

# The World OF Bamboo

Text and photos by Mila and Gordon Powell

## BAMBOO CAN HAVE A PLACE IN YOUR GARDEN

*The world of bamboo is a fascinating one, conjuring images of groomed groves in Japan, delicate Chinese drawings and exotic tropical plants. The beauty, grace and strength of bamboo are unequalled in the plant world.*

**B**amboo is well integrated into the cultures of all who live with it. As a material for construction, furniture and instrument making, or as a source of food and medicine, the uses of bamboo are unlimited. There are many ways to use bamboo in the garden. As an accent plant, groundcover, or grove, bamboo lends an unusual texture and form to the landscape. Although often thought of as a tropical plant, many bamboos are suitable for growing in temperate regions.

This is especially true of dwarf bamboos, which are easily adapted to the

home and garden. Their small size is an asset to a small yard. They are suitable in a container or as a groundcover. And, once established, they are both cold hardy and drought tolerant plants.

Here we present an overview of the bamboo family and talk about dwarf varieties, their attributes, and how they can be used in the garden.

But first, let's begin with a disclaimer. Simply put, not all dwarf bamboos are dwarf in all situations. The severity of winter plays an important role in determining the vigor of a bamboo. The warmer the weather, the taller and faster a bamboo will grow. As an example, the *Sasa*



*Shibataea kumasaca*



The strength and beauty of bamboo make for lovely furniture.

*palmata* in our yard grows to about 3 to 4 feet tall. In frost-free San Francisco, however, there is a handsome specimen about 10 feet tall.

### The Bamboo

There are over 1,200 species in the bamboo family. They include dwarf types that grow less than a foot tall, to tropical giants, which can achieve heights of over 100 feet. Bamboo is distributed throughout the world; the largest concentrations are in the tropical, sub-tropical and temperate regions.

Most of the hardy bamboo we are familiar with originated in China and Japan. In fact, only two varieties are indigenous to the United States. The *Arundinaria gigantea* and one subspecies are common throughout the Southeast and are known as river cane, or to many people, a good fishing pole.

Bamboo is really just an overgrown grass, but with several unique char-

acteristics. Their stems, or culms, are rich in protein and silica, resulting in a strong material suitable for building. Before breaking ground, a new bamboo shoot is a tender edible, an important food source in Asia and a delicacy when freshly harvested. After emerging from the ground, a new culm literally shoots up, capable of growing up to 4 feet in a single day. This giant

grass establishes clumps or groves quickly, creating a sustainable, harvestable crop in as little as 5 to 10 years.

Whether as a live plant, a material for construction or furniture making, or as a source of food and medicine, many cultures have integrated bamboo into their daily lives. The nature of bamboo has captured the interest of many Americans, who are discovering this unique plant and its many uses.

The introduction of bamboo into the United States started in the early 1900s. McClure,



Every part of this roof in the Phillipines is made of bamboo.



Meyer, Young and others were tireless in their efforts to identify, import and establish bamboo in America. Former USDA introduction stations in Georgia and Louisiana are living monuments to their work.

Today, members of the American Bamboo Society continue to study, identify and collect new and rare varieties. Society chapters and members maintain five regional quarantine greenhouses to observe new imports and comply with strict USDA requirements. All new bamboo imports must be quarantined for one year before release. Even so, dozens of new varieties have been introduced since the Society formed over 20 years ago.

It would be wrong to talk about bamboo without considering its use as a resource. Throughout the world, bamboo is a plant used for building things. Complex architecture, musical instruments, paper, and furniture are all examples of how bamboo is an important building material as well as a beautiful plant.

A good example in the Philippines was at a



*Hibanobambusa tranquillans* 'shiroshima' tolerates more sun than other dwarf bamboos.

small restaurant, which used a bamboo truss roof system. The roofing material, a grass thatching, was supported by bamboo purlins which were lashed to bamboo struts which were lashed to bamboo trusses, all held together with split bamboo lashing. It is hard to come up with a better demonstration of the strength of this material.

### Bamboo Flowering

The phenomenon of flowering in bamboo is a little understood event, resulting in much confusion and a few myths. Admittedly, in a botanical world classified by flower, it is hard to study a species that flowers only every 30 to 60 years. In some bamboos, the cycles are even longer, with 120-year intervals between flowering. Because of this, information concerning flowering habits and cycle length is hard to find and equally difficult to gather into usable form.

There are two myths we should address concerning bamboo flowering. The first is when a species of bamboo flowers, all the same species of bamboo all over the world flowers. Given the irregular nature of botany, this myth seems impossible; how could a plant be so organized? So, although many plants through the world (especially offspring) might flower, it is unlikely that all will flower at once.

