

FLORIDA NATIVE FERNS: PTROPICAL PTERIDOPHYTES

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Additional index words. understory plantings, shade-tolerant plants

Abstract. Plants are considered native to Florida if they were here at the time of European contact in the early sixteenth century (1516). Using plants native to Florida in our landscapes helps maintain the natural look of our state and can lead to

more energy efficient landscaping. Florida has over 2,400 native species of plants, with some endemic to the state. They have survived through the years because they are adapted to our soils, temperature, and rainfall patterns. Each is associated with natural plant communities or ecosystems that occur throughout Florida. Although only about 25% of our native flora is in commercial production, interest in native landscaping continues to increase. Commercial and homeowner landscapers can benefit from learning more about native plants and how to use them in the landscape in formal beds, understory plantings or as specimen plants. Multi-media tools offer an easily accessible way to promote the use of native plants and their availability in the nursery trade. A PowerPoint presentation focusing on the use of ferns in understory plantings was developed to address these needs. The presentation begins with a key to fern identification features to assist viewers in distinguishing between different species. Featured native ferns, terrestrial and epiphytic, are discussed with relation to origin, cultural requirements, availability, and landscape uses.

Home landscapers often are encouraged to use plants native to Florida in their yards, but may not be familiar with the types of plants to use in different conditions. Using native plants in the landscape helps to restore the natural beauty of

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Table 1 Some of Florida's most interesting native ferns.²

Common name	Botanical name	Description	Reproduction and propagation	Region	Growing conditions
Giant Leather Fern	<i>Acrostichum danaeifolium</i>	Large, showy deep green fronds, 5-10 ft spread	Reddish spore cases coat the entire underside of the leaf blade	Upper Central Florida southward Hardiness zone: 9-11	Grows in shade or bright sun, prefers moist soils
Fishtail Fern, Giant Sword Fern	<i>Nephrolepis biserrata</i>	Medium height, dark green fronds with fishtail shaped tips, 3-5 ft spread	Sori arranged just along underside edge of leaf blade	South Central Florida southward Hardiness zone: 10-11	Prefers shade and somewhat moist soil, can be invasive
Boston Fern, Sword Fern	<i>Nephrolepis exaltata</i>	Tapered light green fronds, 1-5 ft height	Round or kidney shaped spore cases arranged along underside edge of leaf blade	Throughout Florida Hardiness zone: 8-11	Grows in sun or shade, prefers somewhat moist soil, can be invasive
Cinnamon Fern	<i>Osmunda cinnomomea</i>	Medium sized, erect soft to dark green triangular sterile fronds, 2-4 ft spread and height	Cinnamon colored narrow spore cases produced on leafless frond	Throughout Florida in swamps and marshes Hardiness zone: 5-11 Deciduous in cooler climates	Requires acidic, humus-rich soil, dappled shade and moist conditions
Royal Fern	<i>Osmunda regalis</i>	Large, widely pinnate shrub-like fern, light green sterile fronds, 2-4 ft height, 3-5 ft spread	Golden colored fertile spore cases produced at branch tip	Throughout Florida in swamps, bogs and marshes Hardiness zone: 5-11 Deciduous in cooler climates	Prefers acidic soil, dappled shade and moist conditions
Golden Polypody, Goldfoot Fern, Serpent Fern	<i>Polypodium aureum</i>	Epiphytic or terrestrial fern with clumping, deeply pinnate fronds that can be very small to over 2 ft long, light green to dark green foliage	Round sori borne on conspicuous lines on either side of the axis of the blade segments	Throughout Florida, usually seen growing in the boots of palm trees Hardiness zone: 8B-10	Can withstand nearly full sun to dense shade

²Information provided is a compilation of several sources: Haehle and Brookwell, 1999; Jones, 1987; Nelson, 2003; Nelson, 2000; Osorio, 2001; and Plants Database at <http://plants.usda.gov>.

Florida, and if they are used properly, can lead to reduced maintenance, reduced pesticide use, and often reduce water use once established.

Often homeowners are looking for specific plant characteristics to suit an area of their landscape; a common inquiry has to do with finding plants that are suited to shadier conditions. This is where many of our native Florida ferns can fill the need. Ferns, also known as Pteridophytes—plants that reproduce without seed—have been around for more than 130 million years, since the age of dinosaurs, becoming established long before flowering plants developed. Over 135 native tropical and sub-tropical fern species have been identified in Florida (Lakela and Long, 1976), some more suited for use in the landscape than others. The diversity of fern life in Florida can be attributed to continental shifts, receding oceans and silt deposits from rivers long dried-up (Wunderlin and Hansen, 2000).

The first discovery one might find when learning about ferns is: they all seem to look alike. On second glance though, there are unique differences. Fern fronds can be pinnate, bipinnate, tripinnate; or pinnatifid (the division between the leaves does not fully reach the leaf margin) pinnate-pinnatifid, twice pinnate-pinnatifid. Some species have fronds with percurrent (netlike) veins, producing a plant that does not resemble the typical fern structure (Lakela and Long, 1976). Ferns can also be classified by the pattern of sporangia covering the abaxial leaf surface.

A Powerpoint presentation was developed as a tool to teach homeowners about the native fern options available to them for their landscapes, and was well received by fellow students attending a Florida Native Plant course. The ferns included in the presentation are listed in Table 1, along with

their identifying characteristics and growing requirements. Homeowners would learn about a wide variety of ferns suited to their various sites—high or low light, dry or wetter soils, different height and space requirements considered. All the ferns presented are available to homeowners at the retail level, some however can only be found at a native plant nursery. The average retail cost for the ferns presented ranges from \$6.00 to \$20.00 each for a 3-gal size (Betrock et al., 2004) depending on species. Specific attention was paid to availability and average cost of each variety and the suitability for landscape use.

There are many more native Florida ferns that are not covered in the presentation such as the maidenhair fern, the resurrection fern, and the Florida tree fern. When a plant is desired for the landscape that is a little less common, a little more adaptable in specific locations, or requires a little less maintenance, look at the ferns—there are so many from which to choose.

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