



# *Pinus thunbergiana*

## Japanese Black Pine<sup>1</sup>

Edward F. Gilman and Dennis G. Watson<sup>2</sup>

### INTRODUCTION

An excellent, small, irregularly-shaped Pine, the size and shape of Japanese Black Pine is variable reaching a height of 25 feet and a spread of 20 to 35 feet (Fig. 1). The exceptionally dark green, five to seven-inch-long twisted needles are borne in groups of two. Although trees may or may not have a central leader prune to develop one if the tree will be grown to a large size. Branches are held horizontally in a picturesque silhouette and sometimes can outgrow the central leader forming an attractive multistemmed specimen tree. It is probably best used in this way.

### GENERAL INFORMATION

**Scientific name:** *Pinus thunbergiana*

**Pronunciation:** PIE-nus thun-ber-jee-AY-nuh

**Common name(s):** Japanese Black Pine

**Family:** Pinaceae

**USDA hardiness zones:** 6 through 8 (Fig. 2)

**Origin:** not native to North America

**Uses:** Bonsai; container or above-ground planter; recommended for buffer strips around parking lots or for median strip plantings in the highway; specimen; no proven urban tolerance

**Availability:** generally available in many areas within its hardiness range

### DESCRIPTION

**Height:** 25 to 30 feet

**Spread:** 20 to 35 feet

**Crown uniformity:** irregular outline or silhouette

**Crown shape:** pyramidal

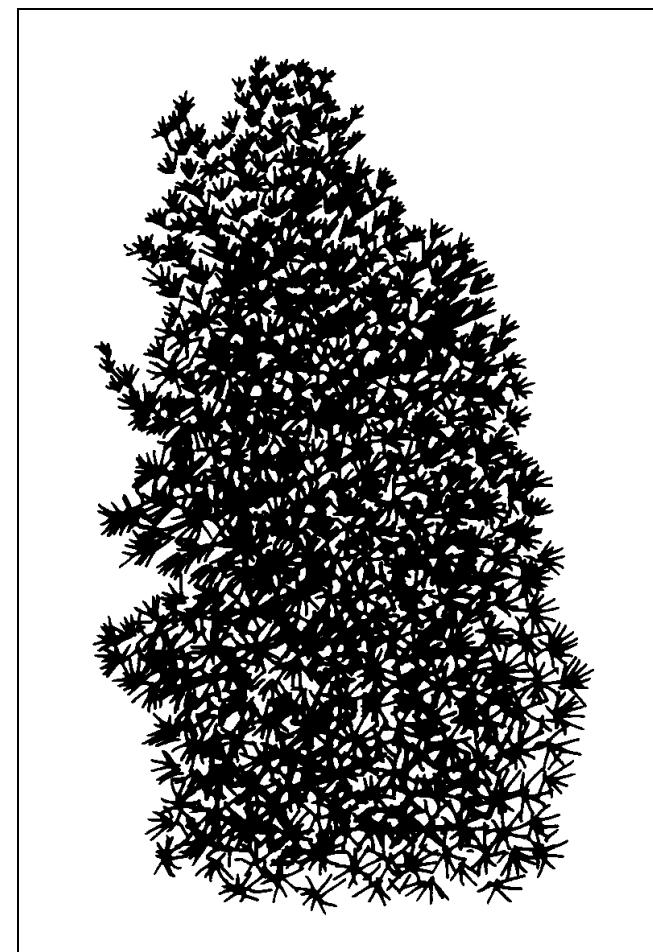


Figure 1. Middle-aged Japanese Black Pine.

**Crown density:** open

**Growth rate:** medium

**Texture:** medium

1. This document is adapted from Fact Sheet ST-480, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1994.
2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.



