

The Ancient Art of Bonsai

by Elizabeth Chute



"You ask me why I dwell in the green
mountain;
I smile and make no reply for my heart is free
of care.
As the peach blossom which flows
downstream and is gone into the unknown,
I have a world apart that is not among men."

-- Li Po

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The History of Bonsai

Gazing upon the stark beauty of a bonsai, images of isolated monasteries on a steep mountainside often come to mind. While no one can say with certainty, it is quite likely that the gentle Chinese monks first began transplanting naturally dwarfed trees into ornamental containers, and that it was they who first began to appreciate the windswept beauty of these trees in their homes and gardens. The Japanese, however, have since been responsible for refining the art of cultivating bonsai trees to its present standards.

The word ***bonsai*** simply means "a plant in a tray". Authentic records of bonsai trees date back to the early 14th century. It is quite possible, however, that the practice of bonsai culture originated over 1,000 years ago in China on a very basic scale known as pun-sai, where only a single specimen is grown in a pot. These early specimens displayed sparse foliage and rugged, gnarled trunks which often looked like animals, dragons and birds. There are a great number of myths and legends surrounding Chinese bonsai, and the grotesque or animal-like trunks and root formations are still highly prized today.



Chinese bonsai come from the landscape of the imagination and images of fiery dragons and coiled serpents take far greater precedence over the natural beauty of the trees, which is preferred by Japanese bonsai artists - so the two forms of this art are quite far apart.

The Japanese tend to focus on using native species for their bonsai - namely pines, azaleas and maples (regarded as the traditional bonsai plants). In other countries however, people are more open to opinion, and even perennial herbs and common weeds are may be grown as summer bonsai. It is generally accepted, however, that most bonsai are trees or shrubs.

With Japan's adoption of many cultural trademarks of China - bonsai was also taken up, introduced to Japan during the Kamakura period (1185 - 1333) by means of Zen Buddhism - which at this time was rapidly spreading around Asia. The exact time is debatable, although it is possible that it had arrived in AD 1195 as there appears to be a reference to it in a Japanese scroll attributed to that period. Once bonsai was introduced into Japan, the art was refined to an extent not yet approached in China. Over time, the simple trees were not just confined to the Buddhist monks and their monasteries, but also later were introduced to be representative of the aristocracy - a symbol of prestige and honour. The ideals and philosophy of bonsai were greatly changed over the years. For the Japanese, bonsai represents a fusion of strong ancient beliefs with the Eastern philosophies of the harmony between man, the soul and nature.

In an ancient Japanese scroll written in Japan around the Kamakura period, it is translated to say : "To appreciate and find pleasure in curiously curved potted trees is to love deformity". Whether this was intended as a positive or negative statement, it leaves us to believe that growing dwarfed and twisted trees in containers was an accepted practice among the upper class of Japan by the Kamakura period. By the fourteenth century bonsai was indeed viewed as a highly refined art form, meaning that it must have been an established practice many years before that time.

Bonsai were brought indoors for display at special times by the 'Japanese elite' and became an important part of Japanese life by being displayed on specially designed shelves. These complex plants were no longer permanently reserved for outdoor display, although the practices of training and pruning did not develop until later - the small trees at this time still being taken from the wild. In the 17th and 18th century, the Japanese arts reached their peak and were regarded very highly. Bonsai again evolved to a much higher understanding and refinement of nature - although the containers used seemed to be slightly deeper than those used today. The main factor in maintaining bonsai was now the removal of all but the most important parts of the plant. The reduction of everything just to the essential elements and ultimate refinement was very symbolic of the Japanese philosophy of this time - shown by the very simple Japanese gardens such as those in the famous temple - Roan-ji.

At around this time, bonsai also became commonplace to the general Japanese public - which greatly increased demand for the small trees collected from the wild and firmly established the artform within the culture and traditions of the country.

Over time, bonsai began to take on different styles, each which varied immensely from one another. Bonsai artists gradually looked into introducing other culturally important elements in their bonsai plantings such as rocks, supplementary and accent plants, and even small buildings and people which itself is known as the art of bon-kei. They also looked at reproducing miniature landscapes in nature - known as sai-kei which further investigated the diverse range of artistic possibilities for bonsai.

Finally, in the mid-19th century, after more than 230 years of global isolation, Japan opened itself up to the rest of the world. Word soon spread from travelers who visited Japan of the miniature trees in ceramic containers which mimicked aged, mature, tall trees in nature. Further exhibitions in London, Vienna and Paris in the latter part of the century - especially the Paris World Exhibition in 1900 opened the world's eyes up to bonsai.

Due to this phenomenal upsurge in the demand for bonsai, the now widely expanding industry and lack of naturally-forming, stunted plants led to the commercial production of bonsai by artists through training young plants to grow to look like bonsai. Several basic styles were adopted, and artists made use of wire, bamboo skewers and growing techniques to do this - allowing the art to evolve even further. The Japanese learned to capitalize on the interest in this art form very quickly - opening up nurseries dedicated solely to grow, train and then export bonsai trees.



Different plants were now being used to cater for worldwide climates and to produce neater foliage and more suitable growth habits. Bonsai techniques such as raising trees from seed or cuttings and the styling and grafting of unusual, different or tender material onto hardy root stock were further developed.

