

## July 2009—*Oklahoma Gardening Shows*

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*Oklahoma Gardening* Information Sheet (#3604)

**OETA air date: July 25 and 26, 2009**

OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

**Integrated Pest Management with Dr. Tom Royer: Monitoring** – In this segment we continue to explore aspects of Integrated Pest Management (IPM) with Entomology Professor and IPM Coordinator Tom Royer. Integrated Pest Management or IPM is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices including cultural and physical techniques, biological control and chemical pesticides. IPM focuses on preventing pest problems before they occur. When pest problems do arise, management options focus on those with the least possible impact on the health of humans and the environment. In this segment, we look at scouting, monitoring and collecting information in the garden.

Integrated Pest Management utilizes many simple tools and techniques to manage pest, but requires knowledge of the landscape and the insects, diseases, plants and other life in the landscape. Knowing your plants and what they should look like when healthy is the first step to recognizing a problem in the landscape. Regularly looking at the plants, or scouting, to monitor their health can help you to identify problems early on. When scouting, it is also helpful to look for signs of insects and diseases present in the landscape.

There are some tools available that can help in monitoring for insect pests. These include traps and baited lures that are hung, for example, in fruit trees. Monitoring for insects helps to identify when control measures need to be taken. In this segment, Dr. Royer shares monitoring techniques to help you keep on top of problems in the landscape.

**Use of Water in Japanese Gardens** – In this segment we look at the use of water in Japanese gardens. Water dominated each garden we visited in Japan. And water is ever present in Japan, from the flooded rice paddy, to the mountain streams, to the surrounding oceans and seas. So it is no surprise that it should feature so prominently in the landscape. A less obvious reason for including water in Japanese Garden design is to create visual space. In Japan, the natural landscape is very dominating. The mountains are steep and close together, forcing people to live in the narrow valleys. The valleys are also home to dairies, rice fields and other farms, and so the people live in dense communities on the land that remains. By including a large sheet of water in the garden, designers create visual space, something that is very limited in the crowded cities. From a design standpoint, open space has many advantages, it provides a place to rest the mind and eye, open space also has the potential to anchor smaller components of the design into a unified whole. Open space also provides contrast to the more detailed surroundings. These same affects are achieved when using raked gravel to represent water. In fact, the simplicity of a dry pond is very powerful in creating open or empty space. Most dry gardens include a large expanse of raked gravel, the emptiness representing the Zen concept of mu or nothingness.

Water is often used symbolically in the landscape and typically represents an ocean or sea. One interpretation for the symbolic use of water as seas relates to ancient Shinto practices in which sacred ponds were created to communicate with those gods that came from over the sea, called *tōrai kami*. These sacred ponds or *kami-ike* still exist today. Some sacred waters are considered to hold special powers, such as the waters at Kiyomizu-dera, where we drank from the Waters of Happiness. Water is also used to metaphorically cleanse or purify the spirit, a practice that extends across many cultures worldwide. For this purpose, water basins are placed at the entrances to sacred spaces and offer a place for both physical and mentally or spiritually preparing oneself to enter the sacred grounds. At Buddhist Temples, these water basins are called *tsukubai*, and at Shinto Shrines they are called *temizuya*. A famous *tsukubai* at Ryoan-ji Zen Temple in Kyoto is a small stone receptacle carved with four kanji, or Japanese characters. The characters, when read together with the central square basin, translate literally as “I only know plenty”, a phrase that simply means “what one has is all one needs” a reflection of the anti-materialistic teachings of Buddhism.

Water in the landscape also has a very practical, aesthetic purpose in that it acts as a mirror, reflecting the rocks, trees and lanterns carefully placed above its surface. It also provides a stage for a magnificent collection of water loving plants. The principle players on this stage are the many varieties of iris and the water lilies we found blooming throughout the gardens.

Other inhabitants of the ponds are the famous Japanese koi. Koi are considered to be one of the strongest fish and are symbols of love and friendship. If you clap your hands while standing at the pond’s edge and the koi swim to you, you will be blessed with good fortune.

**Heian Jingu Shrine** – In this segment we visit Heian Jingu Shrine in Kyoto. The Shinto shrine was built in 1894 to commemorate the 1,100<sup>th</sup> anniversary of Heiankyo, the old name for Kyoto. The red torii, or gate, standing outside the temple is the largest in Japan. The shrine is dedicated to Emperor Kanmu, who moved the capitol to Kyoto and Emperor Komei, who was the last emperor before the capitol was moved to Tokyo.

The shrine houses four gardens surrounding the main buildings. The paths wind through the gardens in the style of a large strolling garden typical of the Edo period. The strolling gardens carry you along a path to a number of magnificent features. The south garden is a Heian style garden designed for *Kyokusui-no-en*, a garden party in which aristocrats would amuse themselves by composing Japanese poems. To celebrate this old tradition, the garden features seasonal haikus written about individual plants in the garden.

The east garden features a magnificent pond called *Seiho-ike* and a famous bridge, *Taiheikaku*. The garden is a glory in spring when the cherry trees come into bloom. Weeping Cherries (*Prunus subhirtella* ‘Pendula’) surround the pond and drape over the water. The trees are not pruned, but allowed to extend to great lengths. Often, the weight of the fruit-covered branches becomes too much for the tree to support. Large bamboo trellises are built to support the fruited branches.

