

# BONSAI

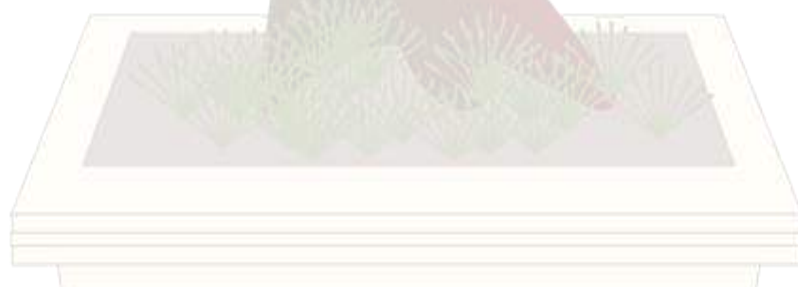
## GROWING AND CARING

The best time to plant a tree was twenty years ago.  
The next best time is now.



# TABLE OF CONTENT

<i>Pulling Bonsai from seeds .....</i>	<i>3</i>
<i>Room bonsai(Indoor) .....</i>	<i>3</i>
<i>Openland bonsai (Outdoor) .....</i>	<i>4</i>
<i>Design .....</i>	<i>4</i>
<i>Replanting .....</i>	<i>4</i>
<i>Trimming the deciduous trees .....</i>	<i>5</i>
<i>Trimming the conifers .....</i>	<i>5</i>
<i>Care .....</i>	<i>6</i>
<i>Watering and fertilizing.....</i>	<i>6</i>
<i>Repotting.....</i>	<i>7</i>
<i>The ideal Soil.....</i>	<i>7</i>
<i>The Bonsai – Bowl .....</i>	<i>8</i>
<i>Outdoor – Location .....</i>	<i>8</i>
<i>Protective measures against diseases .....</i>	<i>9</i>
<i>Room bonsai (Indoor) .....</i>	<i>9</i>
<i>Underplanting .....</i>	<i>9</i>
<i>Safe treatment on holiday .....</i>	<i>10</i>
<i>The Room bonsai – Care calender for the whole year.....</i>	<i>11</i>





# PULLING BONSAI FROM SEEDS

The long history of bonsai design has its origins in Asia. Since we are now in our latitudes living indoors than outdoors once more, tropical plants have been turned into miniature trees for several decades .

These so-called "Indoors" are a fascinating enrichment for the people in the cities, who long for nature and do not only want to animate their home with the usual potted plants.

Tropical and subtropical plants are ideal for this because their growth takes place almost without a break. People who have the possibility to put a bonsai outside - i.e. an "outdoor", that sheds its leaves in winter and is bound to our seasons - will also find very interesting species in Tropica.

Especially when growing bonsai from seeds, the big chance is to influence the shape of the tree from the beginning. It may take longer for a tree to grow from a seed, but when flat shells are used for growing, they grow more compactly than shoots sought in the forest.

## ROOM BONSAI (INDOOR)

Very hard-shelled seeds such as camellia, Mediterranean pine, olive tree, gold pine, tamarind and powder puff should be pre-treated by lightly roughening the seeds with sandpaper or a file and then letting them swell for 12-20 hours in room-warm water. For myrtle, orange-jasmine, dwarf orange or rose seeds and dwarf pomegranate seeds, pre-swelling in room-warm water overnight is sufficient. Soft or very fine seeds such as Jacaranda or Australian pine do not require pre-treatment. You can sprinkle these seeds directly onto the moist growing soil and then cover them very thinly with the same soil.

Sowing in clay granulate has also proved successful. To do this, take a waterproof container (glass, bowl or yoghurt pot), fill 3/4 of it with the granulate, place the seeds on top and cover them again with a thin layer of granulate. The container is filled with water that constantly covers 1/2 cm of the ground. Now the vessel is covered with transparent foil or a glass pane and kept warm so that a greenhouse effect is achieved.

When sowing in soil, the container should only be covered at night. During the day it should be open so that air can reach the ground. The germination period is very different for the different seed species. With uniform humidity and heat (20° - 25° C), some seeds can germinate after 10 to 14 days - others such as hard-shelled seeds usually germinate after 4 to 10 weeks.



*JAPANESE AZALEA AS BONSAI*

And even if your seedlings have already developed, there are still "stragglers" – so don't empty the seed container immediately. It is important for all seedlings to avoid draughts and direct sunlight.

As soon as the first 4 to 5 leaves or side shoots appear, the young plants are individually placed in pots or bowls (pricked). The joy of the first seedlings can quickly be clouded if they fall over without any apparent reason. This is mostly caused by seeds that are sown too densely and whose roots obstruct each other as well as by poor, moist soil and high humidity – all the conditions that were so ideal for growing the seedlings before. Prevent this by keeping the soil a little drier after germination, airing the container from time to time or using a root strengthening agent.