A second, related myth suggests that after any bamboo flowers, it immediately dies. This is true in some cases but is not always so. Many bamboo species can flower, and pro-

duce seed, with little detriment to the vegetative growth.

The variegated simon bamboo has been flowering off and on for years. Its clusters of tiny flowers rarely produce seed and are almost invisible in the dense foliage. If you want to know the true meaning of inconspicuous flowers, this is the plant.

On the other hand, a massive flowering and grove dieback, known as gregarious flowering, is not unusual. One theory offered by David Jansen suggests that a long interval and gregarious flowering is a survival technique. The seeds, which are a delicacy to rodents, must be produced to a saturation point. Only by devoting a grove's entire resources to producing seed will there be enough for foraging animals and to establish a new grove. This can result in the present bamboo dying off, its energy spent on making as much seed as possible.

Isolated areas of cane along the White River have been flowering for the past few years. A few shoots are setting flower here and there, but most of the grove is unaffected. One patch, however, set seed — lots and lots of seed, thousands of viable seeds.

Most of these seeds germinated in less than two weeks, which may support Jansen's theory. If the seed is considered food, the faster it germinates, the better. The less time a seed remains a seed, the less time it will be considered dinner.



Bamboo likes winter!

### THE SEASONS OF BAMBOO

The growth of bamboo through a season occurs in several stages. Sometime between March and May, depending on the species and Mother Nature, the first growth starts with new culms emerging from the ground. This is called shooting, as in shooting up, an appropriate term for this burst of energy. A few years ago, we measured the growth of a new shoot of yellow groove bamboo: 13 inches in 24 hours.

During the next four to six weeks, a developing cane sprouts branches and leaves. This





*Sasa veitchii* displays a pseudo variegation on its winter leaves as the chlorophyll recedes from the leaves' edges.

maturing takes place through the summer, providing food for the bamboo. In late summer and fall the plant increases its size underground. The runners or rhizomes actively seek new turf, preparing for the next season's shooting.

In spite of its reputation as a fast grower, a new planting will take a while to become established. The 'Sleep, Creep, Leap Rule' often applies. The first year the bamboo is said to Sleep. The second year it is busy sending out new growth underground, thus, the Creep. The third season is the Leap – bamboo growing where there was no bamboo before. Often, however, this three-year wait is condensed into a single season. Bamboo surprises are one of the many joys of spring.

## BAMBOO VARIETIES

Hardy bamboo can be roughly divided into three groups, based on the mature height of the plant. Most of the *Pleioblastus* and

*Sasaella* genus are considered dwarfs and range in size between 1 and 5 feet. The pygmy bamboo and dwarf whitestripe bamboo are typical of this group.

The *Sasa*, *Arundinaria*, and *Pseudosasa* are medium-sized bamboo, with heights between 5 and 20 feet. The *Sasa* are attractive Japanese bamboos known for their large leaves and rapid growth. The river cane that is so common along Southern waterways is an example of an *Arundinaria*.

The tallest group is referred to as timber bamboo. There are over 80 species and sub species of *Phyllostachys* available in the United States. The tallest of the hardy bamboos are mostly indigenous to China and can range in height from 20 feet to over 70 feet tall. Established groves, roadside hedges and large specimen plants are typically a variety of *Phyllostachys*. The culms of timber bamboo are extremely strong when mature, making them

suitable for construction and furniture making. The young shoots are a good food source for humans; and, the leaves and tender canes are being explored as fodder for livestock.

## Bamboo in the Home and Garden

Bamboo is a versatile plant in the home and garden. As a fast spreading groundcover, dwarf bamboo does the job well, tolerating shade and dry conditions. In a landscape, the diverse textures and colors of leaves create appealing contrast to flowering plants.

Many bamboos are appropriate plants for containers. Dwarf and medium varieties are a pragmatic choice for a small spot, but if you have the space, some larger bamboos are also suitable.

*Pleioblastus*, *Sasa* and *Shibataea* species all make handsome house or patio plants. Bamboo can also be grown as bonsai plants. By pruning carefully and restricting rhizome growth, one

can create a miniature version of a bamboo grove. Containerized plants should be over-wintered in a frost-free location, as frozen rhizomes could be fatal to the bamboo.

## Containing Bamboo

Because the tendency of bamboo is to grow quickly into your neighbor's rose garden, containing bamboo is an important consideration. This can be done with man-made barriers, natural barriers, or various other containment methods.

The easiest way to contain bamboo is to mow an area around the planting. Mowing will sever any emerging culms, keeping its spread in check. To be effective, a mowing band should be as wide as the bamboo is tall. For a timber bamboo, a 20' band would work; a dwarf might only need a 2 to 4 foot band.