The middle garden called *Naka Shin’en* was constructed in 1895. It contains the *Soryu-ike* pond

crossed by a bridge called Garyu-kyou, the Sleeping Dragon Bridge. The stepping stones used in the bridge come from girders of Kyoto's famous bridges from the 16<sup>th</sup> century. The pond is filled with water lilies and surrounded by a carpet of Rabbit-ear Irises (*Iris laevigata*).

**Japan Hosts/Collaborators** – In this segment we feature all the wonderful people who helped make our experience in Japan possible and memorable. Special thanks to Professor Paul Hsu from the Department of Horticulture and Landscape Architecture, and Dr. David Henneberry, Director of International Programs in Agriculture for supporting our participation in this program.

We all appreciate the generous hospitality of our hosts Mr. Yosuke Fujiwara and Mrs. Suiko Fujiwara, who own the guest house, and the many women who helped out in the kitchen. A great team of guides from the Kameoka Exchange Center joined us each day to help make our visit run smoothly. During our time together we came to know each of our guides individually and will remember them always.

Ms. Kiyomi Kojima, Manager at Kameoka Exchange Center  
Mr. Yukio Hirai, General Manager at Kameoka Exchange Center  
Mr. Masahiro Fujiki, Manager  
Mr. Hirotsugu Ijiri  
Mr. Fuminori Kikuchi  
Mr. Munetsugu Fujita, Guide and Translator  
Mr. Seiki Fujita, Guide  
Miss Margaret Mann, Translator and Coordinator in Kameoka City  
Mr. Hiroshi Kameda, Guide and Translator  
Ms. Takako Kobatake Guide and Translator

In Tokyo Mr. Masanori Sato served as our guide and made sure we all made it to where we needed to be each day.

On several occasions we interacted with citizens of Kameoka. Some of which joined us for a garden tour, others worked alongside us in the gardens at the Kameoka Exchange. We learned a great deal from the Kameoka Youth Gardeners Association under the direction of Mr. Nonomura. Another special group of Kameoka citizens was the Rose Rock Group, which takes its name from Oklahoma's famous rose rocks. The members of this group have all visited Oklahoma in the past.

Special thanks to the Mayor of Kameoka, Mr. Masataka Kuriyama, to Professor Ken Kawai of the Kyoto University of Art and Design for his engaging lecture, and to Ms. Yoshie Nishimoto for inviting us into her country home for lunch.

Part of our experience in Japan was to spend a day with a host family. We met our host families at a Garden party hosted by the Kameoka Exchange, where we had time to get to know one another while we sang songs and ate Japanese style barbeque. We give many thanks to all the families for inviting us into their homes.

**4-H Centennial Garden** – In this segment, Kim is joined by a team of 4-H students who helped design and install a very special garden in the studio. 4-H is a youth development program operated through the Cooperative Extension Service. To celebrate the 100<sup>th</sup> Anniversary of 4-H in Oklahoma, a group of 4-H students joined forces with the *Oklahoma Gardening* team to design and install the “4-H Centennial Garden”. This beautiful garden features native grasses, vegetables, a birthday cake-shaped water feature, and of course, clover! The students tell us all about the process they followed to design and install this wonderful garden. The team was led by Jessica Stewart, 4-H Coordinator of Special Programs and Promotions and included the following team members:

Jeremy Arnett	Faith Howell	Aubrey Snider
Nancy Arnett	Grace Howell	Julie Snider
William Arnett	Gus Howell	Lillie Snider
Tori Burris	Sheree Howell	Karen Weckler
Chance Carpenter	Ethan Logan	Stephanie Weckler
Toni Carpenter	Vickie Logan	Susan Weckler
Becky Carroll	Shelley Mitchell	Anthony Zetterberg
Conner Carroll	Melanie Oliver	Donovan Zetterberg
Donna Dollins	Sky Oliver	Matt Zetterberg
Garrett Dollins	Kim Rebek	Misty Zetterberg
Emily Eller	Michael Anne Skouby	Peyton Zetterberg

A number of organizations supported this project. Special thanks to all who contributed time and materials:

Atwoods of Stillwater  
Bustani Plant Farm  
Dixie Ferrell  
Hardscape Materials Inc.  
Johnson Seed Co.  
Oklahoma 4-H Foundation Inc.  
OSU Botanical Garden  
Oklahoma Horticultural Society  
Stillwater Steel and Supply  
Sunshine Nursery

Thank you to all the students who worked on this wonderful garden and congratulations for a job well done.

**Cooking with Barbara** – Barbara Brown, Extension Food Specialist, makes a Japanese-style cucumber salad.

Please contact your local Oklahoma Cooperative Extension Service Office for more educational information on garden-related topics. If you need further information about this week's show, call (405) 744-5404 or visit our website <http://www.oklahomagardening.okstate.edu>. Thank you for your continued support!

Sincerely,  
 Kim Rebek  
 Oklahoma Gardening Host

## Japanese-Style Cucumber Salad (Sunomono)



- 2 teaspoons sesame seeds
- 2 English cucumbers
- 2 teaspoons salt
- 1/3 cup rice vinegar
- 1 tablespoon sugar
- 1/2 teaspoon low sodium soy sauce
- 1 teaspoon fresh ginger root, grated
- 1/4 cup shredded carrot

1. Toast sesame seeds in a 325°F oven until lightly browned. Set aside.
2. Slice cucumbers very thinly with a knife or mandolin. Place in colander over a bowl. Sprinkle with salt and mix well. Allow to sit 30 minutes.
3. In a small bowl combine vinegar, sugar, soy sauce and ginger.
4. Rinse cucumbers in cold water to remove excess salt. Drain well then gently squeeze in a clean towel to remove additional water.
5. Toss cucumbers with dressing. Cover and refrigerate at least one hour or until thoroughly chilled.
6. Serve in individual small bowls topped with shredded carrots and toasted sesame seeds.

