

The Miniature Art of Nature: Bonsai

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ABSTRACT

The Japanese craft of bonsai involves gardening enthusiasts growing complete plants in tiny pots or containers, occasionally in conjunction with different-shaped rocks. This art form is now extensively practiced worldwide. Growing flowers in your garden doesn't provide you the same year-round enjoyment as bonsai. Additionally, bonsai require regular maintenance, including fertilization, watering, pinching, and wire-trimmed branch pruning. Growing bonsai is an unparalleled source of delight, and its ornamental applications in the home and yard make it a beauty art that creates enduring happiness.

Keywords: Bonsai, container, Japanese, Miniature and Plants *etc.*

INTRODUCTION

Bonsai is an art of growing and training of a plant to a miniature form having a natural look of old age. It was originated from china, but it was called as the Japanese art. The aim of bonsai culture is developing a tiny tree that has all the element of large tree growing in a natural setting. The texture of trunk, its look of age, the moss and the under planting in the container all contribute to the illusion of a miniature trees as it is seen in nature. Bonsai is an art of growing dwarf ornamentally shape tree or shrubs in shallow container or tray. It is an art that expresses in miniature form of a nature tree. The word bonsai is comprises of two words, Bon means- Atray or shallow container and Sai means -to grown plants/ tree. Bonsai is Japanese term.

The word bonsai is a combination of two Japanese words 'Bon' meaning shallow pan and 'Sai' means plant, which can be translated as "tray planting". It is a technique in which plant is grown in shallow



Figure 1. Bonsai



containers or pot and the growth is dwarfed but the plant is not starved. The great Japanese expert on Bonsai, Kyozo Morata, is on record to have said “Like a pet animal, its need water, sunshine and nourishment.”

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Principles of Bonsai

To produce realistic elusions of a mature tree, look for plants with the following characteristic:

- short internodes are distance between leaves.
- small leaf and needles
- Attractive bark and root.
- Branching characteristics for good wing farm.

Factor affecting Bonsai

- Containers /pots (cemented, plastic and wood)
- Selection of suitable plant species
- Adequate sunshine
- Suitable growing media
- Careful trimming, training, pruning, wiring and reporting.
- Proper growth of root and trunk.

Criteria for selection plants

- Plant with small flower and fruit must be selected
- Plant bearing flower on leaf less branches.
- Plant characters and its climatic requirements.
- Plants grown rapidly with good health.
- Ability of plant growing artificial condition other than its natural ones.

Classification of Bonsai

Bonsai are classified according to their sizes. The size relates to the height of the main trunk from base of the trunk to the top of the plant. There is four types of groups are very popular in traditional classification

of bonsai. Japanese classified the bonsai according to height and weight of the tree in its container and they named bonsai as ‘one handed’, ‘two handed’, ‘four handed’ and so on, based on the number of people required to carry the bonsai pots.

1. Miniature bonsai (Mame bonsai)

Miniature bonsai maintains a height of 5-20cm. These types of bonsai are difficult develop and get attractive effect.

2. Small size bonsai

This group of bonsai can be maintained a height of 20-30cm. In this group ‘one handed ‘and ‘two handed bonsai’ are included.

3. Medium size bonsai

The size limit of this group is 30-60cm. Medium size group is very popular in market because these types of bonsai can be easily developed and maintain within this size limit. Two handed and “four handed” bonsai comes in this group.

4. Large bonsai

Large bonsai are prepared up to 60-100cm of height. Four and ‘six handed’ bonsai come in this group.

Style of Bonsai

1. Formal upright style or Chokkan: It is one of the most natural styles where single specimen is grown with a straight and upright stem.

Suitable Plants: *Pine, Juniper, Maple*, and other conifers are ideal.



2. Informal upright style or moyogi: This style is very popular among the bonsai artists. In this style plants grow upward but irregular in movement.

Suitable Plants: *Callistemon lanciolatus, Casuarina equisetifolia and junipers species etc.*





3. Slanting trunk Style or shakkan: In this style the main stem trained slant either in left or right of the root base to receive sunlight. Arrangement of branches should be carefully. Suitable Plants: *Callistemon lanciolatus*, *Ficus deltoidea*, *Cinnamomum comphora* and *Punica granatum* etc.

