

XfrogPlants | Bonsai Library

Version 2.0



XfrogPlants Development

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What's New, and Usage Information for XfrogPlants Bonsai Library, Version 2.0

60 XFR (Xfrog) + 60 Models of one additional 3D format are included in the /Models folder.
(You may select online at xfrog.com, or from your reseller, from most popular 3D formats, such as Maya, 3ds Max, Lightwave, CINEMA 4D, OBJ, 3ds, etc. to be the additional format included on your CDROM)

NOTE - If you purchase our DVDs, they contain ALL 3D formats listed above, inside the DVD, and more!

60 TIFF+Alpha Billboard Renders are included in the /Billboards folder.
(You can map them onto single or crossed polygons, or drag and drop them directly into background images)

60 TIFF+Alpha Perspective Renders are included in the /Perspectives folder.
(You can use their object buffer to place them into background images, ideal for quick comps)

Many Leaf and Bark and Flower Textures are replaced with Higher Quality Textures.
(A year long search and collection effort has yielded much higher texture quality than earlier efforts)

Many Models were completely rebuilt for better accuracy.
(Over the past 3 years we have greatly improved our knowledge and modeling capabilities and we have rebuilt many early models, the results of many months of efforts is Version 2.0)

Each XfrogPlants Library is now available in several more popular 3D formats.
(Maya, Vue d'Esprit, RIB, have been added to a long list of available additional 3d formats)

Each XfrogPlants Library PDF was re-created and showcases the quality of Version 2.0.
(New nicer layout and now we exhibit all Models as Perspective Renders instead of one Render per Species)

Plugins are included to import XFR into Maya, 3ds max, Lightwave, and CINEMA 4D.
(You can directly import XfrogPlants models, or edits you make in Xfrog, into the above programs)

Xfrog Software, Plugins, Demos: <http://www.xfrog.com>
Xfrog User Group: <http://groups.yahoo.com/group/Xfrog/>
Xfrog User Gallery: <http://www.xfrog.com/4images/>

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Author

This XfrogPlants documentation was created in November 2004 by Orio Menoni.

A Foreword about Bonsai

Bonsai is much more than trees planted in a vase. It is an art of millenarian tradition that has deep conceptual implications and meaningful rules. Not a mere reproduction of nature, but neither an arbitrary abuse of it, Bonsai shows the hand and thoughts of man distilling and synthesizing an ideal essence of nature that can fit within the aesthetical canon of Oriental art.

The Greenworks Bonsai library has been created with the intent of being respectful of Bonsai rules and traditions as much as possible. All models have been created after real prized Bonsai exemplars, chosen at the end of an extensive research.

Here follows a short list of some of the main Japanese Bonsai styles. Although Bonsai art was born in China in very ancient times, it is the Japanese styles that are most popular throughout the world today. Many of the styles listed here are represented in the Greenworks Bonsai library. Please use this short guide together with the species specs if you wish to understand the styles used for our models.

Quick Guide to Bonsai Styles

CHOKKAN (Formal Upright)

One tree growing straight upright, with the tip parallel to the base of trunk.

MOYO-GI (Informal Upright)

Similar to Chokkan, but the trunk has sweet undulating bends.

TACHI-GI (Ordered Upright)

Similar to Moyo-Gi, from which it differs in the order of branches.

SHAKAN (Oblique)

The trunk grows with an angle of approx. 45° from the base. Leaf mass should be mostly outside of the base's ideal perpendicular projection.

KENGAI (Cascade)

The trunk grows out and down the vase's limit, but the tip must be placed above the top line of the vase. Leafing should occur mostly in the terminal part of the trunk, without touching the vase.

HAN-KENGAI (Semi-Cascade)

Similar to Kengai, this style has two tips, one (usually a branch) falling down and never ending above the top line of vase, the other (usually the trunk) growing upwards in the same direction.

HOKIDACHI (Broom)

All branches grow near the tip of the trunk, creating a shape similar to an upside-down broom.

