good salt, drought, and alkali tolerance. Uses: Specimen plant; informal hedge.												
<i>Gossypium hirsutum</i> Wild cotton	10-15	F	W	ST	H	H	H	M	Ever	White	Showy	Sp, Su
Notes and Uses: Can be trained as a small tree. Uses: Specimen plant.												
<i>Hamelia patens</i> Scarletbush	5-6	M	W	ST, T	H, M	M	H	M	Ever	Red	Showy	Sp, F
Notes and Uses: Tubular red flowers all year. Uses: Specimen plant.												
<i>Ilex cassine</i> Dahoon holly	25-40	M	A	C, N, ST	H	M	M	L	Ever	White	Insignificant	Sp
Notes and Uses: Red-berried. Grows in boggy sites. Withstands shearing. Uses: Formal hedge.												
<i>Ilex glabra</i> Galberry	6-10	S	A	C, N, ST	M, H	M	M	L	Ever	White	Insignificant	Sp
Notes and Uses: Clump-forming. Black fruits in winter. Uses: Specimen plant.												
<i>Ilex vomitoria</i> Yaupon holly	2-8	M	W	C, N, ST	M, H	H	H	L	Ever	White	Insignificant	Sp, Su
Notes and Uses: Many cultivars of various growth habits exist. Uses: Specimen plant; formal, informal hedge.												
<i>Iva frutescens</i> Marsh elder	3-10	M	Alk	N, C, ST	H	H	M	L	Ever	Green	Insignificant	Sp, Su
Notes and Uses: Useful where brackish water accumulates. Uses: Informal hedge.												
<i>Lycium carolinianum</i> Christmas berry	6-8	M	W	C, N, ST	M, H	H	H	L	Ever	Blue	Insignificant	Su
Notes and Uses: Good for coastal landscapes. Uses: Specimen plant.												

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<i>Mallotia gnaphalodes</i> Sea lavender	4-6	S	W	C, ST, T	H	H	H	L	Ever	White	Insignificant	YR
Notes and Uses: Well adapted for beach landscapes. Considered endangered in Florida. Uses: Specimen plant.												
<i>Myrica cerifera</i> Southern wax myrtle	12-15	M	W	C, N, ST	H	H	H	L	Ever	White	Insignificant	Sp, Su
Notes and Uses: Root suckers, leaves stains on masonry; potentially a problem plant. Uses: Specimen plant.												
<i>Pithecellobium guadelupense</i> Blackbead	15-20	M	W	C, ST, T	H	H	H	L	Ever	Pink	Showy	Sp, Su
Notes and Uses: Lustrous black seeds. Uses: Specimen plant.												
<i>Psychotria nervosa</i> Wild coffee	4-6	M	W	ST, T	M, L	L	M	L	Ever	White	Insignificant	Sp, Su
Notes and Uses: Red berries attract wildlife. Medium-textured understory plant. <i>P. ligustrifolia</i> finer-textured. Uses: Specimen plant.												
<i>Rhapidothymum hustrix</i> Needle palm	3-5	S	W	C, N, ST	L, M, H	L	M	L	Palm	White	Insignificant	Sp
Notes and Uses: A good landscape specimen. Has long spines near crown. Uses: Specimen plant.												
<i>Sabal etonia</i> Scrub palmetto	3-4	S	W	C, N, ST, T	M, H	M	H	L	Palm	White	Insignificant	Sp
Notes and Uses: Slow-growing. Difficult to transplant. Uses: Specimen plant.												
<i>Savia bahamensis</i> Maidenbush	8-10	S	W	ST, T	H	H	H	L	Ever	Green	Insignificant	Sp
Notes and Uses: Good for coastal landscapes. Uses: Specimen plant.												
<i>Serenoa repens</i> Saw palmetto	6-15	S	W	C, N, ST, T	M, H	H	H	L	Palm	White	Insignificant, fragrant	Su
Notes and Uses: Sprawling shrub is excellent for beach plantings. Uses: Specimen plant.												
<i>Suriana maritima</i> Bay cedar	10-15	S	W	ST, T	H	H	H	L	Ever	Yellow	Insignificant, fragrant	YR
Notes and Uses: Well adapted to coastal landscapes. Uses: Specimen plant.												

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<i>Tetrazygia bicolor</i> Florida tetrazygia	5-20	M	W	ST, T	H, M	M	H	L	Ever	White	Showy	Sp, Su
Notes and Uses: Attractive foliage. Uses: Specimen plant; informal hedge.												
<i>Yucca aloifolia</i> Spanish-bayonet	12-15	M	W	C, N, ST	H	H	H	L	Ever	White	Showy	Sp
Notes and Uses: Excellent seaside plant. Dangerous, dagger-like leaves. Uses: Specimen plant.												
¹ S = Slow; M = Medium; F = Fast												
² A = Acid; Alk = Alkaline; W = Wide												
³ C = Central; ST = Subtropical; T = Tropical; N = North												
⁴ L = Low; M = Medium; H = High												
⁵ Ever = Evergreen; Dec = Deciduous												
⁶ YR = Year round; Sp = spring; Su = summer; F = fall; W = winter												