Bonsai has now evolved to reflect changing tastes and times - with a great variety of countries, cultures and conditions in which it is now practiced. In Japan today, bonsai are highly regarded as a symbol of their culture and ideals. The New Year is not complete unless the tokonoma - the special niche in every Japanese home used for the display of ornaments and prized possessions - is filled with a blossoming apricot or plum tree. Bonsai is no longer reserved for the upper-class, but is a joy shared by executive and factory worker alike.

Information from ["The History of Bonsai" by Dan Hubik.](#)

Acquiring & Caring For Bonsai

Most bonsai trees sold at garden centers and nurseries are of excellent quality, but there are a few points to bear in mind when buying a new plant.

- Age and shape of the tree
- General health
- Soil should be damp but not soggy, unless it has just been watered
- Leaves should look bright and healthy, not burnt around the edges or spotty
- If buying a deciduous tree in winter, last year's growth should be smooth and plump, with no sign of bark wrinkling
- The tree should be steady in its container, which should have at least one drainage hole
- A white fungus in and around the drainage hole is natural and harmless



General Care

Purchasing A Tree

When buying a tree from a store during the summer, be sure to give it at least 2 weeks outside, avoiding heavy rain and high winds before displaying it indoors. If purchasing in winter, however, do not allow it to be exposed to frost for the rest of the season, as it will probably have begun to shoot. This is most important with deciduous trees, and while varieties of junipers are very hardy it is as well not to take any chances.

Most bonsai are hardy trees and shrubs whose natural habitat is out in the open. They are **not** permanent houseplants; and even semi-tropical trees should be placed outside when weather permits. During the summer the plant must be able to carry out the process of photosynthesis, and during winter it is resting and building up its strength for the coming spring. Too long in a warm room will persuade it that spring has arrived early and it will start budding. If this happens more than once, the tree will simply die of exhaustion.

Sunlight

Sunlight, especially the ultra-violet ray, affects the growth of trees. Therefore, except in special cases such as immediately after repotting, extensive trimming, etc, bonsai should be placed in a sunny location. Bright light will also work well but the tree should not be placed more than 12" away from the direct light source. An east, west or southern exposure works best. A northern exposure will require the use of "grow lights" which should remain on up to

16 hours each day and the lamp should not be more than 2 inches from the top of the tree. Incandescent light is too hot and will not provide the various spectrum of light that is required to maintain your bonsai tree. If you do not have a window or light source that provides an east, west or southern exposure, be sure to select a bonsai tree that does well in lower lighting conditions.

Watering

Unlike a houseplant, bonsai trees use a "free draining" type of soil because their roots cannot tolerate "wet feet". In addition, they are grown in significantly less soil and, therefore require more watering. Factors such as tree location, temperature, lighting conditions, quantity of soil used, and the changing seasons will determine the frequency of watering. You can get to know when your tree needs to be watered by observing the foliage, testing the soil with your index finger just below the surface, or just by the weight of the pot. (The drier the tree, the lighter it will feel.) To take the guesswork out of watering, an inexpensive moisture meter which works very much like a thermometer comes in handy. Insert it into the soil and the movement of the needle will tell you if it is time to water.

Rainwater is best for watering plants, but tap water that has stood for a few hours is adequate. In summer, trees should be watered in the early morning or late afternoon to avoid the midday heat. This will prevent the leaves of the finer bonsai from burning. In winter, water early to permit any excess to drain before the night frost. Plunging the pot into a bowl to soak is ideal for recently potted trees, small collections and for trees that have dried out. Be sure to drain properly, however!

Misting

All trees grow in more humid conditions than our homes, offices and dormitories. So what can we do to provide this essential humidity? Misting the tree is only beneficial for a short time, so what we recommend is to place the tree on a humidity tray and add water to the tray. As the water in the tray evaporates it creates a humid environment around the tree 24 hours a day. When the water in the tray is gone, add more water. It's a good idea to separate the pot from the water in the tray by adding some pebbles to the bottom of the tray. This will prevent any roots from sitting in the water.



Fertilizing

Because bonsai trees are cultivated in limited amounts of soil, adequate feed is very important. As a general rule, a small amount of feed is given in the spring and a larger amount in the fall. Feed for bonsai should contain three principle ingredients; nitrogen, phosphoric acid, and potash. It is also a good idea to use a fertilizer containing "chelated" iron. Water before fertilizing your tree and then apply at half the strength recommended by the brand's manufacturer. Rotate the use of brands since different manufacturers add different amounts of trace elements and minerals. You could also add Superthrive, which is a vitamin supplement to the fertilizer mix. You may find it simpler and easier to use slow release fertilizer granules (placed over the soil) whose nutrients are released with each watering.

Repotting

All potted plants will eventually outgrow their containers. While houseplants need to be "potted-up", that is, placed in larger and larger containers, the miniaturization of a bonsai trees is maintained by keeping the roots confined to the small container. On average, repotting will be necessary every 3-5 years, but the tree should be removed from its container and its root system inspected once a year. If the roots form a circular ball around the perimeter of the pot, it is time to trim the roots and repot.