FUKINAGASHI (Windswept)

The trunk bends of 45° or more, representing the effect of a strong wind. The branches must (at least for the most part) bend to the same direction of the wind.

NEAGARI (Exposed Roots)

The roots of the tree are exposed to view, above the ground level.

BUNJIN (Literati)

The peculiarity of this style is the disproportion between the lenght of trunk and the masses of leaves and roots. The goal is abstract simple elegance.

BANKAN (Coiled)

The trunk revolves over itself. It is a very rare style nowadays.

SHARIMIKI (Driftwood)

Trunk and roots shown to great evidence, with little foliage. Must suggest a tree which survived strong natural calamities.

IKADA-BUKI (Raft)

Many trunks placed in line create a small forest that originates from what appears to be the same horizontal root, but really is the trunk of tree, placed horizontally, and the trunks are really the branches of it, forced to grow upwards.

NE-TSURANARI (Connected roots)

Similar to Ikada-Buki, but this time the roots are real roots and the trunks are developed suckers.

KABUDACHI (Clump)

Many trunks originating from the same base point of the roots (the typical "multi-trunk").

TAKOZUKURI (Octopus)

Both trunk and branches display an evident and strong alternating ondulation.

SEKIJOUJU (Roots over Rock)

The roots of the tree wrap around a big rock before ending into the ground.

ISHITSUKI (Clinging to a Rock)

The tree is planted directly within a hole in the rock. Often presented in a landscape fashion, sometimes within a very low vase containing water (to simulate a lake).

SAIKEI (Saikei, Landscape)

Many trees are used to recreate a natural environment, often with other natural elements such as rocks, grasses, and water.

NEJIKAN (Twisted)

The trunk grows twisted, in a spiral fashion. This style is uncommon today.

SECONDARY CLASSIFICATIONS

Bonsai can be furtherly classified for height, number of trunks (of the same tree), and number of different trees:

Height	Number of trunks	Number of trees
Shito (up to 7,5 cms.)	Tankan (1 trunk)	Soju (2 trees)
Mame (7,5 to 15 cms.)	Sokan (2 trunks)	Sanbon Yose (3 trees)
Kotate Mochi (15 to 30 cms.)	Sankan (3 trunks)	Gohon Yose (5 trees)
Chiu Bonsai (30 to 60 cms.)	Gokan (5 trunks)	Nanahon Yose (7 trees)
Dai Bonsai (60 cms. and above)	Nanakan (7 trunks)	Kyuhon Yose (9 trees)
	Kyukan (9 or more trunks)	Yose Uhe (more than 9 trees)

01. Field Maple

(*Acer campestre*)



Moyo-Gi
43 centimetres



Moyo-Gi
49 centimetres



Kabudachi (Sankan)
60 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : Central Europe (Denmark to Italy), Eastern Europe

Environment : broadleaf forests and hedges up to 800 m.

Climate : temperate, cool

Notes :

The Field Maple is one of those humble but truly characteristic rural trees of Europe. In the past, European farmers used it to support the vine rows. It used to be the most diffused European Maple, but today more decorative maple species are often preferred for urban decoration.

02. Japanese Maple

(*Acer palmatum*)



Chokkan
56 centimetres



Saikei (Gohon Yose)
50 centimetres



Kabudachi (Sankan)
60 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : West Asia

Environment : forests

Climate : mild

Notes :

The Japanese Maple is widely diffused in city parks all over the world, because of the gorgeous Autumn colours. Many cultivars have been produced of this tree, with different leaf sizes and colours. The Japanese Maple is sensitive to late frost and should be planted in a sheltered position.

Japanese name : Iroha-momiji.

03. Hornbeam

(*Carpinus betulus*)



Moyo-Gi
81 centimetres



Sekijoju
84 centimetres



Saikei (Gohon Yose)
67 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin: Central and Eastern Europe (Germany to Italy and Balkans)

Environment: mixed forests, up to 1.000 m; on fresh, fertile soil

Climate: temperate

Notes:

The Hornbeam is a humble but sometimes majestic rural tree. Once common in Europe's mixed broadleaf forests (with English Oak, Sweet Chestnut, European Beech and Hazel), it is much less diffused today. In the 18th and 19th centuries, the Hornbeam became a high-society fashionable tree for decoration of villas' boulevards.

