

Bonsai: “Capturing time in the woods”

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ABSTRACT

Bonsai is the technique of growing trees in a small space to mimic specific environmental circumstances such as old age, intense weathering, twisted or deformed form, topography, or other characteristics. Bonsai trees are inspired by and modelled after nature. Bonsai may provide an aesthetically pleasant aspect with numerous miniature trees in today's world with increasing population and reduction in home size with no or very little place for garden. Bonsai is a Japanese art form that aims to replicate some of nature's most dramatic and attractive effects on miniature trees.

Introduction

The term "Bon-sai" (sometimes written bonzai or banzai) is a Japanese term that literally translates to "planted in a container." This art form is based on an ancient Chinese horticulture practice that was revived under the influence of Zen Buddhism in Japan.

It's been around for a thousand years or more. Growing a Bonsai has as its ultimate goal the creation of a miniature but realistic representation of nature in the form of a tree. Bonsai are not genetically dwarfed plants; in fact, they can be grown from any tree species. A Bonsai tree is a miniature tree that replicates nature without revealing the human intervention.

Bonsai shapes and styles

Broom style Bonsai



Fig 1. Broom style Bonsai

The broom style works best with deciduous trees that have a lot of fine branching. The trunk is straight and upright, but it does not extend to the tree's top; it branches out in all directions at about 1/3 of the tree's height. During the winter, the branches and leaves create a ball-shaped crown, which is also a spectacular sight.

Formal upright Bonsai style



Fig 2. Formal upright Bonsai style

The formal upright style of Bonsai is quite popular. This design is common in nature, especially when the tree is exposed to a lot of light and isn't competing with other trees. The tapering of the upright-growing trunk must be readily seen for this style. As a result, the trunk must be thicker at the bottom and thinned out as it grows taller. Branching should begin at around 1/4

of the entire length of the trunk. A single branch should create the tree's summit; the trunk should not span the entire height of the tree.

Informal upright Bonsai style



Fig 3. Informal upright Bonsai style

The trunk grows vertically in the shape of a 'S,' with branching occurring at every turn. The trunk must taper, with the base thicker than the top.

Slanting Bonsai style



Fig 4. Slanting Bonsai style

The leaning style should develop at roughly a 60-80 degree inclination to the ground. On one side, the roots are highly developed to keep the tree standing. The roots on the side of the tree that is leaning are plainly not as well developed. To generate a sense of visual equilibrium, the initial branch grows in the opposite direction of the tree. The trunk might be slightly curved or fully straight, but the bottom must be thicker than the top.

Cascade Bonsai style



Fig 5. Cascade Bonsai style

Tall pots are used to house Cascade Bonsai. For a brief period of time, the tree should grow erect before bending downward. The tree's crown normally grows above the pot's rim, but the succeeding branches alternate left and right on the S-shaped trunk's outermost curves. In order to maintain the tree's balance, these branchings should grow out horizontally.

Semi cascade Bonsai style



Fig 6. Semi Cascade Bonsai style

Semi-cascade styles, like cascade styles, can be seen in nature on cliffs and along river and lake banks. The trunk grows erect for a short time before bending downwards or sideways. The semi-cascade trunk, unlike the cascade type, will never grow below the pot's bottom. The crown of the plant is normally above the pot's rim, with further branching below the rim.

Windswept Bonsai style



Fig 7. Windswept Bonsai style

The windswept style also highlights trees that have to fight for survival. The branches and trunk all grow to one side, as if the tree has been blown in one direction by the wind. The branches grow out on all sides of the trunk, but eventually, all of them bend to one side.

Forest Bonsai style



Fig 8. Forest Bonsai style

The forest style is similar to the multi-trunk style, but it is made up of multiple trees rather than a single tree with multiple trunks. The most mature trees are placed in the centre of a large, shallow container. A few smaller trees are planted on the sides to contribute to a single crown. Because the forest will appear more realistic and natural if the trees are planted in a staggered pattern rather than in a straight line.

Growing on a rock Bonsai style



Fig 9. Growing on a rock Bonsai style

On rocky terrain, trees are forced to use their roots to hunt for nutrient-rich soil, which is commonly found in cracks and holes. Because the roots are exposed before reaching the earth, they must defend themselves from the sun by growing an unique bark around them. Because the roots of a Bonsai tree grow over a rock into the pot, it's similar to caring for any other form of tree.

