

Pinus serotina pond pine

Dr. Kim D. Coder, Warnell School of Forestry & Natural Resources, UGA Dec. 2006

Pinus serotina (pond pine) is a tree of the southeastern coastal plain of United States. It was first described as a species in 1803. Historically this tree has been taxonomically associated with pitch pine *Pinus rigida*. Other scientific names for this tree have been *Pinus rigida* var. *serotina* (1868) and *Pinus rigida* subs. *serotina* (1939). The scientific name means a pine with late opening cones. Other common names include swamp pine, marsh pine, bay pine, flatwoods pine, and pocosin pine.

Pinus serotina grows along the coastal plain from southern New Jersey into central Florida and central Alabama. In Georgia, pond pine grows below the fall line. See Georgia range map. *Pinus serotina* grows in bogs, moving water swamps, flatwoods, savannahs, and low scrub areas including poorly drained wetland sites with widely fluctuating water tables. Unlike many other pines pond pine tolerates and reproduces in areas with high organic matter contents. Site drainage shifts species regeneration to loblolly. Pond pine is fire tolerant and sprouts after fire damage, but is disfigured by hot fires.

Pinus serotina is a medium sized tree 40-65 feet tall (maximum of 90 feet). It grows to a diameter of 1-2.2 feet (maximum of 3 feet). The crown form is irregular, ragged, and thin, with many tufts of needles sprouting on the stem. The crown shape is usually flat-topped with many stubby and gnarled branches among longer branches. Cones held for many years lead to the appearance of a cone crowded crown. *Pinus serotina* has a moderate growth rate and is relatively short-lived (90 years). The growth Hardiness Zone is 7a - 9a and the Heat Zone is 8-10. The lowest number of the Hardiness Zone tends to estimate the northern range limit of the tree and the largest Heat Zone number tends to estimate the southern end of the range. Coder Tree Grow Zone C-E.

Pinus serotina needles grow in bundles of 3, with rare 4 and 5 needle bundles present. The needles are held on the tree 2-4 years. Needles are 5.4-8 inches long and are gently twisted, moderately flexible, slender, concentrated near the twig tips, and dark yellow green in color.

Pinus serotina becomes sexually mature around 10 years of age. The mature female cones remain attached to the branches for many years. The cones reach maturity and remain closed for up to 7 years. Sometimes the cones become overgrown by branch tissues. Cones are symmetrically broadly egg-shaped when open and 1.8-2.7 inches long. The cones are a shiny pale reddish brown to creamy brown in color with many yellow tints. The cone scales have a dark red border along the end and a short weak prickle (sometimes no prickle).

Pinus serotina twigs are scaly, moderately stiff but slender, and greenish-yellow to orange-brown in color aging to light to medium brown. The buds are usually very resinous. The branches are fairly wide spreading but tend toward being twisted and misshapen. Mature bark on *Pinus serotina* is dark greyish-brown to reddish-brown in color with flat, rectangular, small, thin scaly plates. The bark is shallowly furrowed.

Pinus serotina identification is difficult when loblolly pine *Pinus taeda* is in the area. When pond pine has a good stem form it resembles loblolly pine but pond pine has resinous buds, 3-4 needles per bundle, a rounded cone, and stem foliage sprouts. *Pinus serotina* is closely related to pitch pine (*Pinus rigida*) and where they grow together they hybridize, generating trees with intermediate characteristics. In Georgia these two species do not overlap. *Pinus serotina* hybridizes with shortleaf pine *Pinus echinata*, pitch pine *Pinus rigida*, loblolly pine *Pinus taeda*, and longleaf pine *Pinus palustris*. The most confusing of the tree characters come from combination hybrids with *Pinus rigida* and *Pinus taeda*.

The historic and current uses of *Pinus serotina* are similar to pitch pine. *Pinus serotina* does have a different mixture of materials in its resin than other pines. The wood is resinous and locally could be used for resin products (naval stores). The tree is used for poorer grade lumber and pulp. The tree is valuable as overstory trees, general forest habitat, and a food source in wetland areas where many other rare and protected species live.



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Native Range Of Growth For *Pinus serotina*: pond pine

Native contiguous range derived from federal and state maps, herbarium samples and personal observations.
The native range includes all areas south and east of the lines on the side of the lines with the arrows.