When repotting remember to:

- Use only bonsai soil
- Remove air pockets by working the soil down through the roots
- Do not remove more than 20% of the root system
- Repot during the appropriate repotting season
- Water well and keep out of the sun for a week or two

Trimming & Pruning

The main objective of trimming and pruning is to shape the bonsai into the desired form and to reduce growth above ground in order to maintain a balance with root growth.

The process of shaping begins when the tree is very young and is on-going as it continues its growth. Trimming is accomplished by using a sharp scissors or shears. This traditional tool is called butterfly shears or bonsai shears and is used for removing foliage and light branches. When heavier branches are removed, we call it pruning and the tool to use is the concave cutter, for which there is no substitute. The concave cutter allows you to remove small, medium and even large branches without leaving any visible scars. Some trees such as the Juniper should be trimmed by using the thumb and index finger to remove new growth and to prevent browning and a "sheared" appearance.

Pests & Diseases

As living trees, bonsai are susceptible to insect attacks and disease. Preventive and corrective measures include:

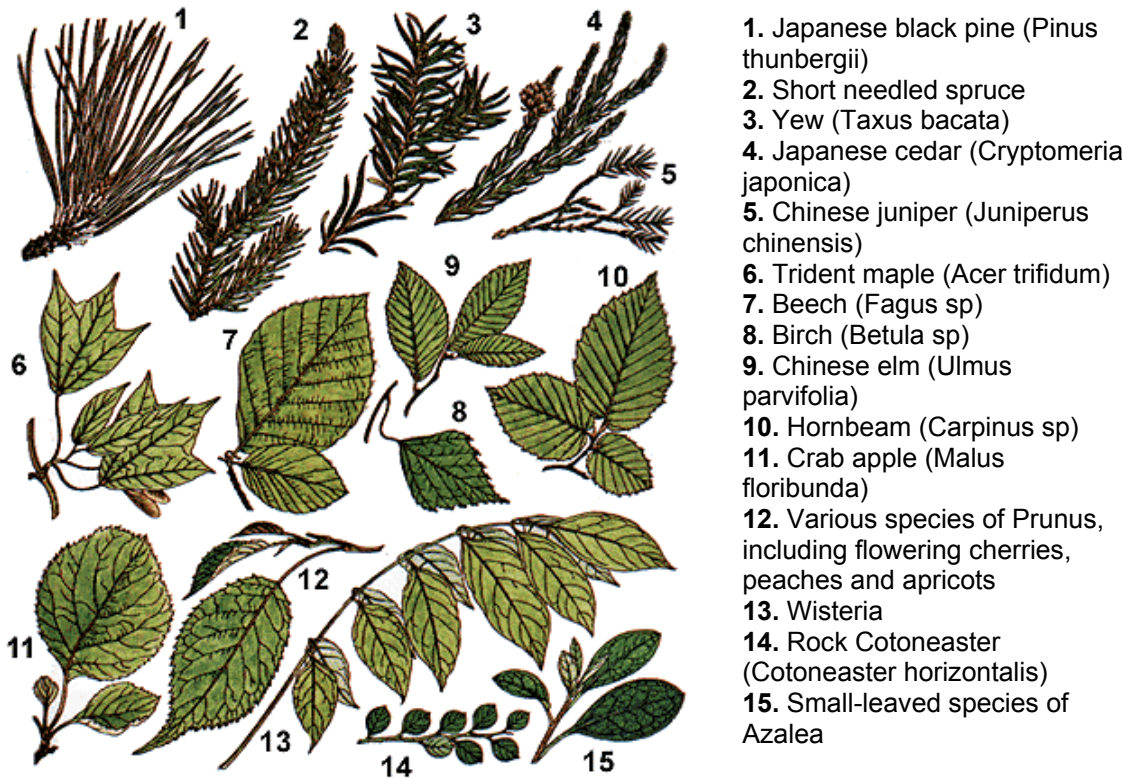
- Keeping your bonsai in good health, since insects and bacteria tend to attack weak trees
- Giving your tree ample light, fresh air and ventilation
- Keeping the soil free of spent blooms and fallen leaves etc. You may also use an insecticidal soap spray which is not harmful to humans or animals. This soap derivative, however, may require more than one application to control the insect population. It's also a good idea to use this spray weekly to prevent any attacks.

Trees & Leaves Suitable For Bonsai Culture

Since the aim of bonsai is to mirror in miniature the whole form of a mature wild tree, care is needed when choosing varieties for bonsai culture, for the parts of the tree should always remain reasonably in scale.

A Guide To Bonsai Leaves

Here are the leaves of a number of common plants that you may find in a bonsai nursery.