**Figure 2.** Shaded area represents potential planting range.

## Foliage

**Leaf arrangement:** alternate; spiral (Fig. 3)  
**Leaf type:** simple  
**Leaf margin:** entire  
**Leaf shape:** needle-like (filiform)  
**Leaf venation:** parallel  
**Leaf type and persistence:** evergreen; fragrant; needle leaf evergreen  
**Leaf blade length:** 2 to 4 inches  
**Leaf color:** green  
**Fall color:** no fall color change  
**Fall characteristic:** not showy

## Flower

**Flower color:** yellow  
**Flower characteristics:** inconspicuous and not showy; spring flowering

## Fruit

**Fruit shape:** oval  
**Fruit length:** 1 to 3 inches  
**Fruit covering:** dry or hard  
**Fruit color:** brown

**Fruit characteristics:** does not attract wildlife; fruit, twigs, or foliage cause significant litter; persistent on the tree; showy

## Trunk and Branches

**Trunk/bark/branches:** droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; routinely grown with, or trainable to be grown with, multiple trunks; not particularly showy; no thorns

**Pruning requirement:** needs little pruning to develop a strong structure

**Breakage:** resistant

**Current year twig color:** brown

**Current year twig thickness:** medium; thick

## Culture

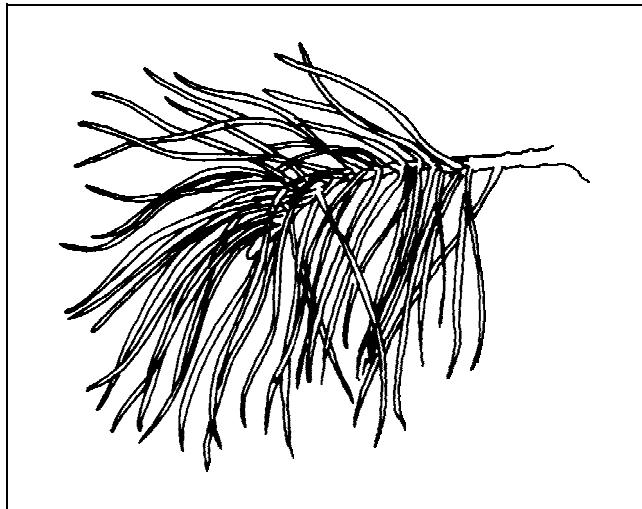
**Light requirement:** tree grows in full sun

**Soil tolerances:** clay; loam; sand; acidic; alkaline; well-drained

**Drought tolerance:** high

**Aerosol salt tolerance:** high

**Soil salt tolerance:** good



**Figure 3.** Foliage of Japanese Black Pine.

## Other

**Roots:** surface roots are usually not a problem  
**Winter interest:** no special winter interest  
**Outstanding tree:** not particularly outstanding  
**Invasive potential:** little, if any, potential at this time  
**Ozone sensitivity:** tolerant  
**Verticillium wilt susceptibility:** not known to be susceptible  
**Pest resistance:** very sensitive to one or more pests or diseases which can affect tree health or aesthetics

## USE AND MANAGEMENT

Trunks are usually not straight but sweep up in a gentle curve. It is often used as a specimen on smaller properties, or is planted in groups on larger scale landscapes. Space 10 to 20 feet apart for mass planting or to create an open screen. Japanese Black Pine can be successfully trained into a bonsai or small specimen plant with selective pruning.

The plant tolerates dry, sandy soil and is extremely salt tolerant, being used successfully along beach front property in the full sun. It also grows well in clay soil with a pH of 8.0. Drought tolerance is good. May grow two to three feet in a year but this rapid growth under optimum cultural conditions may lead to the asymmetrical, open growth habit.

Propagation is by seed which germinate readily.

## Pests

Usually none serious, except Pine wilt nematode in the east and tip moth on recently transplanted Pines.

The Maskell scale has recently devastated large numbers of trees in New Jersey.

Some adelgids will appear as white cottony growths on the bark. All types produce honeydew which may support sooty mold. European Pine shoot moth causes young shoots to fall over. Infested shoots may exude resin. The insects can be found in the shoots during May. Pesticides are only effective when caterpillars are moving from overwintering sites to new shoots. This occurs in mid to late April or when needle growth is about half developed.

Bark beetles bore into trunks making small holes scattered up and down the trunk. The holes look like shotholes. Stressed trees are more susceptible to attack. Keep trees healthy.

Sawfly larvae caterpillars 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 inside 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.

Zimmerman Pine moth larvae bore into the trunk. The only outward symptoms may be death of parts of the tree or masses of hardened pitch on the branches.

The larvae of Pine weevils feed on the sapwood of the leaders. The leader is killed and the shoots replacing it are distorted. First symptoms are pearl white drops of resin on the leaders. The leaders die when the shoot is girdled as adults emerge in summer.

## Diseases

This pine is resistant to *Diplodia* tip blight.