04. Hinoki Falsecypress

(*Chamaecyparis obtusa*)



Chokkan
62 centimetres



Bunjin
45 centimetres



Shakan
50 centimetres

Tree, evergreen conifer **Shape:** narrow conical

Origin : Japan

Environment : mountain slopes, on moist but well-drained acidic soil

Climate : temperate, cool

Notes :

The Hinoki Falsecypress loves to grow in full direct sunlight. It's wood is very much prized in Japan. As a decorative species, it is often planted in city parks throughout the world. Some dwarf garden cultivars exist.

Japanese name : Hinoki.

05. Japanese Cedar

(*Cryptomeria japonica*)



Saikei (Sanbon Yose)
50 centimetres

Chokkan
40 centimetres

Saikei (Gohon Yose)
32 centimetres

Tree, evergreen conifer **Shape:** broad conical
Origin : Japan
Environment : forests
Climate : temperate

Notes :

The Japanese Cedar (but it's really a species of the Cupressaceae family) is a highly ornamental species, often planted in city parks. It is also very much appreciated in Japan for the highly prized quality of the wood. The foliage re-greens in the Spring.

Japanese name : Sugi.

06. European Beech

(*Fagus sylvatica*)



Chokkan
50 centimetres



Hokidachi
42 centimetres



Saikei (Gohon Yose)
40 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : Europe (from Norway to Sicily)

Environment : mountain forests from 600 to 1.700 m. altitude

Climate : cool, cold

Notes :

The European Beech is one of Europe's widest-ranged mountain trees. The slow growth rate, however, is causing it's progressive replacement with the faster-growing spruce trees. The ground of beech forests is acid because of the very little light passing through. The beech wood can be easily bent, and has balsamic properties.

07. Fig Tree

(*Ficus carica*)



Shakan
55 centimetres



Chokkan
55 centimetres



Neagari
77 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : South-Western Asia

Environment : humid and shady; on rocky soils

Climate : warm, mild, temperate

Notes :

The Fig Tree is a rustic species that grows even on arid soils and rocks, tolerating a wide range of temperatures. Fruits are very high in sugar (20% when fresh, 50% dried). One fruit is born from several merged flowers. Many myths are centered on the Fig Tree, considered the tree of knowledge and a symbol of fertility as well.

08. Ginkgo

(*Ginkgo biloba*)



Hokidachi
62 centimetres



Moyo-Gi
55 centimetres



Chokkan
70 centimetres

Tree, deciduous ginkgo **Shape:** broad conical
Origin : China (long-time extinct in nature)
Environment : wild environment unknown
Climate : temperate

Notes :

The Ginkgo (250 millions of years old) is one of the most ancient living beings on earth. It's reproductive system is so old that no tree today has a similar one (only ferns and a few other plants). A long-time extinct in nature, Ginkgo has been preserved by monks, who cultivated it for thousands of years for it's medical qualities. It is immune to pollution and to almost all of today's parasites.

Japanese name : Ichou.

09. Western Juniper

(*Juniperus occidentalis*)



Moyo-Gi
30 centimetres



Sharimiki
45 centimetres



Saikei (Sanbon Yose)
35 centimetres

Tree, evergreen conifer **Shape:** broad conical

Origin : Western USA

Environment : rocky slopes, dry mountain areas

Climate : mild, dry

Notes :

The Western Juniper can become a dramatically spectacular tree, because of the red furrowed bark and the gnarled, massive shapes. It is one of the longest living trees on Earth: living exemplars are known that are over 2.000 years old.

It is an amazing species because it grows directly out of solid rock!