4. Semi cascade style or han kengai: In this style the plant trained horizontally and branches are arranged on the top side of the trunk in informal way. Ideal plants for this style are- *Juniperus horizontalis*, *Bougainvillea*, *Portulacaria afra*, etc.



5. Cascade style or Kengai: This style is also very popular among the bonsai lovers. In this style the trunk grows straight up to 60- 120cm height and then cascading downwards. Regular training and pruning give attractive look. Suitable plants: *Juniper species* and *Virginia crippler*.

Figure 6. Cascade style or Kengai

6. Exposed root style: In this style, the bonsai grows on the container keeping some parts of the roots exposed and looks like extension of the trunk.



Figure 7. Exposed root style

7. Multiple trunks style or Kabudachi: The multiple trunks style produces two or more trunks from the same tree base. Informally grown plants give very attractive effect. e.g., *Callistemon lanceolatus*, *gardenia jasminoides* and *Punica granatum* etc.



Figure 8. Multiple trunks style or Kabudachi

8. Clinging to rock style or ishisuki: This style of bonsai gives the feeling of age and tenacity. A single tree is usually used. The roots are trained to cling and grow round a stone in away similar to that often found on a wind, rocky mountain side. The stone itself may be set in a plan of water which adds considerably to the picture.



Figure 9. Clinging to rock style or ishisuki

9. Broom style or hokidachi: Plants both shrubs and trees having almost vertical from almost ground level and with little trunk, e.g *Malpighia coccigera* and *Thuja orientalis*.

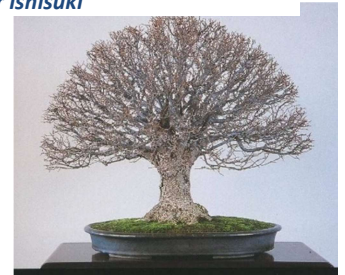


Figure10. Broom style or hokidachi

10. Windswept style or fukinagashi: The trunk right from base is slanted on one side right or left keeping apex straight branches are trained to grow almost horizontally or slanted side of plant, e.g., *Junipers*, *Casuarina equisetifolia*, etc.



Figure11. Windswept style or fukinagashi



Figure 12. Raft Style of Bonsai or Ikadabuki

11. Raft Style of Bonsai or Ikadabuki: This is the most popular form in which one plant looks like multiple plants in a row. E.g. *Ficus spp.*, *Diospyros peregrina*.

Suitable plant for Bonsai:

1. *Ficus benjamina*
2. *Ficus Carmona microphylla*
3. *Ficus nerifolia*
4. *Ficus retusa*
5. *Ficus virens*
6. *Ficus pelkan*
7. *Ficus parasitica*
8. *Ficus krishna*
9. *Ficus elastica*
10. *Ficus trangularis variegated*
11. *Ficus mysorensis*
12. *Ficus nooda Variegated*
13. *Ficus tomentosa*
14. *Ficus saliscifolia*
15. *Ficus jaquinifolia*
16. *Ficus long Island*
17. *Ficus marginata*
18. *Ficus lipstick*



19. Bougainvillea
20. Bottle Brush - Red / White / Lavender
21. Black Olive
22. Brazilian Raintree
23. Cashew
24. Casuarinas
25. Chinese Banyan
26. Chinese Mini Orange
27. Duranta Gold
28. Duranta Variegated
29. Golden Cypress
30. *Hamelia patens*
31. *Hibiscus rosea sinensis*
32. Inga Dulse Variegated
33. Jackaranda
34. Jasmine Kamini
35. *Juniper chinensis*
36. Karonda
37. Lavender Brown
38. Lavender Green
39. Badam
40. Mango
41. *Murraya exotica*
42. *Murraya paniculata*
43. Neem
44. Pine
45. Pomegranate Mini
46. Powder Puff - White / Pink / Red (Calliandra)
47. Poinsettia Mini
48. Kumquat

49. Sapota
50. Schefflera Variegated
51. Silver Oak
52. Surinam Cherry
53. Tamarind
54. Wood apple
55. West Indian Cherry
56. *Wrightia religiosa*

Containers for Bonsai

- They should be usually shallow with 5 to 7.5 cm deep (except for cascade type of Bonsai for which deep pots can be used).
- Round, Hexagonal or square shaped containers with 25 to 30 cm diameters are preferred.
- Containers with specific colours like Mosaic, sky blue, terra cotta, grey or jungle green are well suited for bonsai culture.