Trenching or deep edging around a grove can also be used to curb the rhizomes. This maintenance should be done once or twice a year to cut errant growth. This is a more labor-intensive method but might work better in a tight planting area.

Bamboo will not grow into water, so ponds and streams are considered natural barriers. Other natural barriers that will slow down a bamboo are very dry soil, rocky areas, or deep shade.

Concrete or heavy gauge polyethylene can be used as physical barriers. These barriers should be 3 feet deep and carefully installed to seal all seams. It is best to slope the barrier away from the planting so any rhizomes are deflected



The extended growing points from the rhizome of this yellow bamboo, *P. aureo-sulcata* 'Spectabilis' evidence the potential of some bamboo species for aggressive growth.



upward. A 2-inch lip should extend above the soil line. Yearly inspections should be made to check for wandering rhizomes.

Or you can employ another approach to growing bamboo. This is known as a 'let-'er-rip' attitude and is summed up by painter and bamboo lover, Mary Sims; "I've been waiting for bamboo to take over for years." After all, as gardeners, we must not delude ourselves into thinking we are in charge of our creations. And with many plants, we must realize it is they, not we, who are in control.

A fellow came to the nursery this spring and was looking for a specific vining groundcover for the bank of a large pond. Instead, I suggested bamboo, which would be an excellent choice for this site. The leafy culms would stand out beautifully against the water, the reflections glimmering on the pond surface while the rhizomes reinforce the pond berm, preventing erosion.

He looked at me like I was crazy to suggest such an invasive plant, and left quickly, determined to go into the woods and dig some roots of this vine, kudzu.

## BAMBOOS FOR TEMPERATE REGIONS

Dozens of varieties of bamboo are suitable for temperate regions. Some are evergreen, withstanding sub-zero temperatures with little damage to the leaves.

Other species die back in the climactically challenged Zone 6 Arkansas winters, so must be treated as deciduous perennials. This is true of some of the dwarf species, which can be sheared to ground level before spring. Other varieties will releaf from the old culms each year or re-

grow from the dormant rhizomes. All hardy varieties can survive hard freezes, looking attractive through the fall, long after other plants have succumbed to winter.

### Timber Bamboo

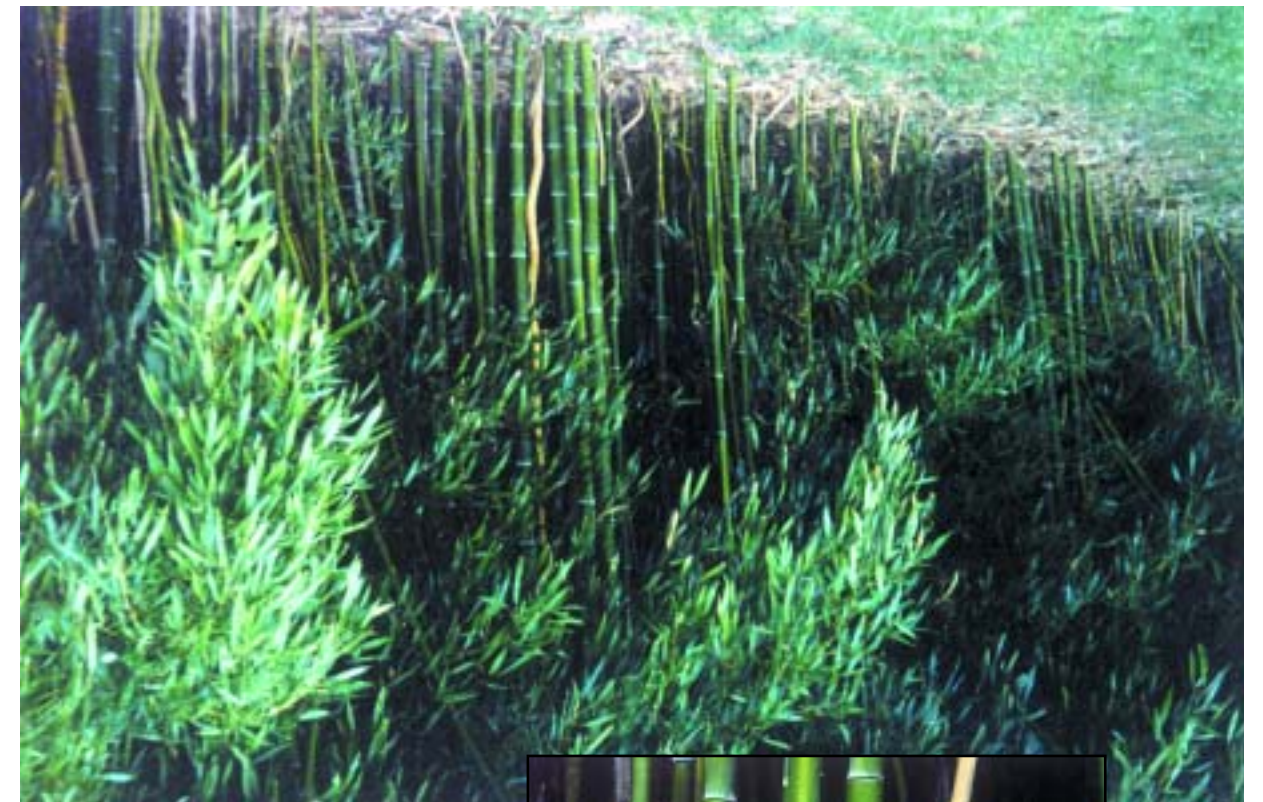
There are many Timber Bamboos that can be grown in Zones 5 and 6 and in the South. The *Phyllostachys* are the tallest of the hardy bamboos, and many can withstand harsh winters. Known for their large culms, some varieties have grown to 25 to 30 feet in the Ozarks. Hardy bamboo grown in subtropical regions can grow upwards of 50 feet tall.

