

Technical Report

Wetland Flora



No. 93-3 / March 1993

Gene Silberhorn

Loblolly Pine

Pinus taeda L.

Growth Habit and Diagnostic Characteristics

At maturity, loblolly pine, is a tall tree with an open canopy, dark grey scaly outer bark, reddish inner bark and somewhat drooping lower branches. Needles are usually in fascicles (bundles) of three and are from 15 to 20 cm long (6 to 8 inches). Seed-bearing cones range from 9 to 13 cm long (3.5 to 5 inches). Cone scales have short, thorny projections, giving the female cone a prickly feel when handled. Young branchlets are covered with reddish brown scales which turn greyish brown with age. Male cones appear in the spring and produce copious pollen in April and early May.

Pinus taeda is one of the more common pines in the coastal plain of Maryland, Virginia and North Carolina. Other common pines in the coastal zone, particularly in Virginia, are Virginia or scrub pine (*Pinus virginiana*) and short-leaf pine (*Pinus echinata*). Diagnostic differentiation between the species is relatively simple at close observation. Virginia pine is a smaller tree with shorter needles and smaller cones. Its needles are in fascicles of two instead of three. Short-leaved pine usually has needles up to 7 inches long, in fascicles of two and cones 1.5 to 3.0 inches long.

Another pine occurring almost exclusively in nontidal wetlands is pond or swamp pine (*Pinus serotina*). Pond pine is infrequent in Virginia, but is more common further south along the coast. The most unusual diagnostic characteristic of this pine is the beard-like appearance of adventitious needles growing directly out of the trunk.

Distribution

Pinus taeda is mainly a coastal or piedmont plateau species along the Atlantic Coast. Geographically, it ranges from southern New Jersey to northern Florida and west to eastern Texas and north along the Mississippi watershed to Tennessee.

Habitat

Loblolly pine has a broad tolerance to both wet and dry conditions. It is recognized as an "old field invader," a pioneer species in fallow fields. *Pinus taeda* is also a

significant component of canopy species in "winter wet woods." This wet woods is also known as a palustrine, forested, broad-leaved deciduous/needle-leaved evergreen, temporarily flooded (PFO1/4A) wetland according to the federal wetland classification system. Wet woods of this type typically have poorly drained, hydric soils and are often covered with standing water three to six weeks during the winter/early spring period.

Broad-leaved deciduous components of PFO1/4As are often red maple, *Acer rubrum*, (Wetland Flora, no. 91-7, July 1991) and sweet gum, *Liquidambar styraciflua*, (Wetland Flora, no. 92-1, January 1992). Other associated species may be black gum (*Nyssa sylvatica*), sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), and American hornbeam (*Carpinus caroliniana*).

Ecological Values/Benefits

Pines rank very high in importance to wildlife. Seeds from the various species of *Pinus* are valuable food for gamebirds and songbirds. Pines are also primary nesting trees for doves and robins as well as the great blue and yellow-crown night herons. Needles provide nesting material for a number of different species of songbirds. A few mature loblolly pine stands in Southside Virginia are the only remaining habitat for the endangered red-cockaded woodpecker in the state. Loblolly pine is also a highly valued timber tree in the southeast and has been extensively harvested and planted for future use.

Holistically, as a common component in palustrine wetlands, *Pinus taeda* accrues, in part, the general ecological values of these habitats. In addition to wildlife benefits, these wetlands function as natural filters of high nutrient loads, which often originate from croplands, as well as sediment runoff, pesticide and herbicide residues and other potential toxins.

Hydrophytic Factor/Wetland indicator Status

According to the *National List of Plant Species that Occur in Wetlands: Virginia* (1988), *Pinus taeda* is classified as a **facultative plant (FAC)**. FACs are plants that are "equally likely to occur in wetlands or nonwetlands (estimated probability 34%-66%)."

Pinus taeda L.



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Note to our readers: Since this series began in 1990, Rita Llanso has skillfully illustrated each plant from live specimens. Rita and her husband, Roberto, have moved to Florida, necessitating us to seek a new artist. Karen Podd from Mathews County, Virginia begins a new series with this issue. The pen and ink medium greatly enhances the plant's features through Karen's artistic talents.

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This report was funded by the Wetlands Program
of the Virginia Institute of Marine Science.

Dr. Carl Hershner, Program Director

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recycled paper 