Serves 6.

Nutrition Facts		
Servings per recipe: 6		
<b>Calories 32</b>	Calories from fat 9	
	% Daily Value	
<b>Total Fat</b> 1g	1%	
Saturated Fat	trace	0%
<b>Cholesterol</b> 0mg	0%	
<b>Sodium</b> 729mg	30%*	
<b>Carbohydrate</b> 6g	2%	
Dietary Fiber	2g	6%
<b>Protein</b> 2g	3%	
Vitamin A: 34%	Vitamin C: 11%	Folacin: 0%
Calcium: 2%	Iron: 1%	Potassium: 1%

\*Sodium content does not reflect discarded salt included in soaking water. Actual sodium content will be less.

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*Oklahoma Gardening Information Sheet (#3603)*

**OETA air date: July 18 and 19, 2009**

OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

**Meiji Shrine** – In this segment we visit Meiji Shrine in Tokyo. Many of the gardens we have presented during our Japan series were housed within Shinto Shrines. Shinto is the name of the former State Religion of Japan. Shinto is not Buddhism, though the two faiths have had a strong influence on each other throughout Japanese history. In Shinto, the afterlife is not a primary concern; much more emphasis is placed on fitting into this world, instead of preparing for the next. Shinto involves the worship of kami, or the spirits that dwell within objects. In Shinto, everything has a spirit, every rock, every tree, every cloud. The Shinto faith garners a great love and respect for nature and underlies many traditional Japanese arts including flower arranging, architecture and garden design.

A Shinto shrine is a structure that houses a kami. There are over 100,000 Shinto Shrines in Japan, with most villages housing at least one. The major feature of a Shinto Shrine is the Honden or sanctuary where the kami is enshrined. Shrines also include torii or sacred gates that delimit the sacred grounds of the shrine. Torii have become a symbol of Japan. Shrines also include lanterns or toro and washing fountains called temizuya. It is customary for visitors to stop at the temizuya upon entering the shrine to cleanse their hands and mouth. Another famous structure of the shrines are the romon or two-storied gates.

**Fushimi Inari Temple** – In this segment we pay a visit to Fushimi Inari Shrine in Kyoto. The shrine is dedicated to Inari, the Shinto god of rice and commerce. The Shrine lies at the base of mountain and includes trails up the mountainside lined with over 5,000 torii or gates. Each gate is donated by a Japanese business as a way of asking Inari for prosperity. Inari has become famous for its thousands of gates, each painted red, the first color, the color of strength and energy.

The Shrine houses a magnificent tea garden and also a pond garden shaped in the form of the kanji, or Japanese written character, for the word heart. In Japanese design, kanji are often used symbolically, much the same way we may use a pictorial image or shape. The heart-shaped kanji also has a connection to the color red, so prominent in the shrine, as red is the color of blood, the first color, the color of beginning.

**Common Ground: Plants used in Japanese and Oklahoma Landscapes** – In this segment we look at some of the plant material commonly used in both Japanese and Oklahoma landscapes. The similarities in plant material are due to similar climatic conditions between the two countries. The main difference in climate between the two areas is that Oklahoma tends to have greater weather extremes, while the oceans surrounding Japan tend to moderate the climate there. As a result, while we use many of the same plants, we often tend to use them in a slightly different manner. For example, in Japan, Japanese Maples (*Acer palmatum*) grow in full sun, which would quickly scorch the trees in Oklahoma.

Another difference in plant growth is many plants grow much larger in Japan, including the Japanese Maples, but also trees like the Deodar Cedar (*Cedrus deodara*) and even the Nandina (*Nandina domestica*) and Rhododendrons (*Rhododendron* species) reached great heights. One reason for this is likely water limitations here in Oklahoma. We also have considerably different soil types.

Horticulture is certainly an international industry, and people have been moving plants from one country to another for centuries. This movement of plants has brought crops from one corner of the world to the other, and also carried ornamental plants across seas. Sometimes, this movement of plants has had devastating results where an aggressive plant escapes cultivation and becomes invasive in the environment. For this reason, the movement of plants across borders is highly regulated by the U.S. Department of Agriculture, and similar

entities abroad. And it is important that you never move plant material from one country to another.

Most often, this exchange of plant material is harmless and has resulted in the great diversity of ornamental plants available in today's garden centers. Many of the plants that we enjoyed in Japan have been brought to the United States. These of course include favorite trees like the Japanese Maple (*Acer palmatum*) and the Japanese Black Pine (*Pinus thunbergii*) as well as a variety of shrubs such as Nandina (*Nandina domestica*) and the Japanese Camellia (*Camellia japonica*). We also grow a number of herbaceous plants originating in Japan, including Miscanthus grasses (*Miscanthus sinensis*) which are native to Japan, China and Korea. Often, the scientific name of the plant gives its origin away, as the species names of Japanese plants are often japonica or japonicum or nipponicum, which contains the root Nippon, the Japanese way of saying Japan.

The Japanese also grow a number of plants native to the United States. One plant that we were surprised to find flowering in a Japanese garden was the Oak Leaf Hydrangea (*Hydrangea quercifolia*) one of our Oklahoma Proven plants. Interestingly, there are even a couple Oklahoma Proven plants that have their origins in Japan, including the Japanese Painted Fern (*Athyrium nipponicum*) and Japanese Kerria (*Kerria japonica*).