One of the varieties often seen in roadside patches is the yellow groove bamboo. An exceptionally hardy species, *Phyllostachys aureosulcata* is often evergreen, wilting in only the worst of winters. In our trials, culms have grown to a height of 25 feet and have a diameter of one and one-half inches.

One cultivar of the yellow groove is equally hardy. *Phyllostachys aureosulcata* 'Spectabilis' has yellow culms and is a stunning specimen when mature. *Phyllostachys rubromarginata* is another large bamboo tolerant of cold, dry wind. It was the fastest growing bamboo in USDA trials and can reach heights of over 30 feet.

*Phyllostachys dulcis* is also a good choice for colder regions. Known for quickly forming large diameter culms, it is said to be hardy to -5 degrees Fahrenheit. It is known as the 'sweetshoot' bamboo, one of the tastiest of the hardy bamboo.

There are a few other hardy bamboos worth mentioning. The *Semiarundinaria fastuosa* has an erect habit with reddish culms. Growing to about 10-12 feet, this Japanese bamboo makes a good hedge. Other members of this genus



The edge of a grove of yellow bamboo, *P. aureosulcata*, demonstrates that bamboo can be kept confined within a desired area.



A closeup view of yellow groove bamboo, *Phyllostachys aureosulcata*.

are also handsome, with straight culms and large leaves.

*Fargesia* is another genus of hardy bamboo. A graceful, arching bamboo, the *Fargesia* grows in the mountains of China and is a principal food source for the pandas. They are exceptionally cold hardy but do not like hot Southern summers. One or two species are said to be more heat tolerant, so they may be more suited to the South. Because of their cold tolerance, this is a family that should be considered for Northern plantings. Considered a clumping bamboo, the *Fargesia* are known for their non-invasive habits.

### Dwarf and Semi-dwarf Bamboo

Dwarf bamboo is a generic term used to describe the smallest members of the family.

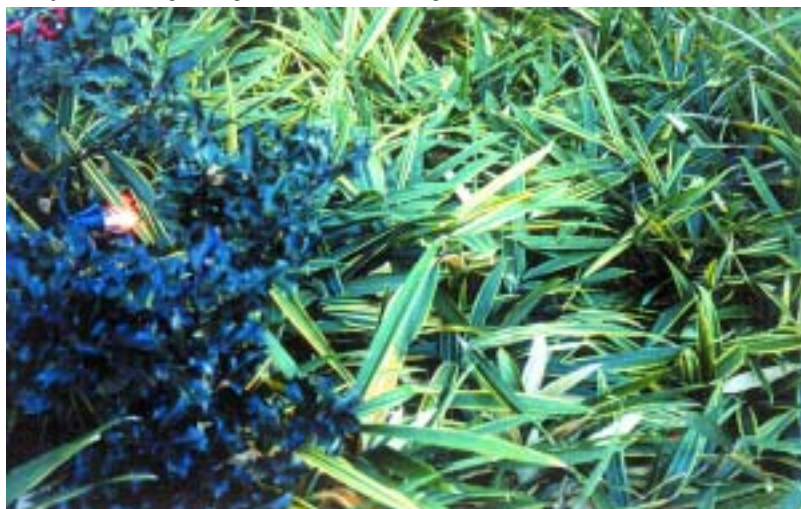
The word "short", of course, is a relative term and our previous disclaimer still applies. Because bamboo responds differently in different climatic zones, the definitions of height become even more fuzzy.

