

***Pinus elliottii*: Slash Pine¹**

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Introduction

The species *elliottii* is a large, stately, heavily-branched, long-needled conifer has a rapid growth rate and is capable of reaching 100 feet in height with a three to four-foot-diameter trunk. The six-inch-long cones appear among the dark green, six to twelve-inch-long needles, and are favored by wildlife. Squirrels are particularly fond of the seeds, as they chew open the cones and litter your sidewalk or driveway with debris. The red-brown bark is deeply furrowed and scaly.

General Information

Scientific name: *Pinus elliottii*

Pronunciation: PIE-nus ell-ee-OTT-ee-eye

Common name(s): slash pine

Family: *Pinaceae*

USDA hardiness zones: 7A through 11 (Figure 2)

Origin: native to the Gulf and Atlantic coastal states from northeastern Louisiana to the southern region of South Carolina

UF/IFAS Invasive Assessment Status: native

Uses: shade; screen; reclamation; highway median



Figure 1. Full Form - *Pinus elliottii*: slash pine
Credits: UF/IFAS

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Figure 2. Range

Description

Height: 75 to 100 feet

Spread: 35 to 50 feet

Crown uniformity: irregular

Crown shape: pyramidal, oval

Crown density: open

Growth rate: fast

Texture: fine

Foliage

Leaf arrangement: alternate; typically in groups of 2 per fascicle, but occasionally in groups of 3 (Fig. 6)

Leaf type: simple

Leaf margin: entire



Figure 3. Leaf - *Pinus elliottii*: slash pine
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Leaf shape: needle-like (filiform)

Leaf venation: parallel

Leaf type and persistence: evergreen, needled evergreen, fragrant

Leaf blade length: 6 to 12 inches

Leaf color: dark green

Fall color: no color change

Fall characteristic: not showy

Flower

Flower color: yellow

Flower characteristics: not showy

Fruit

Fruit shape: elongated, oval, cone

Fruit length: 2 to 6 inches

Fruit covering: dry or hard

Fruit color: brown

Fruit characteristics: attracts squirrels/mammals; showy; fruit/leaves a litter problem



Figure 4. Fruit - *Pinus elliottii*: slash pine
Credits: UF/IFAS

Trunk and Branches

Trunk/branches: branches don't droop; not showy; typically one trunk; no thorns

Bark: red brown and furrowed when young, becoming platey with loose, thin scales that flake off to reveal a dark orange color

Pruning requirement: little required

Breakage: susceptible to breakage

Current year twig color: brown

Current year twig thickness: thick

Wood specific gravity: 0.59



Figure 5. Bark - *Pinus elliottii*: slash pine

Credits: Gitta Hasing, UF/IFAS

Culture

Light requirement: full sun to partial shade

Soil tolerances: clay; sand; loam; acidic; slightly alkaline; well-drained to occasionally wet

Drought tolerance: high

Aerosol salt tolerance: high

Other

Roots: can form large surface roots

Winter interest: no

Outstanding tree: no

Ozone sensitivity: unknown

Verticillium wilt susceptibility: resistant

Pest resistance: sensitive to pests/diseases

Use and Management

Slash pine is self-pruning of its lower branches, is somewhat pyramidal when young and forms an open, rounded canopy creating a light, dappled shade beneath. This allows just enough sun to filter through for maintenance of a lawn beneath this tall, evergreen tree or for underplanting's of dogwoods, azaleas, camellias and other plants which thrive in this high, shifting shade. Aggressive root competition takes place beneath pines so the shrubs and lawn beneath and around the canopy often require more frequent irrigation, particularly during the dry season. Pines have some deep roots except in poorly-drained soil where all roots are shallow. The tap root is prominent in well-drained soil and can make them difficult to transplant from the wild.

Slash Pine grows well on a variety of acidic soils in full sun or partial shade. It does poorly in basic soil (high pH) and so is not recommended for soils with high pH, or where irrigation water has a high pH. Once established, it is more tolerant of wet sites than most other pines and is moderately salt-tolerant. It is not highly drought-tolerant but more so than most other pines. The horizontal branches break easily in ice storms. Trunks which break in hurricanes break several feet up from the ground. Since shaded lower branches die and drop as the tree grows taller be careful not to plant them too close to high traffic areas where branches could fall on people or vehicles, unless there is a regular maintenance plan to remove them. Open-grown trees keep more lower branches, probably due to greater sun exposure.

This native plant is becoming more popular as a landscape plant and is often planted in groups to create a natural-like setting. It is also used as a screen although it is quite unsuited for this purpose because lower branches are not retained in the tree and it grows with an open form. Needles seem to fall from the tree all during the year creating slippery walks. Needles will need to be regularly raked from the lawn in refined landscapes.

Probably the most serious problem of pines in areas with high pH irrigation water is pine chlorosis. Pines gradually turn yellow and begin dying soon after construction activities have begun, or when high pH irrigation water is applied regularly to the root zone. Symptoms appear as micronutrient deficiencies (iron and manganese). Landscape managers have applied fertilizers to the root zone and foliage and, more recently, directly into the trunk through injection

tubes. These are probably temporary solutions to a problem which is caused by a complex of activities, including root injury and removal during construction, over-fertilization, and application of high pH irrigation water. The problem is probably best prevented by eliminating turf from beneath the canopy and withholding high pH irrigation from the root zone. The root zone on trees extends to about three times the dripline.

Pine is the state tree of Arkansas, North Carolina, and Alabama. *Pinus elliottii* var. *densa*, the famous “Dade County Pine” of hardwood fame, extends from the Florida Keys up into central Florida. Development continues to remove these but nurseries are growing it to be replanted in the landscape in USDA hardiness zones 9, 10, and 11. It grows slower than the species, reaching about 40 feet tall with a rounded crown in 30-years. It could make a wonderful street tree, if set back from the roadway.

Propagation is by seed.

Pests

Bark beetles and wood borers can be a serious problem on trees impacted by construction. These include the IPS beetle, the turpentine beetle and the southern Pine beetle. Tip moth damages trees in parts of its range.

Sawfly larvae are variously colored but generally feed in groups on the needles. Some sawfly larvae will flex or rear back in unison when disturbed. Sawflies can cause rapid defoliation of branches if left unchecked.

Pine needle miner larvae feed on the inside of needles causing them to turn yellow and dry up.

Pine needle scale is a white, elongated scale found on the needles. Pine tortoise scale is brown and found on twigs. Depending on the scale, horticultural oil may control overwintering stages.

Pine spittle bug lives and hides in a foamy mass.

Spruce mites cause damage to older needles, and are usually active in the spring and fall. Mites cause older needles to turn yellow.

Diseases

Very susceptible to fusiform rust in USDA hardiness zones 8 through 10. Oaks serve as an alternate host to this fungus. Select resistant trees.

Pitch canker can be a serious problem. It appears to be more of a problem in managed landscapes where trees receive regular applications of nitrogen.

Needle cast causes needles to drop during the winter, but control is usually not needed.

Diplodia sapinea and *Diplodia scrobiculata* can both effect this tree.

References

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