## OPENLANDBONSAI (OUTDOOR)

When sowing in spring, first place the seed bag in the refrigerator for 2 weeks (i.e. at 5 to 8 ° C). Then soak the seeds in water for 2 days. Now they can be sprinkled in seed trays on growing soil and covered with a thick layer of growing soil. In the flower boxes on the windowsill or in the garden-embedded up to the edge of the bowl-germination takes place under natural weather conditions. Germination in the home takes place as described for room bonsai. Please make sure that the young plants are not exposed to the blazing sun or dry heating air.

Bonsai - Formen



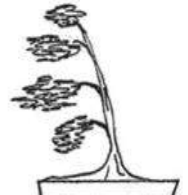
Kugel - Form



Streng aufrechte Form



Frei aufrechte Form



Windgepaitschte Form



Waldform

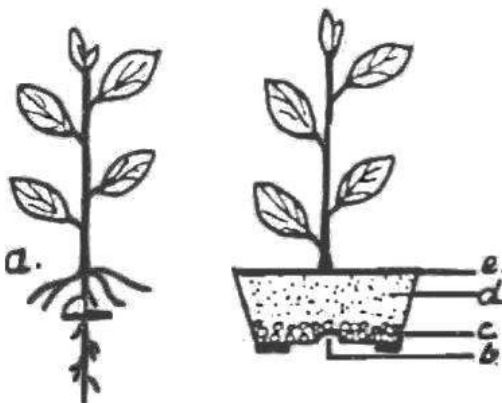


Felsenform

## DESIGN

The aim of bonsai design is to make a good bonsai out of the young plant. If your young plant is 10 to 12 cm tall, you can start to influence its growth.

## REPOTTING



Before repotting into the bonsai bowl, the main root is shortened by 2/3. This should result in a well defined root ball, which is mainly wide.

a.) Root pruning; b.) Sieve and net; c.) Gravel or clay granulate; d.) Bonsai soil, e.) Bonsai shell;

## TRIMMING THE DECIDUOUS TREES

Cut off the main shoot (shoot tip) at the top. Their seedling now develops new side shoots and branches. In the following growing period, the design work on the young plant consists of forming a finely branched crown. For this purpose, the newly formed shoots are repeatedly shortened to 2 to 3 buds. Shoots that form further down are completely removed. With each repotting (usually every 2 years) the roots are cut back semi-circularly by about one third.

- a.) shoot tip cut
- b.) Branching
- c.) Crown cut
- d.) root pruning



## TRIMMING OF CONIFERS

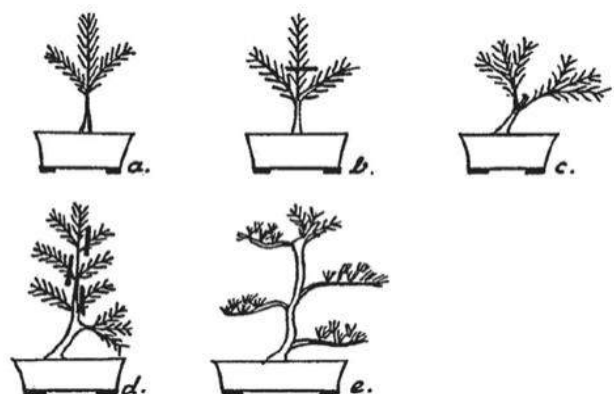


*PINE-BONSAI*

As soon as the first side shoots have formed, the main shoot can be removed. This increases the growth of the side shoots. The next time the tree is repotted, it is placed diagonally into the soil in order to achieve a bonsai shape as quickly as possible. Now the tree is allowed to grow for 2 to 3 years. Make sure that disturbing branches are removed in time, so the branches are left in a staggered position.

The roots of the conifers are cut as with deciduous trees. In order to give an older appearance to the conifers, there is the method of wire cutting. The trunk, branches and twigs which are to be formed are spirally wrapped with soft wire. Wind the wire tightly, but not too tightly, in even turns from bottom to top. Now bend the branches and twigs in the desired direction. This correction aid must be removed after about three months.

- a.) seedling
- b.) Cut of the main shoot
- c.) Oblique potted seedling
- d.) Cutting disturbing branches
- e.) Strictly upright form



In May the girl's pine bears powerful new shoots. Where several new shoots grow out at the same time, the strongest candle (the shoots of pines) is completely broken out. The other shoots are plucked up to 2 or 3 needle rings.

