

Black Pine - *Pinus thunbergii*

General Information: 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. 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. Black pine is a native of Japan. It prefers but does not insist on colder climates; needs special care if grown in the warmer regions. It has rough bark and dark needles.

Occasionally a black pine will have a "witches' broom" growth on a branch caused by a fungus infection. It is a thick clump of branchlets having dwarfed foliage. Trees propagated from witches' brooms make ideal bonsai subjects as they are characterized by compact foliage and needles which are very short and erect. Bonsai propagated from witches's broom stock are called "Yatsubusa".

Family: *Pinaceae*

Lighting: They require full sun and good air circulation. Turn the tree from time to time so that light reaches all parts of the foliage.

Temperature: Zone 6 through 8. The black pine does not like extreme heat, especially in the area of its roots. Spray the foliage with water daily during the summer.

Watering: May be allowed to go dry between waterings. Needs good drainage.

Feeding: Fertilize with an acid based fertilizer.

Pruning and wiring: Do pruning during the early growing season. On all 2-needle pines, begin pinching at the end of spring when the buds have matured. First pinch the undesired weak buds and a week later pinch the undesired strong ones. (Just opposite for 5-needle varieties.) Then, as a result of this first pinching, selectively remove buds in the weak areas, leaving only the biggest and strongest. In the strongest areas leave the weak buds, removing the biggest and strongest. Remove needles growing from the top and bottom of branches, leaving only lateral needles. Every other spring, if the tree is healthy, you can remove all of the new candles. The following fall, buds will appear where the candles were removed. This serves to greatly shorten the internodes and increase foliage density.

Propagation: Black pines may also be grown from seeds sown in sand in early April. Seeds should be soaked in water for two days to hasten germination. Be sure to discard any seeds which are floating in the water. Black pines may also be propagated by grafting and from cuttings.

Repotting: Repot in Spring before the buds begin to swell. A soil mix of

coarse sand, calcinated clay and peat works well. The container may have to be larger than aesthetics dictate so the feeder roots do not dry out and die at the end of a summer day. Don't under pot a black pine. To take up nourishment, pines need to have a special type of fungus in the soil around their roots. This fungus appears as a white, stringy material. When repotting, make sure some of this helpful fungus is included in the new soil mix.

Pests and diseases: Pest: 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.

Aphids, mealy bug & red spider. Scale, shoot-tip moths and beetles may attack the tree and can best be controlled with a systemic insecticide. Do a preventive fungicide spray every two to three weeks with Benomyl® or Daconil®.

Diseases: This pine is resistant to Diplodia tip blight.

Bibliography:

"Chatting with the Master: Tosh Saburomaru on Black Pines", Florida Bonsai, VI, 3:5-7.

"Creating Small-Size Black Pine Bonsai" by David DeGroot, Florida Bonsai, XI, 4:9 16.

"The Training of Japanese Black Pine" by David DeGroot, Florida Bonsai, X, 3:30-47.

"Why Did My Black Pine Die?" by Terry Davis, Florida Bonsai, XIV, 3:3-6.
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