Of course, there are many plants commonly grown in both Japan and Oklahoma, which have their origins in other areas. One example is this tree, *Ginkgo biloba*, planted along the streets of Japan. Ginkgos are an ancient species of tree originating from China. We also found plenty of hollyhocks, oxeye daisies, and other flowering plants from around the world.

All of these plants are excellent choices for planting in a Japanese style garden. Remember to consider sun exposure when planting the more traditional Japanese species, as most will require much more shade in Oklahoma.

**GardenFest Highlights** – In this segment we bring you highlights from our 2009 Summer GardenFest. We appreciate all the help we received from our wonderful volunteers and staff to make this day special.

**Water-wise Containers with Shawna Coronado** – Our keynote speaker for the Summer GardenFest this year was Shawna Lee Coronado. Shawna entertained our visitors with a wonderful presentation on building community through gardening. While she was here, she also taped a segment with us on how to put together ornamental containers that use less water. It was a pleasure working alongside Shawna in the garden.

**Cooking with Barbara** – Barbara Brown, Extension Food Specialist, makes a Japanese potato salad.

**This Week in the Vegetable Garden** – We are harvesting tomatillos in the garden. People often ask “How do I know when the tomatillos are ready?” One thing to look for is the cracking of the skin of the tomatillos. As the fruits fill, the paper husk will start to crack and peel around the expanding fruit. The fruits also begin to turn yellow in color. These are excellent indicators that the fruits are ready to harvest.

**Announcements** – The Kerr Center for Sustainable Agriculture is offering workshops in Integrated Pest Management and Sustainable Pest Control in Tulsa on July 20, and Oklahoma City on July 27. Instructors from OSU Extension and the Kerr Center will demonstrate to small scale growers how they can reduce pesticide use and still produce an abundant crop. For more information, visit the Kerr Center Website at [www.kerrcenter.com](http://www.kerrcenter.com) or call 918-647-9123.

Please contact your local Oklahoma Cooperative Extension Service Office for more educational information on garden-related topics. If you need further information about this week's show, call (405) 744-5404 or visit our website <http://www.oklahomagardening.okstate.edu>. Thank you for your continued support!

Sincerely,

## Japanese Potato Salad



- 1 pound Yukon gold or russet potatoes
- 1 cup very thinly sliced English cucumber
- 1 teaspoon salt
- 1/2 cup thinly sliced onion
- 1/2 cup thinly sliced carrot
- 1 apple, peeled and cut into small cubes
- 1/2 cup Japanese mayonnaise or mayonnaise
- Salt and pepper to taste

1. Peel potatoes and cut into small pieces. Cook in boiling water until soft. Drain and put through a ricer. Cool.
2. Put cucumber in colander over another bowl and mix with 1 teaspoon salt. Let sit 20 minutes.
3. Cook carrot slices in boiling water 3 minutes. Drain well and cool.
4. Rinse cucumber and gently squeeze in a clean towel to remove excess water.
5. Mix together potatoes, cucumber, onion, carrot, apple, mayonnaise and salt and pepper to taste. Chill well before serving.

Serves 6.

Nutrition Facts		
Servings per recipe: 6		
<b>Calories 220</b>	Calories from fat 144	
	% Daily Value	
<b>Total Fat</b> 16g		24%
Saturated Fat 2g		11%
<b>Cholesterol</b> 6mg		2%
<b>Sodium</b> 646mg		27%*
<b>Carbohydrate</b> 20g		7%
Dietary Fiber 2g		9%
<b>Protein</b> 3g		5%
Vitamin A: 63%	Vitamin C: 34%	Folacin: 2%
Calcium: 1%	Iron: 5%	Potassium: 3%

\*Sodium content does not reflect discarded salt included in soaking water. Actual sodium content will be less.

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*Oklahoma Gardening* Information Sheet (#3602)

**OETA air date: July 11 and 12, 2009**

OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

**Meiji or Modern Period Gardens** – In this segment we explore gardens of the next historical period in Japan. The Meiji or modern period of Japanese history extends from the late 19<sup>th</sup> century to the present time. This period saw a great deal of westernization in Japan. At this time, many traditional Japanese garden designs came to incorporate ideas from western gardens, often resulting in an eclectic mixture of what seems to be two very opposite design styles. Components new to Japanese gardens included the use of lawns and flower beds. Innovative karesansui landscape designer Mirei Shigemori is one of the famous gardeners of this period. We visited one of the gardens he designed, as well as two other modern gardens. Each is a unique mixture of tradition and modernism.

**Tofuku-ji** – In this segment we visit Tofuku-ji Temple in Kyoto. The temple was built in 1236, though the original buildings burned down and were rebuilt in the 15<sup>th</sup> century. The Hojo, or abbots' quarters, were rebuilt in 1890, and the gardens arranged at the Hojo's four quarters were laid out in 1939 by landscape sculptor Mirei Shigemori. The gardens are a magnificent example of modern Zen gardens, a blend of tradition and abstraction. Shigemori wished to express in the gardens the simplicity of Zen using the abstract construction of the modern arts. The gardens surround all four sides of the quarters, with each section uniquely different. Together, the four gardens represent the eight aspects of the Buddha's life. The southern garden is composed of a cluster of four giant rocks symbolizing the Elysian Islands: Horai, Hojo, Eiju and Koryo. The islands lay on a bed of swirling raked gravel that symbolizes the eight rough seas. At the western end of the garden, five moss-covered mounds symbolize Gozan, the five sacred mountains.