The black pine has dense and strong needles. In the spring, the shoots set in bundles. The individual shoot (candle) is removed between April and May, when it has reached a length of more than 3 cm. New shoots will appear at the same place and form new bundles during the summer. It is important that the candle is completely removed in spring and not just a part of it. During the entire growth period, the juniper's new shoots are plucked again and again, so that the juniper gets an even fresh green needle cushion.

## CARE

### WATERING AND FERTILIZING

Pouring water, as is usual from our "normal" indoor plants, is not sufficient for Jungbonsai's. Watering should always be done when the upper visible soil layer of the plant is almost dry. During the summer they should be watered thoroughly in the morning and evening.

It is preferable to use rainwater for pouring. If it is not available, stagnant tap water at normal temperature can also be used. Spraying the leaves is advisable on hot summer days.

However, too much water has an adverse effect on the growth of the tree. Waterlogging at the roots leads to decay and death of the plant. A good control possibility: A healthy and well watered plant can usually be lifted easily out of the pot.

As with all plants, pouring water and spraying should be avoided in strong sunlight. During winter, when our native trees are dormant, less water is used. Depending on location and plant species, one or two waterings per week are sufficient.

Bonsai live in relatively little soil, which results in a rapid consumption of nutrients. For healthy growth, the necessary nutrients such as nitrogen, phosphorus, lime, potash, sulphur, iron and trace elements must therefore be supplied to the plant via the fertilizer.

Fertilizers are available in solid or liquid form. The solid organic fertilizer usually consists of a mixture of rapeseed meal, fish meal, blood meal, bone meal, horn chips and wood ash. It is offered in balls or powder and lasts for a few weeks – depending on the size of the plant. It is simply sprinkled over the soil and is absorbed into the soil with pouring water.



MAPLE-BONSAI



In the case of liquid fertilisers, care must be taken to ensure that the soil is moist and that the fertiliser is absorbed, otherwise there is a risk of "burns" at the roots. Openland bonsai must never be fertilised in winter! Only freshly transplanted bonsai and flowering plant species should not be fertilized during flowering – they need a rest period of about 4 weeks.

## REPOTTING

Depending on age and species, a bonsai should be repotted after two to five years.

Transplanting is necessary when the bonsai pot has become too small or the soil is leached out. The appropriate time is spring or autumn. Younger plants should be planted in a slightly larger bowl. With older bonsai the same bowl is used again. The bonsai should be watered less before repotting.

- 1) Grab the tree by the trunk and try to lift it carefully out of its shell.
- 2) Now loosen the root felt all around with a stick. With younger bonsai half of the old soil can be removed – with older bonsai less.



- 3) Now most of the exposed roots are cut off with a clean cut.

The thick main root is shortened by one third with a diagonal cut. One fifth of the shell is filled with drainage granulate (gravel or lecatine). A thin layer of soil is placed on top of this and the bonsai is placed on it.

Carefully spread the remaining roots around the trunk in all directions. Then gradually fill all spaces with soil. The soil should rise slightly towards the trunk.

Now the tree has to be watered carefully. Freshly potted bonsai must in any case be protected from strong sunlight and wind for two to four weeks. Spray several times a day, as new suction roots must first form.

## THE IDEAL SOIL

Never use soil that has already been used for bonsai. This soil is in most cases already very hard and no longer sufficiently air and water permeable. You can also mix the soil yourself. For young plants and deciduous trees one mixes forest soil or peat, clay (= a mixture of sand and clay) and grainy sand in equal parts.



YEW-BONSAI

These three ingredients are the perfect blend, because

- the forest soil or peat (humus) serves as breeding ground,
- the sand loosens up and the soil becomes permeable to air and water
- no waterlogging and the soil does not get muddy
- the clay has a buffering effect that holds everything together well

For plants such as pines and other conifers or old trees that need drier soil, mix two parts of sand, one part of peat and one part of clay.

## THE BONSAI - BOWL

The Bonsai bowl is almost the same as the frame for a picture. Fortunately, there are some rules of thumb for the selection of planters:

- Always make sure that the shells are unglazed on the inside and that they have one or more vent holes in the bottom. This allows the roots to "breathe" and prevents waterlogging which could lead to decay of the roots.
- It is important that the plant and the bonsai bowl are in a harmonious proportion to one another. This means that a tree of 20 cm height is not in a bowl which is 20 cm high or wide. The bowl should be wider than deep so that the roots can spread, but not grow deep into the ground, thus making the tree too big.
- There are rectangular, square, round and oval shells. Upright bonsai, for example, fit perfectly into flat oval or rectangular shells.



