**Basic Bonsai Care**

**Inland Empire Bonsai Society**

[**http://www.inlandbonsai.com/**](http://www.inlandbonsai.com/)

**General Care and Maintenance of Bonsai**

A well cared for bonsai can become a very rare and valuable friend. Some become, like fine works of art, priceless commodities. In recent times some of the older Japanese bonsai have sold for over one million dollars. Of course, these trees must be properly cared for. Such care includes the correct soil mixture, watering, fertilization, and repotting when needed.

**Where to Keep Bonsai**

It must be remembered that, unless you are keeping tropical trees, bonsai are outdoor plants. Bonsai should be kept in a well-lighted place, sheltered from the hot direct rays of the summer sun most of the time. Such diverse locations as a garden, an open balcony, a patio, by a pool, or in a roof garden will allow your tree to be exposed to the atmospheric conditions - sun, wind, and rain - that it needs to thrive. Bonsai may be brought inside the house as a decoration for a few days at a time.

In our area, during the hottest part of the summer it is important that your bonsai be placed where it does not receive a lot of direct afternoon sun. Some of the pines and other high-altitude trees are an exception. The best type of shelter from the summer sun is a screened patio, lathe house, or some other shaded location that can filter the sun's rays.

During the winter bonsai, with the exception of tropical and subtropical species, must be kept outdoors. It is advisable to give them some shelter from temperature extremes and harsh drying winds. A cold frame is desirable, or your bonsai may be set on the ground in a sheltered location. In the latter case some form of mulch, such as pine needles or ground bark, should be placed around the pot up to the base of the trunk to help insulate the root system from temperature extremes.

**Watering Bonsai**

More trees probably die due to improper watering than any other single cause. Not only will the lack of water and higher temperatures cause the roots to wither and die, but air penetrating the dry soil will also make it virtually impossible for later watering to be effective. Therefore, it is imperative that your bonsai receive proper watering in a timely fashion. This may mean watering once or twice a day during the hottest part of the summer. A good rule-of-thumb is to remember that bonsai should be watered before the surface soil becomes totally dry. The color of the soil surface becoming lighter is a good visual indication that watering is needed.

Your bonsai should be watered until water runs out of the drainage holes in the bottom of the pot. This may mean watering in two or three stages, giving the water time to soak into the soil between sprinklings. In Japan it is said that one should water a bonsai three times, once for the top, once for the middle, and once for the bottom. A garden hose with a fine sprayer attachment or a watering can with a fine rose are the most effective and safe methods for watering bonsai. The spray should be fine, so the water does not erode the soil, and has time to soak in.

As mentioned above, in the summer your bonsai may need watering once or twice a day. In cooler seasons one may only need to water every other day, or every third day. In the winter your trees still need to be watered, but maybe only once every two or three weeks, or even once a month, depending on weather conditions and on your method of winter protection. Remember these are only guidelines, many variables will control how often your bonsai need to be watered. Temperature and other weather conditions, type of tree, depth of pot, and location of your tree all will affect how often you must water.

**Pruning and Trimming Bonsai**

One of the most important things we do to our bonsai is the periodic pruning and trimming sessions. It is through pruning and trimming that we attain the basic shape of our trees. When styling a tree, we prune unnecessary branches and twigs. Proper pruning and pinching techniques are the subject of many books and magazine articles; one should learn as much as possible about the subject. It should be noted that the best practices for trimming bonsai have evolved significantly in the past decade in particular, junipers should not be pinched.

**Wiring Techniques and Other Training Methods**

Wiring of bonsai to attain desired shaping is often used in place of, or in association with, long-term pruning. The use of good wiring techniques permits us to train trees to nearly any shape. For example, wiring is used to make a bonsai look older by means of low-hanging branches, to create a bend in the trunk, and/or to eliminate one. The best material to use is either malleable annealed copper or anodized aluminum wire, which can be purchased at most bonsai shops.

The wire must be thick enough to easily hold the branch in place, but not so thick that it is visually distracting. Beginners often use wire that is too thin and therefore bend the branch multiple times trying to get it in the proper location. Wind the wire around the branch at about a 55-degree angle, just tight enough to hold the branch, but not so tight that the wire digs into the bark. The wire should be left until the wire just starts to bite in since that allows enough growth for the branch to stay in place. This can be as short as four to six weeks for rapidly growing deciduous trees and as long as two years for older pines and junipers. Wiring scars take a very long time to heal and can seriously mar the appearance of your bonsai.

There are other techniques that may be used to shape branches. Guy wires can be attached to another branch or to the trunk. Thin guy wires to bend small branches can be attached to the pot, but not larger ones since the force of a large guy wire can stress the roots. One can even tie weights to the branched to bring them down to the desired angle.

**Repotting Bonsai**

Bonsai must be repotted when the roots in the container have grown so much that the water no longer penetrates the entire root ball. Bonsai generally need repotting every one to six years with every two to three years being most common. However, the repotting frequency will depend on the type of tree, its age, the size of container, and the state of training it is in.

Repotting bonsai and trimming the roots is not a hazardous operation if it is done at the right time of the year and if one is careful not to take away too much soil from the root ball. One can safely remove one third of the total volume of soil and roots from the root ball providing it is done just as the new growth starts in the spring.

Every bonsai artist has his or her favorite soil mix. However, most will agree that it should provide for good air and water movement since bonsai are generally potted in shallow containers. As a result, most garden and potting soil is too fine. Particles smaller than 1/16 inch and those larger than ¼ inch are nearly always discarded. The particle size is generally scaled to the tree and pot so that the smaller pots will retain more water and the larger ones will drain better. A mixture of 1 part akadama, 1 part lava, and 1 part pumice is fairly common for conifers. The fraction of akadama is increased for broad leafed trees – sometimes to 100% akadama.

