



The Art of Bonsai: A Toronto Master Gardeners Guide

Bonsai is the Japanese name for the art of growing trees in small containers and has been a tradition in China and Japan for centuries. It is also the name by which these miniature plants are known. They range from tiny (3-6 cm) to relatively large at 1.2 m.

Choosing Plants

While the word 'trees' has been used to describe bonsai, nearly any plant which has a woody stem can be used – ground covers and shrubs as often as large trees. Plants with very large leaves or compound leaves are usually avoided because, while it is impossible to create an exact scale model of a large tree, a large leaf size diminishes the illusion of a large tree in miniature.

Bonsai plants may be grown either indoors or outdoors. Outdoor plants used for bonsai include both deciduous – hornbeam, beech, maple, birch, privet, quince, cotoneaster – and evergreen – juniper, pine, spruce, cedar, larch and hemlock. Indoor bonsai are trees that will tolerate our warm, dry houses in winter. Plants include fig, bougainvillea, natal plum, pomegranate, firethorn, buttonwood, holly, olive, myrtle and warm climate juniper varieties. Azaleas are favourites that bring winter flower colour in our homes.



A bonsai tree from the Sun Yat-Sen Classical Chinese Garden in Vancouver.

Photo: Helen Battersby

Potted nursery trees as opposed to trees dug out of the ground are the best choice for the beginner. Nursery trees come with a compact root system and can often be transplanted directly into a bonsai pot with some root pruning. Trees growing in the ground have wide ranging root systems with most of the feeder roots found at the drip line of the foliage. In this case a year or more of work is needed to grow new feeder roots near the trunk before potting into bonsai containers.

When selecting stock for flowering or fruiting bonsai, it is essential to choose varieties which already have small flowers and fruit as it is nearly impossible to reduce flower and fruit size. For example, use azaleas instead of rhododendrons and crab-apple trees instead of regular apple trees.

Tree Shapes

Bonsai is a type of sculpture – the art of creating the appearance of a large, mature tree in miniature. Most bonsai today are young plants that are made to look old. Mature trees in nature have prominent roots at the soil line, tapered trunks, horizontal branches and sometimes clouds of foliage. Very young trees, however, have no visible surface roots, straight trunks and their branches grow vertically to reach sunlight. Dwarfing and the illusion of maturity are created by using techniques involving the growing environment, root exposure, selective pruning and bending branches.

Growing Environment

Trees grown in containers will grow at about one-fifth the rate of those planted in the ground. Bonsai which are removed from their pots and replanted in the ground will quickly revert to their normal growth rates.

Pruning Techniques

Plants maintain a rough balance between their root mass and their leaf surface area. This balance is an important fact in 'dwarfing' plants. Small leaves are created by frequent clipping or pinching of the leaves and stems. Pinching often produces two new shoots where one was before, resulting in more leaves that are smaller in size in order to maintain the surface-area-to-root-mass balance.

Wiring Methods

Bending trunks and branches into pleasing shapes is perhaps the only unique bonsai operation. This is done by coiling copper or aluminum wire around the branch and then carefully bending. After a growing season the new woody layer formed will be sufficient to hold this new shape.

The other way of directing growth is called the 'clip-and-grow' technique. This produces beautiful results but can take several seasons to accomplish the same results as wiring. In practice both methods are frequently used together.

Maintaining Bonsai

Unlike inanimate sculptures bonsai are never complete. They are always growing, often very slowly. Trunks add an additional growth ring each year and roots and branches send out new shoots. Annual trimming and pinching is necessary to maintain the original design shape. Periodic repotting is necessary to rejuvenate the pot-bound root and to visually balance the trunk diameter as it increases. This continual give and take with nature is part of the fascination of bonsai. It is very gratifying to see the trees become more beautiful each year.

References

1. *Bonsai Landscapes*. Peter Adams
2. *Bonsai, A Care Manual*. Colin Lewis
3. *Creative Art of Bonsai*. Isabelle Samson

Produced by the Toronto Master Gardeners, these Gardening Guides provide introductory information on a variety of gardening topics.

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