Let's solve this problem with a simple four-letter word. By adding the prefix 'semi', we can increase our coverage of this group of bamboos by over 45%. The name "Dwarf and Semi-Dwarf Bamboos" will be an appropriate heading, allowing us to talk about more bamboo without being concerned about that nasty





*Indocalamus tessellatus* bears the largest leaves of the hardy bamboos, preferring shady sites, and growing to a mound-forming 3 to 5 feet tall.



At the Cincinnati Zoo, holly and a dwarf bamboo make for a lovely combination.

ing will take a few years to achieve its maximum stature, no matter in which zone it is grown.

On the upcoming varieties, the heights given are based on our trials and are being updated yearly. If you live in Southern areas, Zones 7 and 8, you could expect taller growth, faster maturity, and less winter damage. If you live further south, zones 9 and 10, you are blessed with near sacred conditions for growing any bamboo.

The *Pleioblastus variegatus*, or dwarf whitestripe bamboo, makes a short, delicate ground-cover. Growing to a height of 12 to 16 inches, the variegated leaves show up well at the base of taller plants, such as golden bamboo. The whitestripe prefers a shady location, adding a bright highlight to sun-starved areas.

Another variegated dwarf is the *Sasaella masamuneana* 'Albostriata.' Growing at the base of a ginkgo tree, this handsome specimen is outstanding in the fall garden. This gem has proven to be quite hardy, holding its leaves in the worst winters. At about two feet tall and a moderate Rambler, this bamboo is also a fine groundcover.

The Sansas are bamboos of medium height, usually growing between 2 to 5 feet in our area. They are known for their large leaves dancing at the tips of thin culms in a palm-like fan. Sansas can easily scorch in the sun, so they prefer a

shady site. Known as very aggressive growers, they must be carefully placed to avoid being moved twice, which is what we had to do.

The *Sasa veitchii*, a shorter, slower growing species, is easily identified by its winter color. Chlorophyll recedes from the edges of the leaves, creating a pseudo variegation and a stunning winter display. The effect is enhanced at pond's edge.

The *Indocalamus tessellatus* has the largest leaves of all hardy bamboos. Forming a handsome mound, this plant seems to cascade as it grows. A Chinese native, it grows to 3 to 5 feet tall and prefers shade.

*Shibataea kumasaca* is a Japanese bamboo that forms a thick hedge 4 to 6 feet tall. The

Japanese term, "kumasaca," literally translates to "field of short bamboo." Known as the ruscus-leaved bamboo, it has short wide leaves densely born on narrow culms. This species is one of the hardiest, tolerant of severe cold and wind chill with minimal damage to the leaves. This year three hedges surprised us by growing about 10 inches taller than last year. Buried under snow, the thin culms bend to the ground, popping back up, one by one, as the weather warms.

Thought to be a naturally occurring hybrid, the *Hibanobambusa tranquillans* 'Shiroshima' is of Japanese origin with a stunning variegation that makes it desirable for a container or the garden. It tolerates more sun than other



Growing at the base of a ginkgo tree is the lovely *Sasaella masamuneana* 'Albostriata.'





dwarf bamboos.

The Cincinnati Zoo is host to a number of mixed plantings, which are examples of how bamboo can be worked into the landscape. Along the pathways at the entrance of the Zoo are raised planters constructed of railroad timbers. These 3-foot tall planters, surrounded by asphalt pathways, are a simple but effective way to contain the bamboo.

At home, our small grove of golden bamboo has become a haven for the birds. Juncos, warblers and wrens hang out in the shelter of the thick hedge and anxiously whisper to each other whenever we walk by. This year, it gave us another bamboo surprise: after 6 years, it had grown to 8 feet. This spring the new canes are already 16 feet tall. This year, the mild weather had little effect on the leaves, so in late February, the only green left in the yard was bamboo. Starting in late March and continuing into summer, we are finding lots of new surprises: bamboo where there was no bamboo before. We like having bamboo all over the yard and are always seeing something new in this beautiful and diverse family. It is our hope, with more knowledge, bamboo will be a better understood plant, enjoyed for its beauty, appreciated for its strength and usefulness, and given a prominent place in the home or the garden, a place it truly deserves. ♡

Gordon and Mila started the Ozark Bamboo Garden as an excuse to grow as much bamboo as they had space for. Out of a collection of about 100 varieties, they now propagate about 50 species, 40 of which are now in trial plantings around the nursery.

(opposite page) Dwarf whitestripe bamboo, *Pleioblastus fortunei*, is a favorite small variety for the garden, as well as for container growing and bonsai treatment.

## CREDITS

A summary of this article was published in *The American Bamboo Society Newsletter*, February 2000.