**Procedure for Repotting Bonsai**

1. The soil should be moderately dry. Carefully take the tree out of the container.
2. Untangle the roots from the root ball mass.
3. Using a pointed stick, like a chopstick, pick away the soil from the sides and bottom to the root ball. Remove approximately one third of the root ball mass, being careful not to disrupt the soil from around the trunk of the tree.
4. Carefully trim off the roots that have now been exposed with a sharp pair of scissors.
5. Prepare the container, covering the drainage holes with a screen and putting wires in place to secure the tree to the pot.
6. Place a thin (one particle thick) layer of the soil mix that is one size larger than the bulk of the soil in the bottom of the pot.
7. Using the proper soil mixture for the tree, place a mound of soil in the pot so that when the tree is pressed gently rotated in the container the top surface of the soil will be slightly below the edge of the pot.
8. Place the tree into the container and locate it in the proper position. Use the previously placed wires to tie it in place. It is critical to tie the tree into the pot so that it does not move since trees that move in the pot will break the fine roots that are necessary for good health.
9. Add an excess of soil to the pot and use your chopstick to work the soil in around the root ball to ensure there are no air pockets. Do not pack the soil down.
10. After the soil has been worked in and smoothed off, the soil must be watered until water runs out of the drainage holes.

After repotting the bonsai should be placed in a sheltered location and protected from direct sun and strong breezes for two to three weeks. Make sure the soil does not dry out during this period, but do not keep it wet since the roots will not be taking up much water. It can be useful to mist the foliage, particularly if it is hot and/or windy since the roots may not be able to supply adequate water. After the recovery period your tree may be placed in its normal location.

**Tools**

Although many bonsai artists have an impressive collection of tools, only a few beyond your mind, eye, and hands are necessary. Only one of the tools listed below is a specialized tool for bonsai – the others are often used for other purposes around the home and garden.

1. A good pair of bypass cutters will work for most branch pruning. Smaller ones are best for most bonsai, but just as in gardening matching the cutter to the branch to be cut is good practice.
2. Concave cutters are a specialized tool used in bonsai to cut branches very close to the trunk or larger branch. They leave a slightly concave cut that will heal with little or no swelling. The 8” (200 mm) size is good for most trees.
3. A sharp pair of narrow scissors is used to trim small twigs and branches as well as cut off individual leaves.
4. Chop sticks are great for untangling roots, settling soil during repotting, and any other chore where your fingers are too big.
5. Wire cutters are used to cut wire. Standard diagonal cutters will work, but the ones designed for bonsai provide more leverage when cutting wire off a branch. Small bolt cutters (Knipex makes a very good one) are good for cutting heavier wire, particularly copper wire.
6. Sieves are used to prepare soil for repotting. They can be made from window screen and hardware cloth. Window screen is typically about 1/20th of an inch.

**Sources for Plants to create bonsai**

1. Local nurseries and garden centers. These are good sources for young inexpensive trees that can be turned into bonsai.
2. Unwanted trees and shrubs can be collected from your own, or a friend's yard. One can sometimes find an old and gnarled small tree or shrub that would make an excellent bonsai.
3. Trees collected from the wild (with the landowner's permission of course).
4. Cuttings taken from mature trees or from your own bonsai in training can be a good way to start new plants from one with desirable characteristics.
5. Air layers taken from a large or mature tree. This method can produce a very nice bonsai in a relatively short time.
6. Trees started from seed. This takes many years to produce a tree of any appreciable size, but one has total control of the training process right from the start.

Collected trees from both the landscape and wild rarely have enough roots to support the strong growth necessary for bonsai training. They are normally potted in nearly pure pumice for one to three years before any training is done to develop a strong root system.

**Recommended Resources**

**Organizations/Websites**

* The American Bonsai Society (Includes subscription to ***Journal of The American Bonsai Society***) [American Bonsai Society (absbonsai.org)](https://www.absbonsai.org/)
* Bonsai Clubs International, (Includes subscription to ***Bonsai Magazine***) [Bonsai BCI - Bonsai BCI (bonsai-bci.com)](https://www.bonsai-bci.com/)
* Bonsai Mirai, [Mirai: Learn Bonsai, Tools, Trees (bonsaimirai.com)](https://bonsaimirai.com/) – educational videos by subscription (some are available on YouTube for free) and store
* Bonsai Tonight, [Bonsai Tonight](https://bonsaitonight.com/) – blog, podcast, and store
* Crataegus Bonsai, [Michael Hagedorn | New Post on Crataegus Bonsai](https://crataegus.com/) - blog

**Magazines**:

* ***Bonsai Focus*** [Bonsai BCI - Bonsai BCI (bonsai-bci.com)](https://www.bonsai-bci.com/)
* ***International Bonsai*** [Everything bonsai, trees, supplies, care, instruction, pictures, events, magazine & free information (internationalbonsai.com)](http://www.internationalbonsai.com/) – now web only

**Books**:

* ***The Little Book of Bonsai*** by Jonas Dupuich
* ***Bonsai Heresy*** by Michael Hagedorn
* ***Principles of Bonsai Design, 2nd edition*** by David De Groot
* ***Bonsai Techniques I*** and ***Bonsai Techniques II*** by John Yoshio Naka, out of print

**Materials**

* Local nurseries – trees and shrubs for raw material
* Northwest Seed and Pet, [Home - Northwest Seed & Pet (nwseed.com)](https://nwseed.com/) – plants including small stock and some pots, tools, and wire – IEBS members get a 15% discount with membership card
* Marle’ Worm Growers, [Marlé Worm Growers (marlewormgrowers.com)](https://marlewormgrowers.com/) – pumice for soil mixes

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Latest revision by Marty Weiser Nov 2022