10. Temple Juniper

(*Juniperus rigida*)



Moyo-Gi
60 centimetres



Moyo-Gi
52 centimetres



Shakan
55 centimetres

Tree, evergreen conifer **Shape:** broad conical
Origin : Central and Southern Japan
Environment : hills and mountains
Climate : temperate, cool

Notes :

The Temple Juniper is more exacting with soil than other juniper species, it needs a rich, well-drained soil for an ideal growth. It preferably grows under direct sunlight and has a slow growth rate.

The tree shape significantly broadens with age.

Japanese name : Nezumisashi.

11. Japanese White Larch

(*Larix kaempferi*)



Ne-Tsuranari (Sankan)
90 centimetres

Moyo-Gi
76 centimetres

Saikei (Gohon Yose)
45 centimetres

Tree, deciduous conifer **Shape:** broad conical

Origin : Central Japan

Environment : mountain forests, on humid, well-drained soil

Climate : cool, cold

Notes :

Compared to the European Larch, the Japanese White Larch is more tolerant of poor soils. It is planted for urban decoration in temperate or cool climate cities but it's large size make it suitable for parks only.

Like all larches, it has deciduous coloured Autumn foliage.

Japanese name : Karamatsu.

12. Apple Tree

(*Malus domestica*)



Tachi-Gi
50 centimetres



Tachi-Gi
50 centimetres



Chokkan
60 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : garden variety of the native European tree (*Malus sylvestris*)

Environment : forests and thickets, up to 1.200 m.

Climate : temperate, cool

Notes :

The Common (Garden) Apple tree is a garden species derived from the Wild Apple (*Malus sylvestris*), a tree that can still be found in the wild in the forests of Central-Southern Europe. The most visible difference between the species is the absence, in the Garden Apple tree, of the small thorns that are present over the branches of the Wild Apple.

13. Olive Tree

(*Olea europaea*)



Hokidachi
89 centimetres

Ishitsuki (Gohon Yose)
52 centimetres

Han-Kengai
55 centimetres

Tree, evergreen broadleaf **Shape:** broad spreading

Origin : West and Central Mediterranean (Spain, Italy, North Africa)