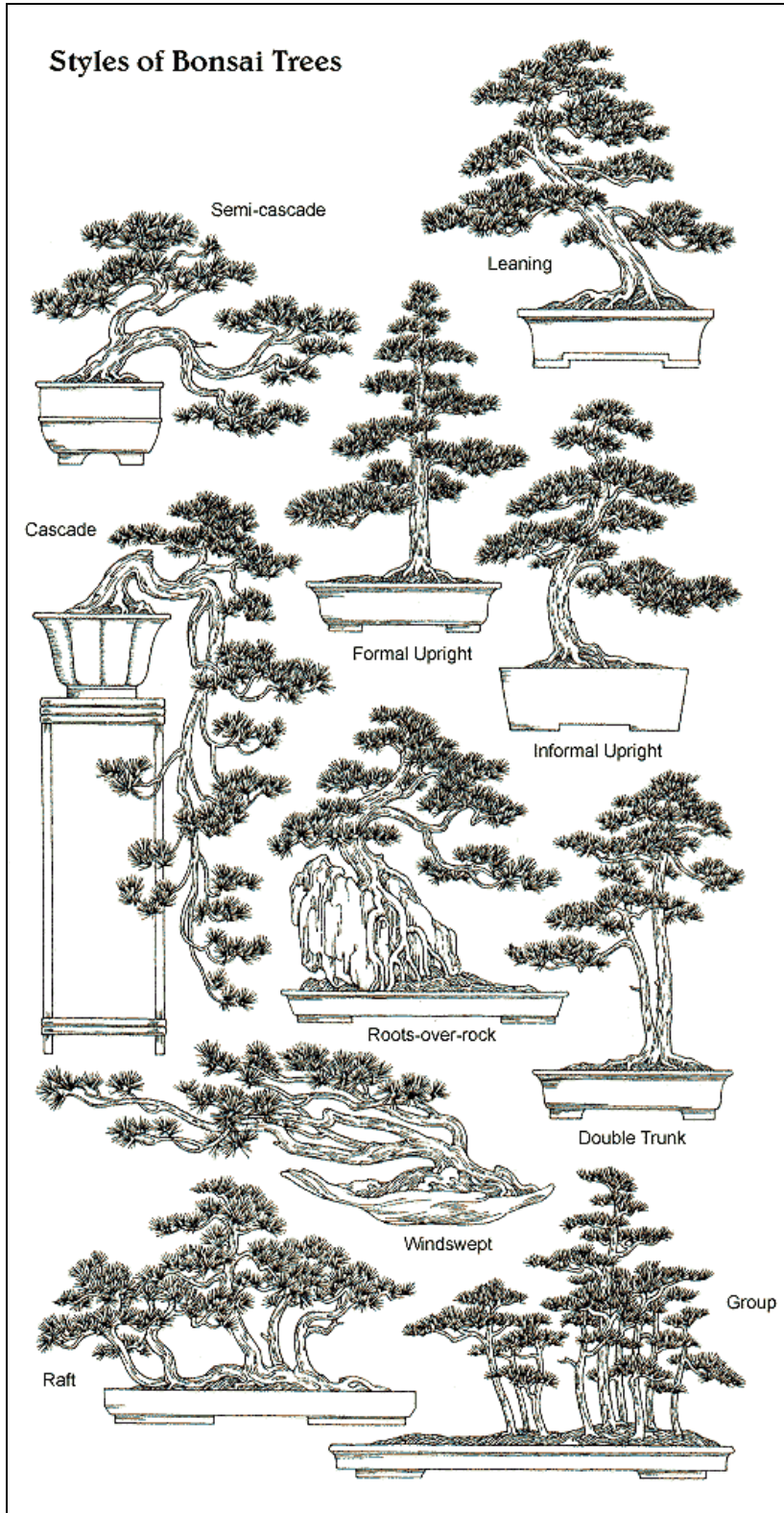
Generally speaking, you should look for trees with small needles or leaves. The most popular evergreen trees for bonsai are pines, junipers and spruces.

Among the pines, short-needles varieties are preferable, although the Japanese black pine (*Pinus thunbergii*) can have its rather long needles reduced in size by removing all new growth every second year. Other popular varieties include Japanese cedar and yew.

Most deciduous trees can have their leaves dramatically reduced in size by not repotting too often and by leaf cutting. Again, varieties with fairly small leaves are generally preferred to begin with, and these include various varieties of maples, elms, hornbeams, beeches, and birches.

When choosing flowering and fruiting trees, bear in mind the size of both the leaves and of flowers and fruits. For instance, and normal apple tree will look very odd when it fruits, but a crabapple will look in scale with its tiny apples about the size of a small cherry. Many shrubs with small flowers and fruits, such as cotoneaster make excellent bonsai.

Styles Of Bonsai Trees



Bonsai trees and plants vary greatly in style and size. Miniature specimens, up to 6 inches tall, are usually naturally dwarf plants trained even smaller. Small bonsai stand up to 12 inches tall, and medium trees from 1 - 2 1/2 feet.

Bonsai do not have to be small however, with some magnificent trees at the Imperial Palace in Tokyo growing more than 6 feet tall. These plants are hundreds of years old!

The most important classification of style refers to the angle at which the trunk stands in the container. These range from the formal upright style, in which the trunk grows straight and vertical, to the full cascade, in which the bonsai tree is trained so that the upper growth sweeps down below the pot.

The most popular bonsai styles today are the simple but relaxed forms such as the informal upright and leaning styles, together with small groups.