The western garden is composed of azalea shrubs trimmed to a square shape, set against square fields of white gravel, the two series of blocks laid out in a checkerboard pattern to reflect the garden's name, Seiden'ichimatsu, which is an ancient Chinese pattern of land division. The northern garden uses foundation rocks from the front gate, cut into squares, and laid out in an irregular checkerboard pattern with moss planted between the square stones. The garden embodies the Tsutsen Bridge and gorge with its magnificent autumn foliage as a scenic backdrop. The eastern garden contains seven cylindrical stones cut from the temples foundation pillars set in a bed of raked gravel and laid out to represent the main stars in the Great Bear Constellation.

**Murinan** – In this segment we visit another modern garden in Kyoto called Murinan. Murinan was established in 1896 at the former home of the Meiji Statesman Yamagata Aritomo. The garden has many western influences, most notably in the use of a turfgrass lawn in place of stone or moss. The topography is also relatively flat as compared to more traditional landscape gardens, and the waters flow in a stream, rather than setting gently in a pond. The water used in the garden comes from a canal that brought water to the city from the surrounding mountains as a large public works project.

Murinan is a good example of a Tsukiyama garden design, or a landscape garden that uses "borrowed scenery" from the surrounding land. In this case, you can see the Higashiyama Hills in the background. The use of borrowed scenery creates the illusion of more space in a relatively confined garden. It also allows designers to highlight nearby vistas. Ponds, streams, hills, stones, trees, flowers, bridges and paths are often highlighted in this style.

**Ume Kouji Park** – In this segment we visit the Suzaku or Sparrow gardens located in Ume Koji Park in Kyoto. The gardens were built in 1994 to commemorate Kyoto's 1,200<sup>th</sup> anniversary. These gardens utilize all of the gardening techniques handed down through the ages. In Japan, gardening is a high art and a practice that is traditionally passed from sensei to apprentice. The gardens at Ume Kouji Park encompass many traditional design concepts applied to a modern landscape. It includes three elements that are central to Japanese garden design, these are water, whether real or symbolic, stone, and plantings. Japanese garden design reflects the strong connection the people of Japan have with nature. This relationship guides the use of the three elements in designs. For example, water appears as a natural part of garden's surroundings. This is why we see streams, ponds or waterfalls, but not fountains. The sensory qualities that water provides in the landscape are integral to the Japanese garden, the sound, the motion, the flickering of light of its surface. But also important is the visual space provided by a sheet of water, or in a dry landscape, the raked expanse of gravel.

Stones are used functionally to create paths, walls or bridges, and are also used symbolically to represent land or mountains. To create the imagery of mountains, large boulders are often set at sharp angles so that they seem to erupt from the earth. Smaller stones are commonly placed in odd numbers and in groupings that reflect a triangular shape, again representative of mountains. Rocks may also be used as religious imagery in the landscape. Certain rocks are believed to contain a spirit or supernatural power, other act as a conduit of ki – the life energy. Rocks are also used simply for their sculptural beauty.

Plant material is used carefully, with Japanese designs giving preference to subtle green tones and much less emphasis is placed on flowers. We do find seasonal bursts of color, such as the cherry blossoms and fruits, or when the azaleas and irises are in bloom. The variety of plants used in older Japanese landscapes was fairly narrow, as influenced by Zen principles of simplicity. Today, we see a broader plant palette emerging.

The gardens at Ume Kouji Park bring the three design elements together in beautiful harmony and are representative of a wide range of traditional styles. The landscape gardens depict a rolling hillside and copy views from the Japanese countryside including mountains, streams and rice paddies. The strolling gardens carry you through a thicket of Japanese red pines to several smaller, intimate spaces which include bridges, a stream and a waterfall. There is also a magnificent viewing garden that puts a modern twist on the traditional pond and island garden.

**Introduction to KEC/Sister Cities** – One of the cities we visited in Japan was Kameoka, which is Stillwater's Sister City. The *Oklahoma Gardening* team has forged a relationship with the gardeners of Kameoka over the years through the Stillwater Sister Cities Council. Our studio gardens house a traditional Japanese Tea Ceremony Garden designed and installed by visiting members of the Youth Gardeners Association of Kameoka. We have also hosted members of their gardening team over the years. These gardeners helped renovate our karesansui garden and gave demonstrations during our Summer GardenFest. The students participating in the study abroad program have likewise benefited from this cultural exchange. Each year, students participating in the course have had an opportunity to work alongside the gardeners of Kameoka. Together, they have been slowly constructing a Japanese garden outside the Exchange Center. This year, they added to the garden by installing a section of bamboo fence and a stone path. While in Japan, we spoke with Professor Paul Hsu, who has led the Japanese Study Abroad program for ten years. He shares with us information about the program and the many benefits it provides to participating students.

**Japanese Landscape Design Study Abroad Course** – In this segment Professor Paul Hsu of the Department of Horticulture and Landscape Architecture at OSU joins us in Kameoka outside the Kameoka Exchange Center. He provides a brief history of the program, tells us what is involved in the study abroad program and what the students gain from this unique experience.

