

Common Pines of Florida ¹

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This document identifies the 10 pines you are most likely to encounter in Florida. Note: Though their common names indicate otherwise, two exotic species (Norfolk Island pine and Australian pine) are not true pines and so are not included here.

Background

Pines are a common feature of the Florida landscape. Few people realize that there are seven species of native pines and three other commonly planted non-native species found in Florida. Each species grows best in a particular environment. Several are of commercial value and are cultivated and managed to provide useful products such as paper, packaging and lumber. Some species are managed to enhance wildlife habitat and/or to provide attractive landscapes. Of course, many pines grow naturally. Unmanaged pine stands will produce mature trees and some wildlife benefits, but like any natural resource, will provide more benefits if managed wisely.

Sand Pine (*Pinus clausa* [Chapm.] Vasey)

Sand pine (Figure 1) occurs on both the Atlantic and Gulf coastal sand dunes as far south as Dade County on the east coast and Lee county on the west coast. It also occurs in pure stands on deep, dry, infertile acid sands of the interior such as the Big Scrub area of the Ocala National Forest, the world's largest area of sand pine.

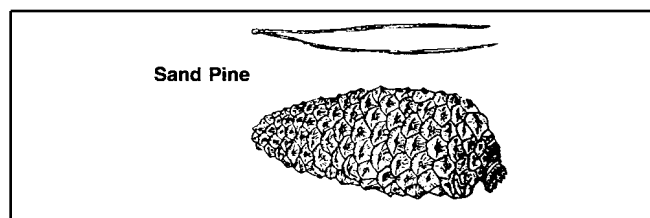


Figure 1 .

Sand pine is a small-to-medium sized tree with a conical crown and persistent low lateral branches. It grows in open stands. Young trees have brownish-tan smooth trunks. The bark of large trees remains fairly smooth particularly near the top. The two needles in each bundle or fascicle are 2 to 4-1/2 inches long. Sand pine twigs are many-branched, smooth and slender. Trunk and branches of sand pines are

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frequently twisted. This and their relatively small size make them unsuitable for timber but perfectly acceptable for pulpwood use. Mature cones are 2 to 4 inches long and may persist on the tree for many years open or unopened. Two varieties of sand pine are recognized in Florida: Ocala sand pine (variety *clausa*) has cones which remain closed until fire sweeps through the stand; the Choctawatchee strain (variety *immuginata*) has cones which open at maturity. *Immuginata* is usually planted in reforestation projects on deep sands as it survives planting best. This genetically improved Choctawatchee sand pine is best for Christmas trees and may be sheared and shaped effectively.

Old timers sometimes referred to sand pine as "spruce pine". This is not correct, as spruce pine is the common name for *Pinus glabra*.

Shortleaf Pine (*Pinus echinata* Mill.)

Shortleaf pine (Figure 2) is found in natural stands in northern Florida from the Aucilla River westward to Okaloosa County. This tree grows on moist, fertile soils in western Florida. It is a common pine of Piedmont and Cumberland plateaus north of Florida. Local common names for shortleaf pine include "short-needled pine". To avoid confusion, remember that any short-needled native pine east of the Suwannee River is not shortleaf!

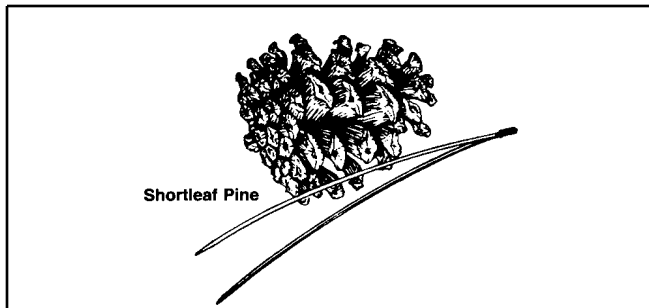


Figure 2 .

The bark of old shortleaf pines has distinctive, flat, broad, heavy reddish-brown rectangular plates. Many small resin pockets may be scattered throughout the bark. Bark of twigs is rough and scaly. Needles are 2 to 5 inches long and are packaged in fascicles of two or three. Most needles on each tree are fairly uniform in length, but needle length from tree to tree varies more than in any other native pine in Florida.

In the Florida panhandle, *P. echinata* and *P. glabra* (spruce pine) are sometimes confused, as both may occur as old trees in mixed hardwood stands. Remember the rough reddish bark of shortleaf pines and the full, dark gray smooth bark of spruce pine if you encounter this situation in the panhandle.