How To Prune Bonsai Trees

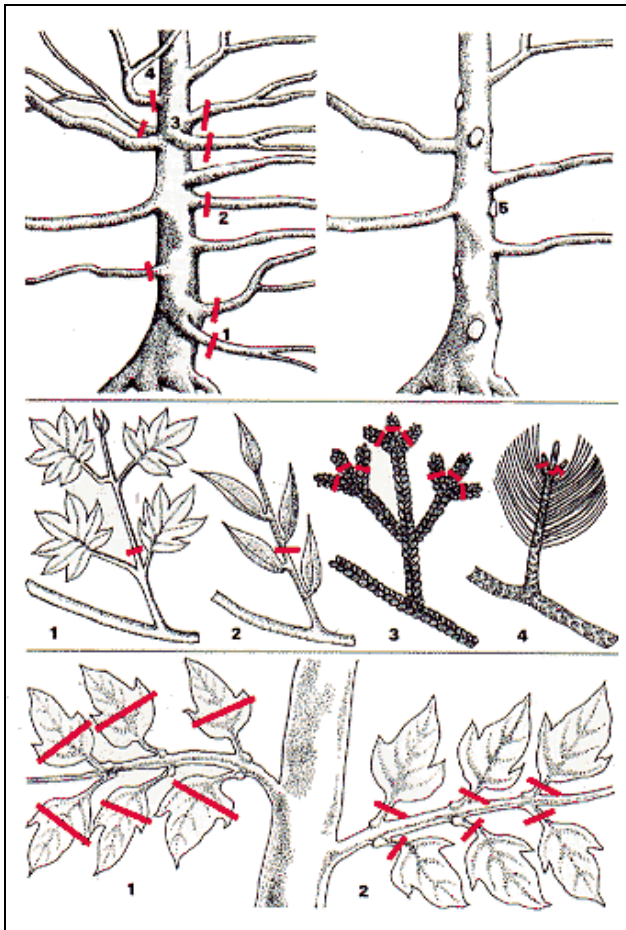
Bonsai trees need training throughout their lives in order to:

1. Maintain the small size of a naturally large tree
2. Give the plant an appearance of age and maturity

Pruning Tools:

Pruning instruments should always be sharp and clean because blunt tools will leave a ragged stump, which could easily become a doorway for disease and pests. Heavy pruning cuts should be whittled down to a slight hollow in the trunk or branch in order to encourage the formation of a callous. Large cuts should be painted with protective paint.

When pruning a branch, try to make the cut just above a bud that is pointing in the direction you want the branch to grow. If the cut slopes downwards, then the water will run off and the chances of rot will be considerably lessened.



Main branch pruning:

Heavy pruning should be carried out in autumn, winter, or early spring, and is the major way of shaping a bonsai tree. The main priorities are to remove any branches that are too low at the front **1** any branch directly opposite another **2** any that creates a so-called cartwheel effect **3** and any that crosses the front or back to the other side of the tree. **4** Hollow out all stumps with a sharp knife **5**.

General Pruning:

Throughout the growing season, cut back shoots of maples **1** zelkovas **2** and other broad-leaves to the first or second pair of leaves. Pinch out the tips of juniper shoots **3**. With pines, **4** remove the center "candles" and pinch back the others.

Leaf Cutting:

Do this in early summer on deciduous trees that don't flower or fruit. Use sharp scissors to remove half of each leaf **1** on weak branches or trees, but all but the stalk **2** on strong wood. In a few weeks the stalk will drop and new small foliage and shoots will grow.

Training Your Bonsai Tree

Often considered the most difficult training technique, wiring is used to bend the trunk and branches of a tree into the shape you would like your bonsai to take. Beginners can learn to judge tension in different sized branches, and the various ways of securing wire, by first practicing on a small branch from an ordinary tree or shrub. **Never rush.** Deciding the shape your tree will take is a lifetime decision, so be sure to examine all angles and possibilities.



Copper wire, though expensive, is most suitable for wiring a bonsai-to-be such as the juniper above, because it remains soft. Galvanized iron or plastic coated wire may be used, but they tend to look rather ugly and detract from your tree. Remember, the larger coniferous trees will be wearing their wires for 12 - 18 months, so please take care in choosing the best "look" for your bonsai.



The same juniper, after wiring.

How To Begin:

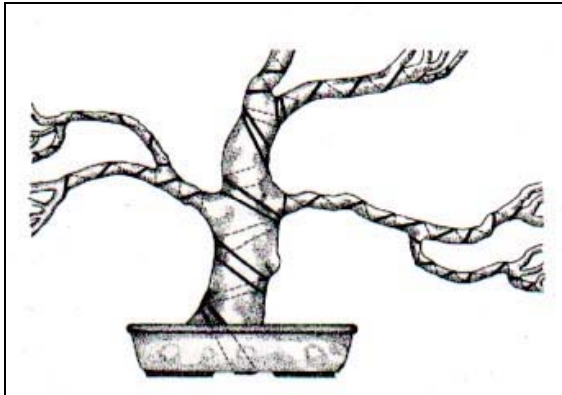
If you study very carefully the way trees grow in nature, it is possible to design a realistic looking bonsai without knowing the names of styles, etc. The most important part is **always remember that you are working with a living plant.** Look carefully at its natural characteristics and you may discern within them a suitable style, or styles.

Once a certain "shape" begins to reveal itself, you will find that **gentle** bending of a branch before wiring will increase its flexibility and give you an idea of the correct strength of wire. What you are looking for is a wire that will give you a tension **slightly more** than the tension of the branch. Tender-barked trees, such as maples, should be trained with paper-wrapped wire to protect the bark.