*JUNIPER BONSAI IN MOON BOWL*

## OUTDOOR - LOCATION

The best place for a bonsai is on the terrace, balcony or garden with morning sun. The afternoon sun causes the small plant shells to dry out too quickly. If only one side of the bonsai is facing the light, it should be turned every 14 days to achieve even growth. If an outdoor bonsai is brought into the apartment, it should be put outside again after one week latest. The tree needs weather influences such as sun, wind and rain to develop properly.



## PROTECTIVE MEASURES AGAINST DISEASES

The most common disease is root decay. It manifests itself through yellow-brown leaves or needles, but can also cause whole branches to die.

It is mostly caused by moisture standing in the bowl. In this case the bonsai must be repotted immediately. All rotten root parts and the upper plant parts are removed. During the next weeks you should water the plant only moderately and place it in a protected area.

If your bonsai is once attacked by insects, fungi and bacteria, the commercially available pesticides will help. Proper bonsai care is still the best way to prevent disease and pest infestation.

## ROOM BONSAI (INDOOR)

The most suitable room bonsai are all small-leaved tropical and subtropical trees and shrubs whose home climate best suits our living climate. We have known some plant species for decades as pot plants. The subtropical – generally the most common species for bonsai – should be between  $+5^{\circ}\text{C}$  and  $+12^{\circ}\text{C}$  in the winter months. During this time they take a break from growth. We recommend a bright place: bedroom, hallway or winter garden.

During the months of summer, room bonsai thrive well outdoors, as they find sufficient light and humidity.



*BONSAI WITH MOSSY SOIL*

Evaporation trays are provided for room bonsai. You should also sprinkle the bonsai more often, as this also increases the humidity.

It is best to use softened water for watering. This can be boiled or you can use an anti-limescale softener from a specialist retailer. The water should always be at room temperature.

## UNDERPLANTING

This refers to a mossing of the soil. The moss blanket brings out the plant more strongly and prevents the soil from drying out too quickly.

Low moss species can be found on stones, trees and damp soils.

## SAFE TREATMENT ON HOLIDAY

Now that you have grown, nursed and taken care of a little tree, you would like to go on holiday. To a neighbour or mother-in-law? Not everyone likes to entrust their bonsai to another person. Too much water can do as much harm as too little. And many people water their bonsai too often fearing that it might die of thirst.

The safest thing to do first is not to keep your bonsai too warm or in the sun during your holiday. For a short holiday of about a week, you should dip your little tree vigorously once so that the soil as well as the bowl can suck full of water. Then take a tray that is about twice the size of the Bonsai bowl, fill it 1 to 2 cm high with clay granules and moisten the granules properly. Place the bonsai on top and the ceramic bowl can absorb moisture.

If you are one of those lucky people traveling away for 2 to 3 weeks, you should also dive the bonsai first. Then fill a large plastic tub with wet peat or wet clay granules and place your bonsai with the bowl so deep that the upper edge of the bowl is about 3 to 4 cm covered.

If you are going on a winter holiday, you should make sure that the heating is not switched off completely as tropical and subtropical bonsai require temperatures around 10° C.



*EVEN ON HOLIDAY, YOU CAN ALWAYS FIND BONSAI TREASURES IN THE REMOTEST PLACES, HERE IN CHINA.*

## THE ROOM BONSAI - CARE CALENDAR FOR THE WHOLE YEAR

January	Bonsai standing on the heating windowsill or exposed to a lot of dry air should now be checked more frequently and watered or dipped.
February	Like January. You should only fertilise rarely. Due to the short days you should keep the bonsai as bright as possible or provide extra light.
March	Slowly the growth begins. Weak shoots that have formed in winter should now be cut out.
April	The bonsai now needs more water for healthy growth and can be regularly fertilized again.
May	The first new shoot can already be trimmed. Pay further attention to regular watering and fertilizing. You can repot this month if necessary.
June	A lot of water and fertilizer. The Bonsai may also stand quietly outside. Now cut back fast growing bonsai.
July / August	In these two months you should "dip" the Bonsai to the watering best, since the water need is now very high. In addition, you should pay attention to a plentiful supply of nutrients. Do not cut flowering bonsai. Bonsai that have been cut back heal particularly well and a place outdoors is now particularly suitable even for room bonsai. Places in semi-shade are ideal.
September	The water requirement of the bonsai decreases. Strong bonsai should only lightly be cut back.
October / November/	October / The heating period begins and the bonsai feels good if it is sprayed with low lime water. In heated rooms you should now make sure that the soil does not dry out. Make sure there is plenty of light.
December	Make sure that the bonsai does not freeze. The plants should not be under +5° C. Only very rarely fertilize in the winter phase.

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