Slash Pine (*Pinus elliottii* Engelm.)

This is the common tree of pine plantations throughout Florida. Millions of acres of slash pine (Figure 3) have been planted, grown, and harvested. It takes about 30 years for slash pine trees to reach sawtimber size. Younger trees are harvested for pulpwood which is converted to many products. On a good site, a well-stocked stand of slash pine will grow about two cords of wood per acre per year. Growing pines can be a good investment. Contact your county Extension agent for information on forestry investments.

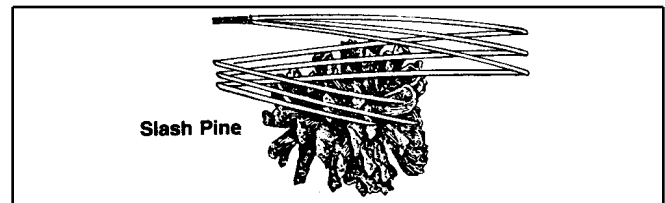


Figure 3 .

Historically, slash pine was a primary naval store species, producing turpentine and resins. The naval stores industry has all but disappeared in Florida, but slash pines with "cat-face" scars left from naval stores sap harvesting can still be found in many old stands.

Slash pine may be identified by large, flat bark plates, rough twigs and large "brooms" of needles. Needles are 5 to 11 inches long and are packaged two or three per fascicle.

While slash pine is widely planted, it occurs naturally in wet, flatwoods, swampy areas and shallow pond edges. Slash is sometimes found growing with loblolly pine (*Pinus taeda* L.). The two can be distinguished by noting that loblolly pine always grow with three needles per fascicle, its cones persist on the tree for a longer time than slash pine cones and cones of loblolly pine are far more prickly than slash pine cones.

South Florida Slash Pine (*Pinus elliottii* var. *densa*)

South Florida slash pine is similar to the native pines of the West Indies and is, in fact, a link between the temperate and subtropical communities. The characteristics are very similar to those described for slash pine (Figure 3).

Spruce Pine (*Pinus glabra* Walt.)

This short-needled pine (Figure 4) is found in hardwood hammocks from Alachua County northward and west into the panhandle. Older trees have silvery gray bark resembling that of spruce trees. Needles are 1-1/2 to 4 inches long, twisted and grow in pairs. Cones are small (1 to 2 inches long) and flexible and armed with a minute prickle which is easily knocked off. This species is the most shade tolerant of our native pines. Full sun may retard growth.



Figure 4 .

In early times, botanists frequently called sand pine "spruce pine" so if you study older books do not be confused.

Spruce pines reach heights of 80 to 90 feet in the moist, sandy loam soils they prefer. They are not generally abundant, but may be found scattered among loblolly pines and hardwoods in hammocks, or along stream banks.

Longleaf Pine (*Pinus palustris* Mill.)

Longleaf pine (Figure 5) is the southern yellow pine you may encounter when reading about southern forest history. While longleaf pine once covered 30 to 60 million acres of the southeastern United States, 200 years of logging and land clearing have greatly reduced occurrence of this species. Current reforestation methods, including machine planting of containerized seedlings, are aiding in expansion of longleaf pine

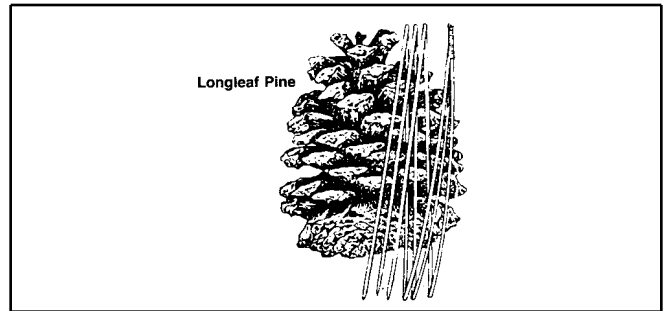


Figure 5 .

culture and in the future we may expect to see more of these majestic trees in the Florida landscape. Longleaf pines may reach heights of 80 to 100 feet and diameters of 2-1/2 feet. Long boles (trunks) with no branches are topped by a small, open crown with long, dark green tufts of needles at the ends of stout twigs. Needles can be 8 to 18 inches long and the cones range from 5 to 10 inches in length.

Needles are borne three to a fascicle. When the large cones fall from the tree they generally leave a few scales on the branch. The small prickle on each scale is recurved, bent down toward the base of the cone.