Environment : sea coasts and hills, on dry rocky soil

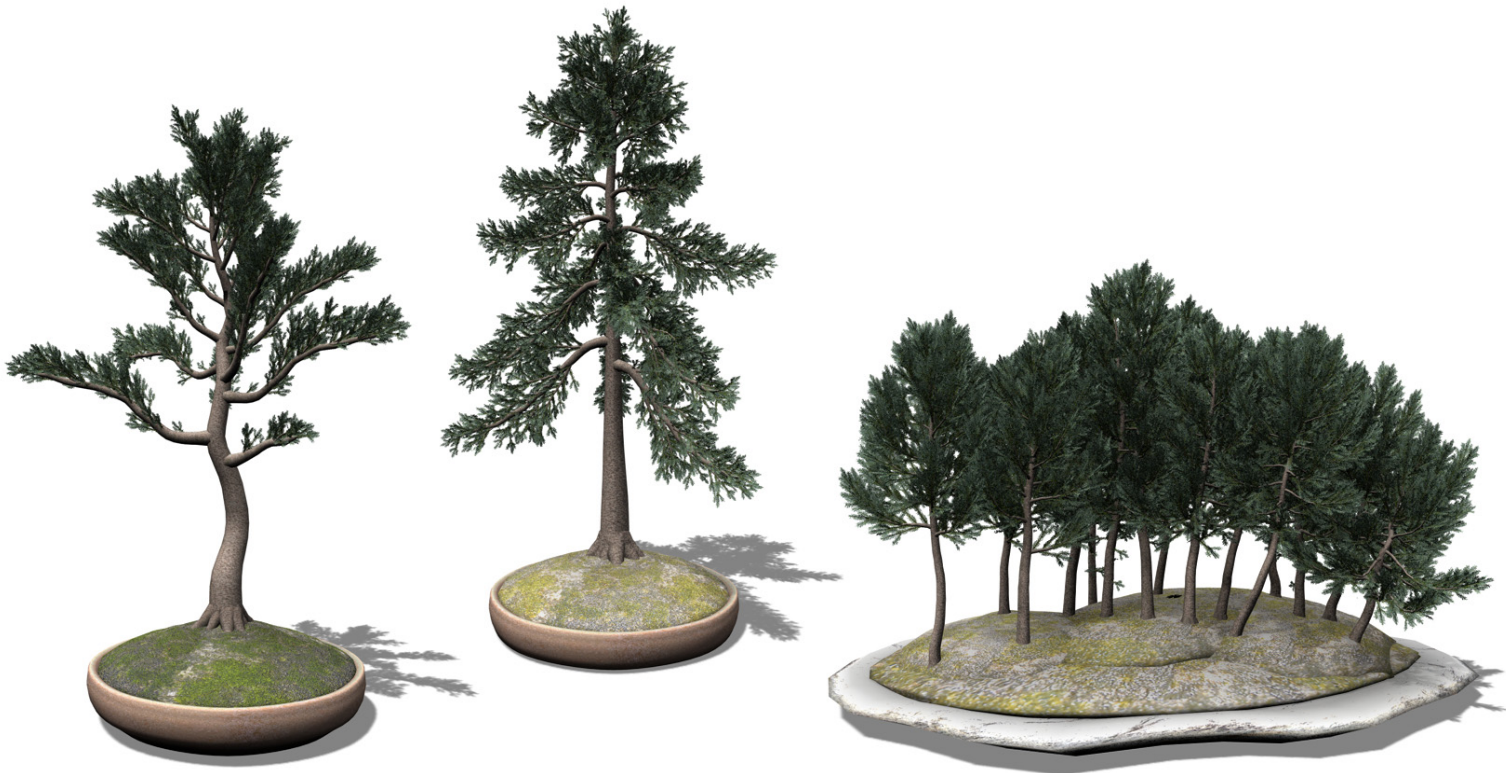
Climate : warm, with mild winters and dry summers

Notes :

One of the most important trees economically, because of oil, Olive trees are also spectacular because of trunks' contorted shapes. One of the longest living trees: living exemplars exist in Palestine that are over 2000 year old, thus older than Jesus. The Gospel says that Jesus spent his last night praying in an olive grove.

14. White Spruce

(*Picea glauca*)



Moyo-Gi
75 centimetres

Chokkan
92 centimetres

Saikei (Yose Uhe)
50 centimetres

Tree, evergreen conifer **Shape:** narrow conical

Origin : Canada, Northern USA

Environment : forests, in full sunlight, on well-drained, acidic soil

Climate : cool, cold

Notes :

The White Spruce (South Dakota State tree, Manitoba provincial tree) is often planted outside it's native areas for decoration. The leaves have an intense but unpleasant smell when crushed.

It is often used as Christmas Tree, and although it prefers cool climates, it can be planted near the sea because it is salt-tolerant.

15. Japanese White Pine

(*Pinus parviflora*)



Moyo-Gi
95 centimetres



Sekijoju
55 centimetres



Kengai
70 centimetres

Tree, evergreen conifer **Shape:** broad columnar

Origin : Japan

Environment : mountain forests, on rocky soil

Climate : cool, cold

Notes :

The Japanese White Pine is often planted in city parks throughout the world. It can sometimes have weeping branches. It is mostly known, though, because it is one of the most popular and suitable species for Bonsai cultivation.

Japanese name : Goyomatsu.

16. Scotch Pine

(*Pinus sylvestris*)



Moyo-Gi
50 centimetres



Kengai
30 centimetres



Fukinagashi
65 centimetres

Tree, evergreen conifer **Shape:** broad spreading

Origin : Whole Europe, Asia

Environment : mountains, on sandy soil

Climate : cool, cold

Notes :

Also known as Scots pine, it is probably the tree with the widest diffusion over Europe, from Spain to Siberia, Scandinavia to Apennines. It is a rustic tree that loves full sunlight and grows even on arid soils.