When To Wire:

Deciduous trees should be wired after their leaves have matured, in early summer, and the wires removed in autumn to avoid wounding the bark.

Coniferous trees should be wired during the winter months, since they take considerably longer to become fixed in position. All trees should be protected from hot sun and heavy rain for a month after wiring.



Wiring A Bonsai Tree:

Begin wiring from the base of the trunk, anchoring the wire in the soil. You may need two wires to hold the trunk in position. After securing the base of the trunk, proceed to the main, and then the smaller branches, ending with the highest twigs. Wires should be wound at about 45 degrees to the line of the branch. Gauge the tension carefully, as tight wiring will cut into the bark, and loose wiring will slip.

Dealing With Breaks

Even if you are very careful, you may bend a branch to its breaking point while wiring. If the break is simply a fracture with the broken part still partially attached, you have a chance of saving the branch. Very gently ease the broken part into place, carefully fitting both ends of the break together. Wrap the break with garden tape or raffia and tie it securely, but not too tightly. Within several months, the fractured branch tissue may knit together.

If the break is complete or the ends fail to unite, you have several choices. You can cut the broken branch back to where side branches grow out from it, or you can cut it back to its point of origin.



Care After Wiring:

To help your bonsai recover from the trauma of wiring, keep it out of direct sunlight for several days. It's also a good idea to keep it sheltered from wind for several weeks. Water the plant routinely, giving the foliage a daily sprinkling.

Removing The Wire

To give wired branches a good chance to grow into their new positions, leave wires in place for a full growing season. Then, in early autumn, remove them to avoid any constriction during the next growth phase. If wires are left in place too long, the bark will show unsightly spiral scars for years. With stiff copper wire, it is best to cut it carefully from branches to avoid inflicting damage by uncoiling. Aluminum wire can be uncoiled, starting at the outmost end and carefully uncoiling toward the anchor end. If wired branches still need more coaxing to achieve the desired positions, they can be rewired at the appropriate time for another year of training. When you rewire a branch, vary the wire position from that of the previous year.

Additional Training Techniques

Before wiring became standard practice, bonsai practitioners manipulated the shapes of their plants in other ways. These methods lack the relative unobtrusiveness of wire, but they are still effective training techniques.

Bending Branches

If you need to make a simple downward bend in a branch, there are three reasonably easy ways to do it:

1. **Tying to the trunk:** Branches too stiff to bend by wiring can often be bent by tying. You simply attach wire to the branch, bend the branch down and tie the wire to the trunk. You can use a thinner gauge of wire for tying than for wiring a bend.

Encircle the branch with a loose wire loop, protecting the wood by slipping padding (such as cloth, paper, or rubber) between the branch and the wire. Also place padding between the wire and the trunk where the wire exerts pressure against the trunk.

Make the bend gradually in order to avoid breaking the limb. Start by pulling the limb about 1/3 of the way toward its desired position. After 2 - 3 months, bend the branch a bit more, and then give it more time to adjust to that position. Repeat this process until you eventually achieve the bend you desire.

2. **Tying to the container:** You can also wire branches to the plant's container to pull them downward. Loop a strand of wire under the pot and up over the soil, then tie the ends together snugly. Now run a separate loop of padded wire from each branch that you wish to bend down to the wire that goes across the pot. Pull down on the wire until the branch is in the position you want, then secure the branch wire to the pot wire. As with the previous method, it's best to do this in gradual stages so that the branch doesn't break.



3. **Weighting a branch:**

A third way to bend a branch down is to attach a weight to it. Fishing weights suspended from the branch by a string are traditional, but any object heavy enough to exert the desired pressure will work. Choose the weight with care - if it's too heavy, it may break the branch. Don't use this method if your bonsai plant is in a breezy location: in a wind, weighted branches can pump up and down to the breaking point.

Spreading & Snugging:

If your bonsai has a pair of branches or trunks that are either too close together or too far apart and you can't separate them by wiring, these two training methods offer a simple solution to the problem.

Spreading: a simple wedge can permanently spread apart two branches that are growing too close. This works particularly well to separate parallel trunks and forked branches.

Take a small piece of wood, cut it into a triangular or trapezoidal shape, and gently wedge it between the limbs until they are separated as far as you want. Be very careful when separating forked branches; too much pressure can cause a split down the fork.

Remove the wedge after 4 months. If the branches return to their original positions, put the wedge back in place. Eventually the branches will lose their tendency to spring back when you take away the wedge.

Snugging: to bring branches closer, especially parallel ones, loop a soft cord or a small belt around them and pull them into the desired position. Or form a piece of sturdy wire into an "S" shape, hooking each branch into one of the curves of the "S". In time, the branches will stay in place on their own.



Displaying Your Bonsai Outdoors

Your beautiful bonsai can greatly benefit by the right setting. Here are some examples outdoor displays.



Outdoor Display

If you grow just a few bonsai plants, you will have no problem displaying them. All you need is something that elevates the pots so that you can view them from the front rather than from the top down. A patio bench, for example, will accommodate one or several bonsai plants, and can also define the edge of a deck or serve as seating.