Bark of the longleaf is orange-brown and scaly. The thick, platy bark of mature trees provides fire resistance, as do the thick hairs found on buds when the tree is in its grass stage. In fact, longleaf is one of many tree species which thrive when periodic fires burn through stands.

Like slash pines, longleaf pines were a major source of naval stores in the past. Certain stands were also reserved by the English crown to supply masts for sailing ships when supplies of Eastern white pines dwindled in the northeast.

Longleaf pine is a common associate of turkey oak and is found naturally on flat, gravelly and sandy soils. While stands of the longleaf pine-turkey oak ecological community are found throughout Florida, they are most common in the central portion of the state north of Lake Placid and in the interior area of the panhandle.

Pond Pine (*Pinus serotina* Michx.)

Pond pine (Figure 6) is a scattered, often overlooked native pine which is often confused with loblolly pine.

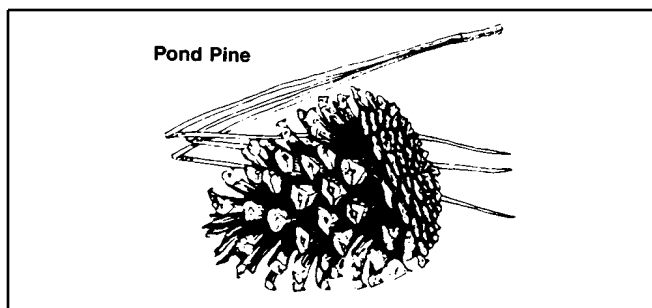


Figure 6 .

This close relative of the northern pitch pine grows in poorly drained flatwoods near bayheads and pond edges. These forested wetlands are known locally as pocosins. Tufts of needles and twigs growing on the tree trunk are obvious identifying characteristics of pond pine. This epicormic branching may be caused by fire damage.

Needles are 4 to 8 inches long and occur in bundles of three or four. The top-shaped cones may remain unopened on the tree for several years like the cones of the sand pine. The two should not be confused as the sand pine grows only on well drained sites, while the pond pine prefers "wet feet".

Pond pine is not of particular value for wood products but larger trees may be harvested for pulp.

Eastern White Pine (*Pinus strobus* L.)

Although native to the United States, the natural range of Eastern white pine (Figure 7) does not extend further south than the mountains of northern Georgia. Because of its unique form and beauty, Eastern white pine has been widely planted as an ornamental and now can be found growing in many home landscapes, particularly in the panhandle region of the state.

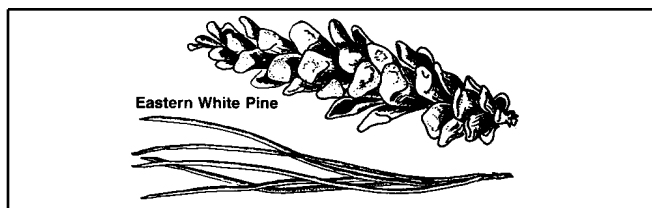


Figure 7 .

In its native range, the mature tree may reach 230 feet in height, though heights of 100 to 180 feet are more common. The foliage is fine-textured and

bluish-green in color. Needles 3 to 5 inches long occur

in bundles of five. Cones are cylindrical and 3 to 5 inches in length. In the northeastern United States between 1700 and 1800 expansive stands of eastern white pine were cut for the light-weight, straight-grained wood. White pine was used for ship masts, bridges, homes, shingles and inexpensive furniture. Today it is used for cabinets, house interiors, house framing and carving.

In colonial times, the British crown claimed all white pines over 18 inches in diameter and the king's foresters marked them with an arrow-shaped blaze. These became known as "The King's broad-arrow trees" and cutting them could result in severe penalties--even death. The king required these trees as masts for the sailing fleet which then ruled the seven seas and kept England in a dominant position of world power. Some historians believe that denial of use of these trees was at least as instrumental as taxation of tea in bringing about the American Revolution. In fact, the eastern white pine was the emblem emblazoned on the first colonial flag.

Loblolly Pine (*Pinus taeda* L.)

Loblolly pine (Figure 8) is common from Orange County in the central peninsula northward, except on wet ground or in sand pine scrub areas. It does occur on sandy sites underlain by clay. Loblolly pine is known as "old field pine" as it often invades abandoned fields.

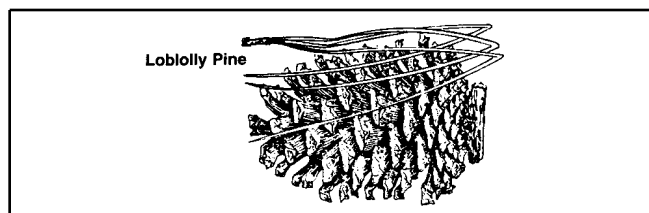


Figure 8 .