The American Bamboo Society provides a multi-leveled forum for bamboo enthusiasts. Research grants, publications, and source lists are some of the benefits offered. Individual chapters located throughout the United States offer local support and have as members some of the nicest people we have met.

### Membership information:

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Yearly membership \$35 includes monthly newsletter, annual journal and membership in local chapter.

Some photos have been previously published in *The Temperate Bamboo Quarterly*, a magazine published by Adam and Sue Turtle, leading bamboo authorities. In addition to publishing TBQ, Adam and Sue maintain a collection of over 200 varieties of hardy bamboo, operate a wholesale bamboo nursery, travel around the world and lecture on growing bamboo. Their magazine features articles covering many facets of bamboo. A typical issue might discuss bamboo plants, uses of bamboo, recipes for shoots, book reviews and notes and comments from other gardeners. Whether a novice or an experienced grower, one can enjoy this magazine for its folksy style and dedication to bamboo.

### The Temperate Bamboo Quarterly

Earth Advocates Research Farm  
30 Myers Road, Summertown, TN 38483-7323  
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Ozark Bamboo Garden catalogue, price list, bamboo information available for \$2.00 from Ozark Bamboo Garden, 1059 CR 266, Eureka Springs, AR 72631; 501-253-6801. E-mail: [bamboos@cswnet.com](mailto:bamboos@cswnet.com).



# The Margaret Grigg Nanjing Friendship Garden

by Leslie Muskopf

*The Margaret Grigg Nanjing Friendship Garden at the Missouri Botanical Garden is the most authentic Chinese garden of its size in the United States.*

Opened to the public in 1859, the Missouri Botanical Garden was a unique, visionary gift to the city of St. Louis from philanthropist Henry Shaw. Influenced by physician-botanist Dr. George Englemann, Shaw included both an herbarium (collection of botanical specimens) and a library. Today, under the tireless direction of Dr. Peter Raven, the MBG has attained a leadership position in plant conservation and research within the world community. A monumental project, the Flora of China, has been an on-going work of the MBG as researchers seek to catalogue the 30,000+ species of plants native to China – about an eighth of the world’s known flora. (The continental U.S. is home to perhaps half that number.) Many of our most familiar ornamental plants originated in China – azaleas, rhododendrons, camellias, gardenias, hibiscus, peonies, chrysanthemums, and ginkgos.



The Margaret Grigg Nanjing Friendship Garden commemorates this longstanding scientific and cultural exchange between the Missouri Botanical Garden and Chinese botanical institutions. The Chinese garden also honors the sister city relationship between St. Louis and Nanjing, established in 1979 as the first such relationship between the United States and China. Construction of the Chinese garden was made possible by a gift from Margaret Grigg Oberheide in memory of her parents, Estelle and Robert Blanke. Major features of the garden were gifts from the city of Nanjing with the Garden and the city of St. Louis giving a children’s playground to the city of Nanjing in return. The Margaret Grigg Nanjing Friendship Garden was designed by the award-winning Chinese American architect Yong Pan, in consultation with Environmental Planning and Design of Pittsburgh, Pennsylvania.

## An Ancient Tradition

Landscape design has been of great significance in Chinese culture for more than 2,500 years. The Japanese garden style, more familiar to Western gardeners, was itself born of



No Chinese garden is complete without a water feature.

inspiration from the Chinese garden tradition — a blending of the traditional art forms of landscaping, painting, poetry, and calligraphy within a spiritual and philosophical framework. The naturalistic garden style of 18<sup>th</sup> century Europeans, too, was inspired by the Chinese tradition.

Every detail of the traditional Chinese garden stems from Taoist philosophy’s concept of *c’hi* – spiritual harmony of man with the universe. To help humans experience that special state, Chinese landscape design, influenced also by Confucianism and Buddhism, seeks to create that haven of peace and accord with Nature. In northern China, this design takes the Imperial form of elaborate gilded roofs, incorporating brilliant reds and greens, perhaps to enliven the four seasons. In southern China, the design is more reserved, distinguished by monochromatic tones of grey, white, black, and reddish brown more suited to retreats for gentlemen and scholars. Typically, these gardens are private, enclosed within walls. Often Chinese gardens resemble a labyrinth of walled spaces that subtly manipulate perspective, making small spaces appear infinite.

Although the Grigg garden is built in the style of the southern provinces where Nanjing is located, it includes a broader range of plants so as to commemorate the extensive list of native Chinese plants. Because the St. Louis climate cannot accommodate traditional

Chinese tropical plants, these plants are displayed in containers and set out in the garden



The traditional Moon Gate symbolizes that you are entering a special place with the circle a symbol of perfection.



Tucked away from the garden’s main pathway is a rough-hewn stone table with stone seating.