Benches and Shelves:

You can put together a simple bonsai bench in a matter of minutes. Select a sturdy wooden plank, such as a 2 x 12, and raise it on concrete blocks, bricks, or flat stones. If you use slats (2 x 2's, or 2 x 4's) instead of a single plank, water will drain through the bench.

If you display bonsai on shelves placed against a wall or fence, **remember that the heat reflection from light-colored walls can seriously damage bonsai plants in the summer.** Make sure these displays are sheltered from direct sun during the warmest part of the day, usually late morning through afternoon.



Tables

Outdoor tables will certainly hold a collection of bonsai trees, but they may not display them to their best advantage as all the pots rest on the same level. If you do keep your collection on a table, choose one just wide enough for three plants, then place the larger specimens in the center, with smaller plants on the outside rows. Stagger placement so that no plant is directly behind another one.

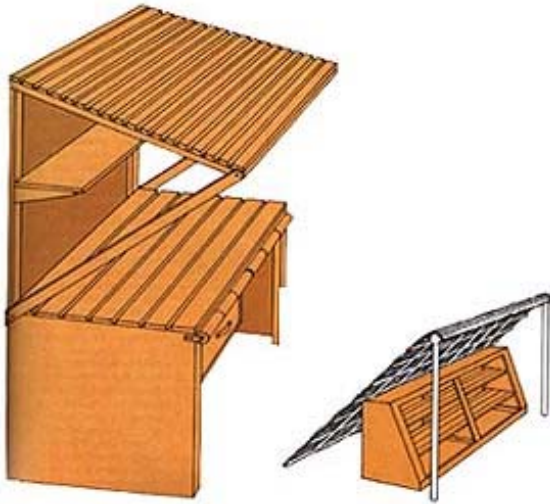
For better display, construct a unit along the lines of a patio table that has built-in benches. Make the center section (table) just wide enough to hold a single or double row of plants; the two lower sections (benches) can be just a bit wider to show off a number of smaller specimens on each side.

Outdoor Bonsai Maintenance Tips:

- Don't crowd bonsai plants. You should leave about 8 - 12 inches of space between the outspread branches of adjacent plants so that each plant can develop independently.
- Make sure the plants receive at least morning sun, more if climate permits. This is particularly important in spring when plants are putting out new growth.
- Rotate containers about a quarter turn in the same direction every other week to expose all sides to the same conditions. Otherwise, new growth will be strongest on the side facing the light while roots will tend to grow away from the sun. Specimens placed too close to a wall or fence can become one-sided as rear branches dwindle from lack of light.
- Rotating small containers is easy; turning larger specimens is more difficult. Use a lazy susan-type turntable, and you'll be able to turn the largest bonsai with the push of a finger.

"Additional Training Techniques" & "Outdoor Display" pages courtesy of
[Sunset Bonsai: An illustrated guide to an ancient art](#)

Display Stands & Winter Shelter



Display Stands:

Keeping your collection of bonsai trees on a stand makes them easier to work with and to see, and gives protection from extremes of weather. The large design **on the left** is simple to build from wood, having a shade of timber battens and a slatted bench-top.

There is a shelf for miniature bonsai at the back and a tool drawer under the bench. In severe weather, the trees can be placed under the bench and enclosed with heavy-gauge clear plastic sheeting (shown rolled).

The smaller example is based on a stand illustrated in an early Japanese bonsai book, and uses bamboo for shading.

Building A Display Stand:

The number of trees in your bonsai collection will determine the size of the stand. When calculating the dimensions, be sure to allow each tree plenty of space, and remember that small as they are, they do grow.

To allow for easier working, the stand should be made a little higher than an indoor table. It should be made of good quality wood, treated with a preservative, or it could have a metal frame with a wooden top. The trees can be placed on a gravel bed, as this cuts down on the need to water; but in this case they should be lifted every now and then to make sure the roots are not growing into the gravel.

Above the stand, around the sides and at the back, a weather-shade of thin timber laths or canes should be made. Each strip should be secured an inch apart. This will help protect the trees from all extremes: hot sunlight, heavy rain, high winds, and even a certain amount of frost. For harder winter conditions the bottom of the stand can be enclosed and the trees placed inside.

Winter Care

Container plantings of any kind are more subject to damage from cold than plants growing in the ground. Containers just don't hold enough soil to insulate plant roots.

Where winter temperatures are frost free or relatively mild (above 20F or -7C) you can leave a bonsai outside if its normal display area is protected from wind. Spreading straw or mulch around the pots also helps insulate the soil.

An unheated greenhouse is ideal as a winter shelter since the plants receive good light, are somewhat protected from the cold, and with a door ajar or vents opened slightly, get plenty of air. You can devise a polyethylene plastic and wood greenhouse by extending a lean-to from under house eaves. Leave all or part of one end open, unless winters are severe.

Building A Cold Frame:

With just a bit more effort you can build a simple cold frame - essentially a low greenhouse with a translucent hinged top. Placed against a south-facing wall and recessed into the ground it will keep plants dormant but not frozen (unless you live in the colder regions of Canada, for example).

