

Boxwood—*Buxus sp.* Compiled by Sabrina Caine and Thomas L. Zane
<http://www.bonsai-bci.com/species/boxwood.html>

General Information: Boxes are densely branched shrubs native to Europe and Asia. A hedge steeped in history, box sprigs have been found in the tombs of Romans. It is widely used as a hedge plant, and is a common topiary subject. Most varieties of box are marked by a distinctive "foxy" smell, which some find distasteful. The box is an important plant commercially, as it is one of the few woods heavier than water, and is thus used for making woodcuts and precision instruments.

Most boxes are grown as hardy bonsai, but the Harland box has been successfully grown as an indoor plant. Box is very popular for bonsai due to its tiny leaves and flowers and its tolerance for extensive pruning and shaping. One note of caution: box leaves are poisonous, and eating even a few can kill a small pet.

Lighting: Box is not particular. Sun or shade both work well. *Buxus harlandii* prefers shade or semi-shade, and has an indoor light requirement of only 800 Lux.

Temperature: Hardiness depends on variety, but boxwoods need protection from frost and cold winds even when grown in the proper climate. In the summer, box appreciates fresh air.

Watering: Moderate, but does not like wet soil. Allow the box to dry somewhat between waterings.

Feeding: Every two weeks during growth. Harland Box, every 20–30 days. Use a liquid bonsai fertilizer with one application of pulverized organic fertilizer during active growth. Fertilize with general-purpose fertilizer.

Pruning and wiring: Growth on the dwarf varieties can be very slow. Box can be wired at any time. It is tolerant of radical treatments, such as jin, shari and being grown root over rock. Fine bonsai material may frequently be pillaged from old hedges. Leaves may turn reddish brown in winter. Control shape by thinning and by pinching off most of unwanted new growth.

Propagation: By division in spring, or from hardwood cuttings taken in late summer or autumn. Air-layering is also possible.

Repotting: Every two years. Spring is the best time, but as box is a broadleaf evergreen, there is more leeway with appropriate times to repot than with deciduous trees. It can be repotted in summer and autumn if need be, but avoid repotting during very hot weather or during a growth spurt. Use basic bonsai soil. Box dislikes acid soil, and the use of limestone in the soil mix or adding an occasional dose of lime to the soil is recommended. Soil must be well drained.

Pests and diseases: Nematodes, mites and leaf miners, blackfly, greenfly, and red spider mites. Although box is very disease resistant, honey fungus and rust are sometimes encountered.

Species useful for bonsai:

- *Buxus harlandii*: Harland box—A native of Taiwan, the Harland box can grow to 33 feet. Its leaves are thinner than other box species. This box doesn't like cold, and should not be exposed to temperatures below 37°F, but it has been grown successfully as an indoor plant. If the temperature goes above 65°F, the Harland box enjoys a daily misting, and the amount of food should be reduced. During the winter, keep the tree at a temperature below 65°F; between 46°F and 50°F is best.
- *Buxus microphylla*: Japanese box—Grows to 5 feet, and has evergreen leaves under 1 inch long. It tolerates both sun and shade. All *B. microphylla* varieties are scentless. It grows best in zones 5–8.
- *Buxus microphylla* 'Compacta': dwarf boxwood, Kingsville box. Quarterly spray with Black Leaf 40 mixed with soap.

- *Buxus microphylla* 'Koreana': Korean boxwood—The most hardy box, it grows in zones 4–8, but expect the foliage to brown in the winter. It is a low, spreading variety, growing to only 3 feet.
- *Buxus microphylla* 'Morris Midget': Morris Midget boxwood.
- *Buxus sempervirens*: common box, English box—This box can grow to 25 feet in a mild climate, and therefore appears as both hedges and small trees. Its evergreen leaves grow to 1-1/2 inches. This box is hardy in zones 6–8 with some winter protection at the upper end of the range, although there is a cultivar, 'Vardar Valley' that is hardy to zone 5. This is a long-lived plant, and historic boxes from Colonial days are still alive in Virginia.
- *Buxus sinica* - A native of China, similar to other small boxes.

Bougainvillea Care Compiled by Thomas L. Zane
<http://www.bonsai-bci.com/species/bougainvillea.html>

Lighting: Full sun.

Temperature: Being a warm weather plant, they must be provided winter protection. They can usually tolerate die back from a freeze, but will withhold blooms for awhile.

Watering: Sparse to light watering and good drainage.

Feeding: Fertilize once in the spring with a low nitrogen fertilizer and maybe once again in the fall. The old established method of forcing flowers is to withhold water to a point of causing severe stress to the plant. Research at the University of Florida has found that plants flower best when given high nitrogen fertilizers and short day lengths (15 hours of darkness within every 24-hour period).

Pruning and wiring: The bougainvillea takes well to pruning; a useful attribute in styling bonsai. Because bougainvillea generally blooms on new growth, each branch, as blooms begin to fade, should be cut back to a point somewhat shorter than the desired length. Seal all cuts to prevent rot. If rot is detected on a collected specimen, cut it out completely.

Propagation: Bougainvillea may be grown from air layers, root cuttings and branch cuttings. Young shoots, a few inches in length, should be placed in sandy soil with bottom heat and moisture. Half-ripened or old wood cuttings in six to twelve inch lengths may be rooted April to June.

Repotting: Repot in spring. Do not prune the roots too severely.

Pests and Diseases: Caterpillars, aphids, scale, greenfly and mineral deficiencies (chlorosis). Care must be taken that fungus does not invade the tree; reduced humidity and a preventive spraying of fungicide will help greatly.