**Installing a Stepping Stone Path** – In this segment the students participating in the study abroad program are installing a stepping stone path at the Kameoka Exchange Center in Kameoka, Japan. Kim walks us through the process. First, the stones are laid out in the desired pattern. It is a good idea to keep the spacing between stones consistent, and make sure they are laid in a comfortable walking pattern. Use a pick ax to outline the shape of the stones so that you know where to dig holes. Move the stone out of the way and start digging. Only move the stone you are working on, that way, the remaining stones in the path will be in place to help you stay oriented. Choose large stones for pathways, as they do not move easily. Once the hole is dug, set the stone in place so that only a couple inches extend above ground. Backfill soil around the stone, tamping the soil firmly as you go. Use a level to make sure the stones are set properly. The stones will settle a little over time. You can plant steppable plants around the stones to reduce the need for mowing.

**Bamboo Fence Construction** – In this segment we install a section of bamboo fence at the studio garden. The fence style is called the four window style fence, the same style the students learned while working in Kameoka. In Japanese this style is called Yotsume Gaki. The first step is to set cedar posts at five foot intervals, we have already done this. Our posts are not set in cement; however you could use cement if you want to install the posts permanently. Cedar is a good choice of wood to work with as it is not favored by termites. In Japan, the gardeners burned the posts using a hand torch for preservation before setting them in the ground.

Once the posts are in place, we attach bamboo cross beams. We need to cut the bamboo to the proper length using a hand saw. The best place to cut bamboo is just outside of the nodes or joints. Bamboo is hollow, but at the joints tissues are fused across the interior. Cutting outside this area provides a cap to help keep water out of the bamboo tube and slow deterioration. Secure the cross beams to the posts using screws. It is a good idea to reverse the orientation for every other pole so the thicker ends are not all on one side. This will improve the appearance of the fence.

Once the cross beams are in place, we are ready to set the vertical poles. It can be difficult to create an even line across the top, so to help us we are stretching a string across the tops of the posts. As we set the vertical poles we will hammer them down until they are in line with the string. Hammer the poles gently with a rubber mallet. We want to cut the poles long enough so they will extend into the ground about four inches to help keep them in place. We will not screw the vertical poles in place as we did the cross beams, instead, they are tied onto the cross beams with sections of rope. In Japan we used a rope made from the fibrous bark of the hemp palm, *Trachycarpus fortunei*. The rope is died black with charcoal. You can use a rope made of natural or synthetic fibers. The more important consideration will be the thickness and strength of the rope; we want it to last a while in the elements.

The knot we are using is called Otoko Musubi or the Men's Tie. For lashing, use your right hand to manipulate the rope, and your left to pinch and hold. To start, the leading end of the rope will be in your right hand. Wrap the rope across the front of the joint, bringing the leading end over and around the upper right corner of the joint, then down behind the joint and back out under the lower left corner. Pull the rope tightly across the top of the trailing end, pinching it with your left hand, thumb on top, level with the cross beam. Now bring the same, leading end of the rope under the lower right hand corner of the joint, behind and over the upper left side of the joint. Pinch the rope tightly with your left thumb and forefinger. The leading end of the rope will still be oriented to the right hand side. Take the trailing end of the rope (left hand side) and make a loop, coming over and behind the leading end, again pinching in left hand. Now take the leading end, bring it under the knot and pinch it between your thumb and forefinger along with the loop. Bring the leading end through the backside of the loop, pulling the slack through the loop and again pinching it tightly. Use your right hand to position the loop so that it is oriented upward, pinch it with the left thumb and forefinger, then pull the left string to tighten the knot.

Tying the Men's Tie tightly will take some practice. Once all of the vertical poles are tied in place, our bamboo fence is complete. It is relatively easy to install, once you get the hang of those knots.

**Study Abroad Information** – If you are a student at OSU or know a student who is interested in learning more about the Japanese Study Abroad program, please visit the Department of Horticulture and Landscape Architecture's student web page at [www.hortla.okstate.edu/hortla/student.htm](http://www.hortla.okstate.edu/hortla/student.htm). The Division of Agricultural Sciences and Natural Resources (DASNR) is a leader in connecting students with enriching study abroad opportunities. The Division offers a number of opportunities to study abroad, both long term and in the short course format. For more information on DASNR Study Abroad programs visit <http://internationalagprograms.okstate.edu>.

**This Week in the Vegetable Garden** – This week in the vegetable garden we can start sowing seeds for our cole crop transplants. Broccoli, cabbage, cauliflower, bok choy and Brussels sprouts are excellent fall crops. In fact, many of these perform much better in the fall than in the spring. You can start seeds indoors, or find a shady, protected location in the landscape. A cold frame with the lid removed, or with a screen in place to provide shade makes an ideal location for starting seeds. If you plan to replant any tomatoes, peppers, tomatillos or eggplants, now is also the time to start those seeds.

### **Announcements**

The Tulsa Herb Society will host an evening with Jim Long at the Tulsa Garden Center on Monday, July 13 from 7:00 to 8:30 p.m. The event is free and open to the public. For more information contact the Tulsa Garden Center at 918-746-5125.

The Kerr Center for Sustainable Agriculture is offering workshops in Integrated Pest Management and Sustainable Pest Control in Tulsa on July 20, and Oklahoma City on July 27. Instructors from OSU Extension and the Kerr Center will demonstrate to small scale growers how they can reduce pesticide use and still produce an abundant crop. For more information, visit the Kerr Center Website at [www.kerrcenter.com](http://www.kerrcenter.com) or call 918-647-9123.

Please contact your local Oklahoma Cooperative Extension Service Office for more educational information on garden-related topics. If you need further information about this week's show, call (405) 744-5404 or visit our website <http://www.oklahomagardening.okstate.edu>. Thank you for your continued support!