The 6 to 10 inch needles occur in fascicles of three though bundles of two occasionally are found. They are rather stiff and sometimes slightly twisted. Cones are 3 to 6 inches long and persist on the tree until the end of the third year of their growth. Bark of young trees is nearly black and scaly. On older trees the thick bark divides into irregular dark brown scaly blocks.

Loblolly pines may attain heights of 90 to 110 feet and diameters of 2 to 4 feet. Branches in the high crown spread gracefully and may give a drooping appearance. Loblolly pine is often confused with slash pine. Slash pine, however, commonly has two or three needles to the bundle and cones are more flexible. They may be easily squeezed in the hand.

Virginia Pine (*Pinus virginiana* Mill.)

The native range of Virginia pine (Figure 9) is limited to the eastern United States, more specifically to the Piedmont and foothills of the Appalachian Mountains. It is becoming more prevalent in Florida due to its potential for Christmas tree cultivation.

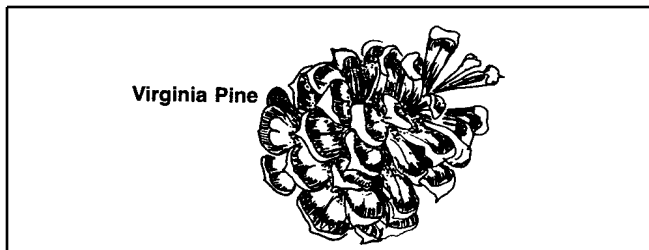


Figure 9 .

Although this pine grows on a variety of soils, it grows best in moderate- to well-drained clay, loam, or sandy soils. Compared to other pines it is slow growing and short lived. If grown in the open, the crown is quite irregular with sporadic branching, often shrub-like in appearance. It is a small to medium sized tree, rarely over 50 feet tall. Unlike many native Florida pines, Virginia pine does not self-prune and may exhibit many dead branches below the live crown. Bark of the Virginia pine is thin and smooth on young trees and on older trees is broken into dark-brown plate-like scales separated by shallow fissures. The upper trunk and larger limbs are covered with orange- brown papery scales.

Virginia pine needles are dark yellow green, relatively thick in relation to their length, and are soft or flexible. They are approximately 1-1/2 to 3 inches long and occur in bunches of two. The cones measure about 1-1/2 to 3 inches in length and are cone shaped with a slender, curved spine on each scale.

Japanese Black Pine (*Pinus thumbergia* Franco)

Japanese black pine (Figure 10) is indigenous to Japan, where in its native habitat it may grow as tall as 130 feet. Planted in Florida as a popular ornamental, the tree does not exhibit its natural regal form, but is still aesthetically pleasing.

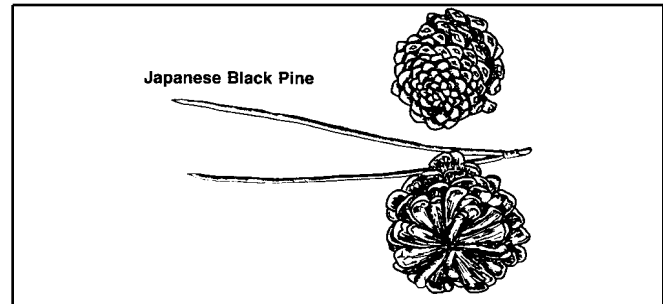


Figure 10 .

One reason for the popularity of this species is its relative salt tolerance. It may be planted successfully in oceanside areas. In the United States it is useful as a roadside planting where highways are salted for ice removal.

The shrub-like branching and stocky habit makes the species ideal for living screens and barriers. Individual specimens provide a focal point for confined planters, oriental gardens and entrances.

Needles of the Japanese black pine are bright green, 3 to 4-1/2 inches long, and grouped in pairs. They are stout and sharp pointed, when compared with other pines of Florida. Cones are round to cone shaped and approximately 1-1/2 inches long.

Suggested Reading

For more information on pine trees in Florida you may want to consult the following:

Ellwood and George Harrar. 1962. *Guide to Southern Trees*. Dover Publications, Inc. New York.

Herman Kurz and Robert K. Godfrey. 1962. *Trees of Northern Florida*. University of Florida Press, Gainesville.

Florida Division of Forestry. 1977. *Forest Trees of Florida*. Division of Forestry, Tallahassee.