Growing in a rock Bonsai style



Fig 10 Growing in a rock Bonsai style

The roots of the tree grow in the cracks and holes of the rock in this style. This means that the roots don't have much room to grow and absorb nutrients. Trees growing on rocks will never appear to be in good health, thus it should be obvious that the tree is fighting for survival. Because there is limited capacity to store water and nutrients, it is critical to fertilise and water frequently. The Bonsai's rock is frequently placed in a shallow pot, which is sometimes filled with water or fine gravel.

Shari Bonsai style



Fig 11. Shari Bonsai style

As a result of harsh weather conditions, some trees develop bald or barkless areas on their trunks over time. The bald part usually begins at the place where the roots emerge from the ground, and grows increasingly thinner as it continues up the trunk. These sections will be bleached by direct sunshine, forming a distinct feature of the tree. The bark is scraped using a sharp knife in Bonsai, and the barkless area is treated with lime sulphur to accelerate the bleaching process.

Technique for Growing Bonsai

Selection of Plant



The hardiness of a plant is the most important aspect in determining its potential as a "Bonsai." It should be able to grow in shallow containers and survive operations such as root and branch pruning as well as rigorous training. Bonsai is ideally suited to plants with seasonal diversity in growth pattern and flowering. Bonsai plants can be grown from seeds, cuttings, layering, or species found in the wild.

A variety of tropical trees can be grown as "Bonsai" plants. Bottlebrush, Bakain, Pine, Saptaparni, and Bamboos are some of the most frequent. Some shrubs and woody climbers can be trained to grow like "Bonsai."

Selection of Pot

The height of the pot should be the same as the width of the trunk above the surface roots (Nebari). The height of oval and rectangular pots is normally 2/3 of the height of the tree. Unless the foliage is especially enormous, round or square pots are 1/3 the height of the tree; if the foliage is unusually large, the pot also becomes broader; this is countered by lowering the height of the pot. The design of the container should correspond to the degree of masculinity or femininity of your tree. The closer you get, the more harmonic your finished Bonsai will be.

When it comes to choosing a glaze for a pot, the most basic rule is that the colour should appear in the tree. The bark, the colour of the leaves, the fruit, and the flowers are all examples of this. As a result, unglazed brown, grey, and earth tones are generally safe bets. They also give the Bonsai tree warmth and stability. However, we can also use opposing hues such as blue or cold green. They give the music a sense of balance and freshness.

Pruning

The purpose of maintenance pruning is to keep a tree's shape and refine it. Trees will focus the majority of their development on the top and outside parts of their stems; it is critical to prune these growth areas on a regular basis to encourage growth closer to the tree's core parts.

Maintenance pruning is necessary to keep a tree's shape. Simply use twig shears or regular cutters to clip branches and shoots that have beyond the appropriate canopy shape.

wiring



Wiring is a crucial technique for training and styling Bonsai plants. You can bend and rearrange the branches of a tree by wrapping wire around the branches. The branches require a few months to settle into their new positions (s). Wiring most tree species is possible at any time of year. Due to the lack of foliage, deciduous trees are significantly easier to wire in late winter. When wiring during the growing season, keep in mind that branches can quickly thicken, resulting in unsightly scars from the wire cutting into the bark.

Fertilizing

Fertilizing Bonsai on a regular basis during the growing season is critical to their survival and success. Trees may normally expand their root systems in search of nutrients, but because Bonsai are restricted to the relatively tiny pots in which they are planted, proper fertiliser is required to replace the soil's nutritional content.

Nitrogen, phosphorus, and potassium are the three basic ingredients in fertilisers (NPK.) Nitrogen promotes leaf and stem growth, as well as growth above ground. Phosphorus is important for root growth as well as fruit and blossom growth. Potassium benefits plant health in general. For different trees and times of the year, growers frequently utilise varied NPK ratios. Experts are increasingly advising that the same NPK ratio be used throughout the Bonsai growth cycle. Fertilizers can also contain micronutrients such as iron, manganese, boron, molybdenum, zinc, and copper, in addition to the three macronutrients (NPK).

Repotting

It's critical to repot, or transplant, your Bonsai on a regular basis to avoid it becoming pot-bound and starved to death. When a tree uses up all of the available nutrients in the soil, its roots develop to fit the shape of the pot. The trees stop growing due to a shortage of room and nutrition, and if nothing is done, they will perish. Repotting or transplanting your Bonsai will replenish the nutrients the tree requires to thrive.