Large, naturally eroded limestone rocks, known as Tai Hu, brought to the MBG from China, are sited around the garden in the traditional manner.

when the summer temperatures allow.

## Enter the Garden

A traditional circular entrance, or moon gate, signals you are entering a special place. The circle is a symbol of perfection to the Chinese, who have a saying, “Flowers are beautiful when the moon is full.”

Over the Moon Gate is a traditional fan-shaped stone plaque carved with the characters *Yu Ning Yuan*, translated as “Friendship Nanjing Garden.” The characters were drawn by Liu Hai-su, a famed Chinese calligrapher who died at the age of 100, the day after completing the lettering for this garden.

A group of tall, narrow stones beside the entrance represents a grove of bamboo. The undulating roof-line is meant to resemble a range of distant mountains in the background. Tiles along the wall display the Missouri Botanical Garden logo.

Inside, the narrow entrance follows a winding path adorned with handmade mosaics made from colorful pebbles depicting symbolic plum



Pebbles from China were used to create the traditional mosaics inlaid in the garden's paths and paved areas.

blossoms, peonies, and birds, with a yin/yang symbol where the path divides. The winding path and lush plantings allow the garden to unfold in a series of scenes, always offering the elements of mystery and surprise. The path leads to the central pool and pavilion area, the spiritual heart of the garden.

## The Heart of the Garden

In traditional Chinese landscape paintings, a tiny hut or pavilion almost always provides a focus, dwarfed by vast, precipitous mountains and waterfalls. The pavilion, or *t'ing*, represents humankind's place in the universe, balanced



To include tropical or special plants in the garden, containers are used.



Because the Chinese term for landscape is *shan shui*, literally ‘mountains and water,’ the placement of naturally eroded rocks is integral to the garden design.



The teahouse and pavilion are the heart of the Chinese garden.

between heaven and earth.

Many Chinese pavilions are noted for elaborate and fanciful carvings of animals, dragons, and sea monsters, but this garden is in the more restrained style of the scholar's garden, serving as both quiet retreats and social gatherings.

The Grigg pavilion was originally made in Nanjing, disassembled and shipped to the US, and reconstructed on site at the MBG. The structure fits together like an intricate Chinese puzzle with only the roof fastened with nails. Each of the six columns is made from a single tree. The massive ceramic tile roof curves dramatically, seeming to float in suspension from its lotus flower finial, echoing the upward sweep of tree branches behind the pavilion. On the roof and balustrades, intricate carvings repeat the motifs of the phoenix, bamboo, and mountains.





Craggy rocks border the stream edges to imitate a mountain stream.

## Rocks and Water

The Chinese term for landscape is *shan shui*, literally ‘mountains and water.’ No Chinese garden is complete without a body of water, no matter how small.

Beside the pavilion in the Grigg garden, a lively stream of water trickles down a slope lined with stones to resemble a rocky mountain gorge. The stream flows beneath a white marble bridge that was hand-carved in China and into the quiet pool next to the pavilion’s teahouse.

Water is the nurturing, yielding, or *yin* element, a necessary counterpoint to the



The white marble bridge was handcarved in China and shipped to the MBG for the Grigg garden.

hard, vertical, *yang* elements of the large, naturally eroded limestone rocks, called Tai Hu stones placed throughout the Grigg garden. These stones were brought to the garden from Lake Tai in Jiangsu Province near Nanjing and from Lake Chao Hu in nearby Anhui Province where the stones have been prized for centuries. Inside the garden’s pool, rugged rocks jut from the water, reminiscent of craggy shorelines and islands. The pond’s irregular edge, lined with native Missouri stone, creates an illusion of great size.

## Leaving the Garden — The Lotus Gate

Behind the pavilion, five stone panels, carved in China, depicting the Confucious temple area near Nanjing, are mounted on the white stucco wall. Just beyond, in another stucco wall are four decorative window openings, known as the “eyes” of the garden. Each presents a different



Combining rocks and water effects symbolic representation of the harmony of yin and yang.



The traditional Chinese garden is enclosed by walls to create a private haven for humans to find peace and harmony with Nature.



Black roof tiles display intricate design.

sents a strong but resilient character. It is used, also, in every traditional Chinese garden for its beauty, the rustling sound

design through which to glimpse the bamboo grove on the other side. The wall leads to the massive wooden exit gate. Black tiles roof the gate adorned with carved lotus flowers. On the wall beside the lotus gate is a black stone tablet carved from Chinese characters created by the great calligrapher Pu Jie, brother of the last Chinese emperor Pu Yi:

“Sitting alone in a secluded bamboo grove,  
I was singing while playing the qin  
Before realizing, in the deep grove,  
The moon had already joined me  
With her beautiful light.”