Sincerely,  
Kim Rebek  
*Oklahoma Gardening* Host

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*Oklahoma Gardening* Information Sheet (#3601)  
**OETA air date: July 4 and 5, 2009**  
OETA airtime: Saturday 11:00 a.m., Sunday 3:30 p.m.

**Edo Period Gardens: Tea Gardens** – As we look at the development of gardens through Japanese history, the next major time period was the Edo period, from the 15<sup>th</sup> to late 19<sup>th</sup> century. During this period of history the tea ceremony was perfected and with it tea rooms and tea gardens. These spaces tended to be small and designers avoided including too much ornamentation in the tea gardens. The tea room and tea garden are intimately connected, so that as you sit in the tea room, you feel connected to the natural world surrounding you.

Fushimi Inari Temple in Kyoto houses an excellent example of the traditional tea garden. While not all tea gardens house a tea room, in those that did, the garden and house were designed as one, with the gardens being a natural extension of the house. Both were designed based upon the simple concepts of the tea ceremony or sa-do. The Japanese word for the tea garden is roji, which literally means dewy ground. The tea garden functioned as a space of transition from the outside world to the world of the tea ceremony. It was a place for one to compose their mind as they awaited their host and prepared to enter the tea room. The world inside the tea garden is carefully arranged, and each tea garden offers a unique experience. Tea gardens traditionally include a stepping stone path leading to the tea house, stone lanterns, called toro, to light the way at night, and a stone basin, called a tsukubai, where guests purify themselves before the ceremony.

**Strolling Gardens and the Designs of Kobori Enshu** – Large strolling gardens also took shape during the Edo period. These Strolling gardens are arranged for viewing a sequence of effects from a path that carries you through the garden. These large gardens were closely associated with tea gardens of the era, as they contained a series of small spaces for several different tea ceremonies to take place at the same time. The larger strolling garden unifies the various small species into a picturesque whole.

A famous landscape designer of the time, Kobori Enshu, created a number of notable gardens during the early 1600s. Many of his gardens endure today and are celebrated among Japan's great works. As a master of the tea ceremony, Enshu designed a number of famous tea houses, but he also incorporated earlier styles in his work, including karesansui and pond and island gardens. We visited a few of Enshu's gardens, including those at Nijo-jo Castle and Kodai-ji Temple, which remain intact from the original design. We also visited a garden that was re-created from drawings of his original work. Let's take a look at the creations of Kobori Enshu.

**Nijo Castle** – In this segment we visit Nijo Castle in Kyoto. The castle was built as the Kyoto residence of the Tokugawa Shoguns and was completed in 1625. The Nijō Castle has two concentric rings of fortifications, each consisting of a wall and a wide moat. Between the two main rings of fortifications lies Ninomaru garden, designed by the famous landscape architect and tea master, Kobori Enshu. The garden is designed as a large-scale viewing garden with a reflecting pond. The pond contains three islands and features numerous carefully placed stones and topiary pine trees. The arrangement of the buildings in a diagonal line affords a variety of viewing points and vision lines into the garden. Each view was carefully designed.

At the time the pond was constructed, landscape artists were changing the way shorelines were created. During the Heian Period, shorelines were relatively simple and smooth. During the 16<sup>th</sup> and 17<sup>th</sup> centuries, shorelines became more intricate with stones skillfully placed to create more variable and complex views in to the garden. These views change with the vantage point. The use of rocks also shifted, with older gardens giving reference to natural unshaped stones, and newer gardens incorporating cut stone into the landscape.

The way rocks are grouped in the landscape is also very important and the expression of rock groupings changed over time. In older gardens, rock groups had a very strong presence, inheriting an almost mystical aspect. In some gardens, the rock groupings tell stories, such as at Kinkaku-ji, The Temple of the Golden Pavilion, where the rock groupings and islands tell the Zen creation story.

**Kodai-ji** – In this segment we visit another creation of Kobori Enshu, the gardens at Kodai-ji Zen Temple in Kyoto. The temple was established in 1606 and houses many properties considered to be of significant cultural importance in Japan. Among these is the Moon Viewing Pavilion, a small, four-pilared structure designed to allow viewing of the moon's reflection of the surface of the pond. It features a Chinese-style cypress bark roof with three gables. The Garyoro or Reclining Dragon Corridor is a magnificent covered hallway leading from the founder's hall to the sanctuary that resembles the back of a dragon. The property also houses a number of famous tea houses.

The property includes two important gardens. The first is the Temple Garden which was redesigned by Kobori Enshu from an older garden located on the property. The Temple Garden is a tsukiyama or “constructed landscape” garden famous for its excellent stone layout. This pond and island style garden contains two sections. The north section of the pond contains an island shaped like a tortoise and the southern section contains a group of stones representing a crane. The turtle and crane are symbols of long life and happiness. The garden has been designated by the Japanese Government as a Place of Historical Importance and Outstanding Scenery.

Kodaiji's south garden is a karesansui or dry landscape garden that is a more recent creation. This garden features a large area of raked gravel punctuated by conical gravel formations. The gravel bed is surrounded by an undulating border of moss and stone reminiscent of a shoreline. The raked gravel of the garden evokes the ripple patterns found on the surface of a pond. Like many traditional karesansui gardens, it is intended to be viewed from a single vantage point.