Dig a rectangle about 6 -8 inches deep beside the wall. Using scrap lumber or plywood, build a frame with sides that slope down toward the front; a 6 inch slope is sufficient. Make sure the front is high enough (about 18 inches) to accommodate your shortest bonsai. Then set the frame against the wall and spread 3 - 4 inches of gravel in the bottom.

Traditionally, old window sashes formed the tops of cold frames, but you can also use clear plastic, fiberglass, or polyethylene plastic sheeting. In snowy areas, first cover the frame with fine mesh chicken wire or hardware cloth.

Place the bonsai on the gravel base and surround and cover the pots lightly with straw. Close the lid for protection from extreme cold, opening it slightly for ventilation when the temperature is above freezing.

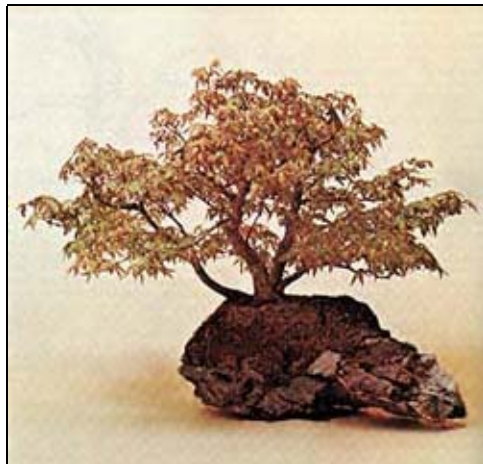


Winter Watering:

During freezing weather, water your bonsai (if they need it) in the morning. This allows excess water to drain out before the temperature drops. Water-soaked soil expands as it freezes, which can cause containers to crack.

Special Bonsai Plantings

The exquisite beauty of a bonsai tree well trained in a simple style, and growing vibrantly in a pot of suitable size and shape, can be the focus of many happy hours of contemplation. For some people, such simplicity is all that is necessary. Others, however, may prefer the more complex drama of a tree trained to cling to a rock, or the grandeur of a bonsai group planting. Such scenes are more complicated to create, but the basic rule of all bonsai still applies: the finished planting should evoke a natural theme.



Rock Plantings

The idea of planting trees on or over rocks has come from nature herself in the picture of a gnarled pine clinging to the protection of an outcropping of rock, or of a small, twisted tree growing on a cliff face.

In rock plantings, the tree can either be planted in or on the rock itself, or it can be trained over the rock, with the roots buried in the soil of the container.

Rocks used for such plantings should be fairly hard, since soft rocks tend to rot after prolonged exposure to the elements. They should not be too smooth, and should be pitted with plenty of small crevices and small pockets where the roots can grab hold. Rocks with a saddle-shaped depression or a large, deep pocket are ideal for planting directly onto the rock. Just make sure that the drainage is correct, as if the water doesn't run off and instead pools in the pocket, the roots could rot; while if the water runs off straight away, the tree would get no moisture.

Relatively small trees with small leaves, such as Cotoneaster are ideal for planting on rock.

Group Plantings

Whether planting a small copse of three trees, or a more ambitious miniature forest, the composition should first be planned out on paper. A shallow but wide container should be used, and the trees selected should be of the same variety, but of various heights. They should always be planted in odd numbers, not only because the Japanese dislike even numbers (especially 4), but because it will be found in practice that a balanced composition is easier to create with odd numbers.

The soil mixture required would be that which is normally used for the type of tree being grown.

To Begin:

- Always start by planting the largest tree first. This focal point is normally set to the right or left of center.
- The second largest tree is then planted to compliment the first... and so on with the remaining trees.
- Be sure to check and see how the planting is looking, not only from the front, but from the back and sides as you are trying to maintain an even balance.
- Do not tie down the trees until the exact position of each has been determined.
- After planting, thin out any inward growing branches, except for those trees planted around the outer edge.



Saikei:

Group and rock plantings can be taken a step further by adding small underplantings of alpine plants and tiny shrubs. Rocks can be embedded into the soil and small streams suggested by the use of white sand. Such a planting is generally called **saikei**, and small figurines and bridges are sometimes added to the landscape. See example picture above.

Bonseki:

Using a shallow tray of almost any composition, you can create a meditative **bonseki** composition. This generally consists of a group of rocks or stones placed in raked sand, which gives the impressions of small islands in the sea. As there are no living plants in bonseki, it doesn't require any care and can be kept indefinitely. Children love bonseki!

Bonkei:

Bonkei is another type of tray landscape which attempts to replicate natural or imaginary scenes. Every type of material available can be used, including artificial or real plants, figurines, false rocks, and paint. The finished effect, however, should again mimic nature and retain a natural elegance.

Bonsai Links and Resources

Bonsai plants and kits:

[Trees Under \\$30](#)

Bonsai Books:

<http://www.growitgold.com/resources/bonsaibooks.shtml>

Oriental Zen Water Fountains: (tabletop & outdoor)

[SerenityHealth](#) - unique products at Discount Prices.

Bridges, Lanterns & more (very unique):

[One of a Kind Home & Garden Accents](#)

And for some very special, hand-selected bonsai seed collections, please visit:

[Angelgrove Seeds](http://www.trees-seeds.com) - <http://www.trees-seeds.com>

I hope you have enjoyed this little e-book on the ancient art of Bonsai. Please feel free to share this booklet with friends.

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