## Plants as symbols

Over the centuries, many species of plants have attained symbolic meanings to the Chinese. In the traditional Chinese walled garden, plants are used sparingly and selected for these special meanings.

**Bamboo** – As an evergreen, bamboo is one of the “three friends of winter.” Bamboo repre-

of its leaves in the breeze, and the feathery shadows it casts upon the garden walls.

**Pine** – Another evergreen “friend of winter,” *Pinus* symbolizes longevity, persistence, tenacity, and dignity. Garden specimens are often chosen for their gnarled limbs, twisted trunks, or windblown appearance to suggest great age.

**Flowering Plum** – In late winter, *Prunus mume*, the third “friend of winter,” displays



Looking back into the Margaret Grigg Nanjing Friendship Garden from the Lotus Gate Exit, the visitor is left with magical vision of the serene courtyard.





The side of the Lotus Gate is adorned with lotus carvings symbolizing purity.

brehtaking masses of blossoms on bare branches, often while the garden is still covered with snow. Taoists believe one who contemplates this sight can experience the essence of spiritual harmony. *Prunus mume*, called “plum blossom,” is one of the most important species in Chinese gardens, where it represents renewal and strength of will. Branches forced to bloom indoors symbolize friendship.

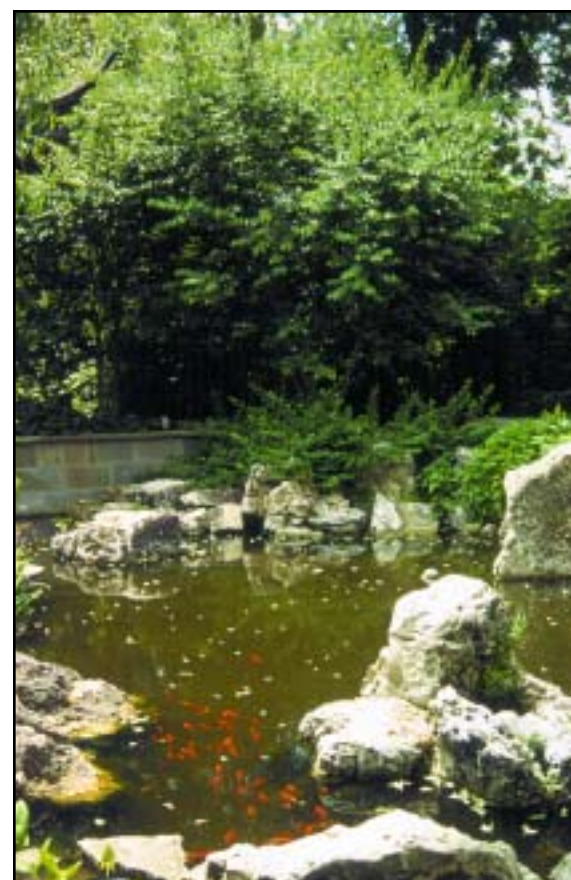
**Lotus** – The sacred lotus, *Nelumbo nucifera*, symbolizes purity, with lovely white and pink blossoms emerging from the mud beneath the water where it grows. For the Buddhist, the lotus represents a noble character — the soul battling against the material world to reach the light. It is also a Confucian symbol for the enlightened man.

**Chrysanthemum** – An ancient symbol of splendor, luster, and “the courage to make sacrifices for a natural life,” chrysanthemum blooms are displayed sparingly to emphasize their individual beauty.

**Peony** – Peonies symbolize wealth as they were forced into bloom for winter use in Imperial palaces and in the receiving halls of Chinese homes. Tree peonies, *Paeonia suffruticosa*, were reserved for royalty and called

the “King of Flowers.”

**Orchid** – While many orchids are native to China, the elegant cymbidiums, often grown in containers, are the most commonly used in Chinese gardens. Considered the “ancestor of fragrance,” they symbolize the perfect personality by exuding an exquisite perfume that is not overbearing.



Rugged rocks jut from the pond's surface to suggest mountainous islands.

**Narcissus** – *Narcissus tazetta* var. *orientalis* found its way to China from Persia via the Great Silk Road. The early spring bloomer came to symbolize regeneration and the new season.

Leslie Muskopf handles Public Relations, for the Missouri Botanical Garden. The Garden is located at 4344 Shaw Boulevard, just off the Vandeventer Exit on US 44, St. Louis, MO. Don't be surprised if you find one day is not enough to fully explore this magnificent public garden. Visit their website at [www.mobot.org](http://www.mobot.org) for more information.



The Chinese ground orchid, *Bletilla striata*, is a hardy species native to both China and Japan.