Figure 13. Containers for Bonsai

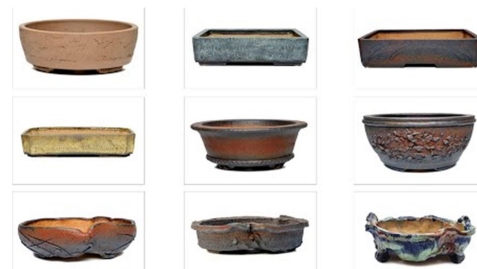


Figure 14. Latest design Containers for Bonsai

Potting and Repotting

For making bonsai the plant material may be seedling cutting, layering or grafting. Seedling should be first planted in small pot with



the increase in age and size. This planting may be at 20-30 cm prior to their transfer to the ornamental bonsai pot. Pots have green, blue or white colour fit well for deciduous species. In bonsai repotting actually the being of presenting the plant in its perfect style. It consists of removal of plant either from ordinary pot or from bonsai pot and replacing it to either first time in bonsai pot or in same ornamental bonsai pot. The best season for repotting is earlier spring or monsoon. Evergreen plants require repotting after 3-5 year.

Bonsai styling

Bonsai styling and training includes the wide range of techniques to make the normal plants aesthetically dwarf.

Bonsai styling through pruning: Pruning includes trimming of a tree, shrub, or bush by cutting away dead or overgrown branches or stems, especially to encourage growth.



Figure 16. Bonsai styling through pruning

Bonsai styling through wiring: To train and style the bonsai plants wiring is a crucial technique. To give desirable shape and style the artist twists the wire around the limbs of bonsai.

Wiring used for training the branches and the trunk of bonsai to a desired shape and bending in any direction. Two types of wire are used –copper and aluminium. The wire thickness varies as per thickness of branches or trunk desire to be given shape. While wiring branches keep wire at 45 angles to branch for best result, wire should be removed after few months when it starts titrating into bark of plant.



Figure 17. Bonsai styling through wiring

Maintenance and Care of Bonsai

Bonsai care and management requires techniques and tools that are specialized to support the growth and



long-term maintenance of trees in small containers. Through bonsai trees are more delicate, compared to the average indoor plant, a few basic rules should enable anyone to take care of its tree properly. Most importantly are soil mixture, watering and fertilization, etc. Soil is important to supply your trees with nutrient, but it also needs to drain properly, provide enough aeration and retain water. Balanced soil mixture is most important for bonsai plant.

The soil mixture is prepared with 3 part of loam soil, 3 part of cow dung manure, 3 parts of leaf mould and 2 parts of brick pieces or sand. The most important part of taking care of your bonsai trees is watering. How often a tree needs to be watered depends on several factors (like species of tree, size of tree, size of pot, time of year, soil mixture and climate), indicating that it is impossible to say how often you should water bonsai. However, understanding a few basic guidelines will help you to observe when a tree needs to be watered. Fertilizing regularly during the growth season is crucial for your bonsai to survive. Normal trees are able to extend their root system looking for nutrients. However, bonsai are planted in rather small pots and need to be fertilized in order to replenish the soil's nutritional content.

Defoliation is done where all the leaves are removed from tree to force new flush. The best time to practice defoliation is July to august or February to march, but it largely depends on plant species. Similarly leaf pinching and shoot tip pinching is generally done in plants which are grown for flowering beauty. Therefore, the application of insecticides and pesticides at regular intervals must be done to keep off pests and disease.

CONCLUSION

Since its globalization, bonsai has evolved from a relatively confined subject to an intriguing and soothing pastime that appeals to all ages. Although growing bonsai might be challenging for beginners, it is possible with minimal maintenance. A bonsai tree's beauty and tranquillity may be preserved with the right maintenance. Furthermore, bonsai are available in a wide variety of forms and designs. However, you may mold the plants into whatever shape you choose with your imagination, ingenuity, and ideas.



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