**Imperial Garden East** – In this segment we visit a garden at the Imperial Palace. Tokyo Imperial Palace is the main residence of the Emperor of Japan. It is a large park-like area located in Tokyo and contains numerous administrative buildings and the private residences of the imperial family. The East Garden is where most of the administrative buildings for the palace are located. The Ninomaru area of the gardens was created as part of a renovation project in the 1960s from a 18<sup>th</sup> century garden map that depicted the layout of the grounds as designed in the 1600s by Kobori Enshu. The grounds include a large pond and island style garden which houses a section dedicated to irises. Eighty four species of iris are represented in the iris garden. Another feature is the Ninomaru Grove, which includes tree species from each of Japan’s 47 prefectures. The trees have been donated from each prefecture, with a total 260 trees and 30 varieties.

**Uses of Bamboo in Japanese Gardens and in the Oklahoma Landscape** – To the Japanese the segments of bamboo evoke the image of generations, and the supple nature of the plant calls to mind an image of resilience. With their hollow stems, bamboo is often used to metaphorically depict the Zen principle of an empty heart. Bamboo is used extensively in Japanese gardens and plays many different rolls. It is an incredibly versatile plant, but is most often used in the cut and dried form rather than the living form.

Bamboo is used to construct a variety of structures in the Japanese garden. The bamboo fence is a very important component of the garden. It helps create a sense of enclosure and separation from the outside world. Bamboo fences are built in a great diversity of styles and sizes, from low edging to full fences.

Bamboo is also used to build a number of structures used in the landscape. We see many fountains constructed out of bamboo. The timbers are used both to construct the spout of the fountain, and also to build covers or lids for water basins. The ladles used to cleanse one’s self at the tsukubai are also often built of bamboo. Bamboo is also used for a wide variety of indoor tools and decorations such as baskets.

Living bamboo is also used in the garden. Timber bamboos are typically too large to use in traditional gardens, though in larger strolling gardens and at many temples, timber bamboo may be used along the edges of the property to enclose the garden from its surroundings. In a sense they are used to create living walls. Smaller bamboo varieties fit much better into the garden and are often used as ground covers. This is a great use for bamboo both in Japan and here in Oklahoma, however, when looking for a bamboo to use as a ground cover, be sure to look at the expected mature size. Many bamboos that are labeled as dwarf can reach a height of four to six feet.

Bamboos thrive in Oklahoma, and can become somewhat invasive. Be sure you are dedicated to managing the plant before you add it to your landscape. One way to help keep bamboo under control is to plant in containers. But these voracious plants can escape containers, so you will still need to keep an eye on it. Bamboo is a remarkable versatile group of plants and there is a bamboo for just about every situation in the landscape.

**Bamboo Satori Visit to Guthrie** – In this segment we visit the Bamboo Satori in Guthrie. Owner Linda Finley grows a wide range of bamboo species adapted to Oklahoma's climate. She shows us a number of interesting species and cultivars, ranging from the giant timber bamboo to low-growing ground covers. She also provides tips on growing bamboo and ways to help manage this sometimes aggressive plant. Following is a list of bamboos highlighted during the visit.

Timber bamboos, *Phyllostachys vivax* and *P. nigra* 'Henon'

Sweet shoot bamboo, *Phyllostachys dulcis*

Low-growing bamboo, *Shibataea kumasaca*

Ground-cover bamboo, *Sasa masamuneana* 'Albostriata'

Bamboo for screen, *Phyllostachys* species 'Bisetti'

Gray-stemmed bamboo, *Phyllostachys nigra* 'Boryana'

Black bamboo, *Phyllostachys nigra*

Yellow bamboos with green stripe: *Phyllostachys bambusoides* 'Castilonis' and *P. aureosulcata* 'Spectabilis'

Green bamboo with yellow stripe, *Phyllostachys aureosulcata* 'Yellow Groove'

Linda's favorite bamboo, *Phyllostachys viridis* 'Robert Young'

Temple bamboo, *Semiarundinaria fastuosa*

If you are interested in visiting the Bamboo Satori, you can contact Linda at (405) 590-0179 or e-mail at [Lindafinley01@sbcglobal.net](mailto:Lindafinley01@sbcglobal.net).

**This Week in the Vegetable Garden** – Squirrels are destroying our corn! What can we do about this rascally critters? We are going to try using a Scarecrow, but not the traditional scarecrow stuffed with straw and bearing button eyes. Instead, we will install a motion activated sprinkler called the Scarecrow®. This system uses an infrared sensor to detect motion, then releases a short blast of water, frightening unwanted wildlife away. It is effective not only against squirrels, but also deer, raccoons and other wildlife. You can find more information about the Scarecrow® online at [www.contech-inc.com](http://www.contech-inc.com).

### **Announcements**

The Water Garden Society of Oklahoma will be opening their yards for public viewing during their 23<sup>rd</sup> Annual Water Garden Tour on Saturday, July 11 and Sunday, July 12 from 9 a.m. to 6 p.m. All gardens are located in the Oklahoma City Metropolitan area. Tour maps will be available at area garden centers, as well as fish, plant and pond supply outlets. You can also visit their website for more information at [www.WGSO.org](http://www.WGSO.org).

The Tulsa Herb Society is hosting an evening with Jim Long at the Tulsa Garden Center on Monday, July 13 from 7:00 to 8:30 p.m. Admission is free. For more information contact the Tulsa Garden center at 918-746-5125 or visit the website [www.tulsaerb.com](http://www.tulsaerb.com).

Please contact your local Oklahoma Cooperative Extension Service Office for more educational information on garden-related topics. If you need further information about this week's show, call (405) 744-5404 or visit our website <http://www.oklahomagardening.okstate.edu>. Thank you for your continued support!

Sincerely,  
Kim Rebek  
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