The resin is used to produce turpentine and colophony, a paste that makes ships waterproof. The buds are balsamic.

17. Apricot Tree

(*Prunus armeniaca*)



Moyo-Gi
40 centimetres

Moyo-Gi
70 centimetres

Han-Kengai
50 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : China

Environment : hillside thickets

Climate : mild, warm

Notes :

The Apricot tree, more than the Cherry or Plum, needs a relatively warm climate to grow. It suffers from late frost, especially if it happens during the blossoming period. Like the other species in the Prunus family, the Apricot tree, too, can be attacked by many parasites and diseases.

18. Satsuki Azalea

(*Rhododendron indicum*)



Tachi-Gi
45 centimetres

Moyo-Gi
50 centimetres

Kabudachi (Sankan)
55 centimetres

Shrub/Tree, evergreen broadleaf **Shape:** shrubby, broad spreading

Origin : Japan

Environment : valley meadows, thickets, on moist, acidic soil

Climate : mild, temperate

Notes :

This small tree or shrub grows of preference in the shade of other species, or in partial sunlight. During blooming it prefers more light. Blooming lasts longer in cool climates. The Azaleae species need the soil to be always moist and the air to be preferably humid.

19. Smooth-Leaved Elm

(*Ulmus minor*)



Ishitsuki (Gohon Yose)
55 centimetres



Ikada-Buki (Gokan)
50 centimetres



Moyo-Gi
98 centimetres

Tree, deciduous broadleaf **Shape:** broad columnar

Origin : Southern Europe, Northern Africa, Western Asia

Environment : forests, forest slopes, wild plains, river and stream banks

Climate : mild

Notes :

The Smooth-leaved Elm is a widespread European elm. It is endangered by graphiosis, a disease which will lead all Elm species to a sure extinction. Before the disease spread out, the Smooth-leaved Elm used to grow practically everywhere in Southern Central Europe.

Ironically, it is one of the most pollution-resistant species.

20. Japanese Zelkova

(*Zelkova serrata*)



Hokidachi
64 centimetres



Hokidachi
50 centimetres



Hokidachi (Gohon Yose)
23 centimetres

Tree, deciduous broadleaf **Shape:** broad spreading

Origin : Japan, China, Korea

Environment : along streams, on moist soil

Climate : temperate

Notes :

Zelkovae are often planted as substitutes for Elms (decimated by graphiosis), and in fact they are Ulmaceae too. The Japanese Zelkova can become a tall, spectacular tree; it is shade-tolerant and doesn't need special care. The bark changes with age, from smooth to shaggy and rough.

Japanese name : Keyaki.

Note about model heights

The heights of the models indicate the height of the tree (lowest to highest point), or, in case of multiple trees, the range from the highest to the lowest.

The vases and other supports have not been calculated, in order to maintain consistency (the heights of supports may differ greatly from one model to another).

Note about texturing in external applications

Due to the peculiarity of these models, some components (some of the ground components, and a few rock components as well) had to be textured with Xfrog's "Linear" mode in order to obtain a correct mapping.

Linear mode can not be exported from Xfrog, so you will have to re-assign it in your rendering application. Basically, you just have to select the parts that use Linear mapping, go to the Material editor and switch the mapping mode to "linear", "flat" or equivalent (names may vary). This is very easily done and usually requires not more than a couple of mouse clicks.

Here's a few examples of how to do it in a few popular applications:

Cinema 4D: select the object part, and the "Attributes/Tag" should automatically open. There, switch Projection to "Flat" and adjust Length X and Length Y to approximately the proportions of the bitmap. Small percentages often give the best results.

Vue d'Esprit/Vue Pro: select the object part, open the Material Editor and switch Mapping to "Flat".

Bryce: select the object part, open the Material Editor and switch Texture Mapping Mode to "Object Space".

Please note: the software "Poser" does not currently offer a "flat" mapping mode option.

(Cinema 4D, Vue d'Esprit, Vue Pro, Bryce and Poser are registered trademarks of their respective owners.)

