

THE FORT BEND GARDENER



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TEXAS A&M
AGRI LIFE
EXTENSION

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FORT BEND COUNTY
Master Gardeners



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Understanding and Identifying Rose Rosette Disease

By Gaye Hammond
Houston Rose Society

Rose Rosette (sometimes referred to as Rose Rosette Disease, “RRD”, and/or Rose Rosette Virus, “RRV”) was first described in the early 1940s and has become one of the most devastating and least understood diseases of roses.

For almost 50 years after the first sighting, little progress was made toward identifying the cause of rose rosette disease. In 1988, scientists identified a connection between the eriophyid mite, *Phyllocoptes fructiphilus*, and plants demonstrating RRD symptoms and that year concluded that this wingless mite was the vector for infection—although the disease process itself remained a mystery. In 1990, scientists became suspicious that RRD was caused by a virus. Confirmation that RRD is caused by a virus came in 2011 (Lane, et al, 2011).

Roses demonstrating symptoms of RRD have been found in Dallas and San Antonio in alarming numbers in the last year. In June 2012, a plant specimen demonstrating RRD symptoms was brought to a meeting of the Houston Rose Soc. for identification, and by September 2012, two more instances of RRD in the landscape were identified. Plants with RRD symptoms have been found in landscapes and at retail centers in San Antonio and in numerous landscape settings (public and private) in north Texas.

Disease Transmission

Transmission by mites. The wingless *eriophyid mite* is one way that healthy plants become infected with the RRD virus. The virus-carrying mite is blown by wind or dislodged by rain from an infected host plant to a new healthy plant. Sometimes the mites hitch a ride on other insects or birds as a way to get from plant to plant. By feeding on the healthy plant, the mite injects the virus.

Plants inoculated with RRD via mite transmission typically display symptoms of RRD within 90 days of inoculation. The summer months are the peak time of year for the mite activity.

Transmission by pruning? It is suspected that the virus can also be transmitted in other ways. Pruning on a bush infected with RRD and then pruning on a healthy bush has long been thought to be a method of transmission of virus from plant to plant. This is an excellent reason for

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East Meets West

By Amy Jo Holdaway,
Japanese Garden Chair

The tradition of Japanese gardening can be traced back over 1400 years. In early Japanese history, the garden was no more than an area enclosed by stones, rope, or a fence. Though different styles emerged as the social functions of gardens changed, the underlying concepts have remained. This gardening approach has always involved the paring down of the natural world to its essential elements to bring, through contemplation, understanding of the workings of both nature and time. The shapes and forms of Japanese gardening have a universal appeal, and the Japanese garden remains a space set apart from the everyday world for communion with nature.

In today's world, most of us don't have the space or time to incorporate a full-size Japanese garden into our landscapes, but it is possible. Alternately, by using a blend of natural plants, water, and rock, even small spaces can convey the impression of the larger, natural world.

This article contains a brief description of each of the five distinct styles of Japanese gardening: Hill and Pond, Dry or Zen, Tea Garden, Stroll Garden, and Courtyard, after which the idea of the "Japanese-inspired" garden, which usually highlights just a few elements of one or more of the five styles, will be discussed.

Hill-and-Pond Style

This style can be described as a pond and island style. The scale of the classic hill-and-pond garden is often extremely large. A scaled-down version in a typical city lot is possible by following design principles called "simplification" and "diminishing perspective." Lanterns, streams, ponds, bridges, trees, and other features of the landscape must be in direct proportion to the garden itself.

Hill-and-pond gardens often have berms or small earthen mounds, and rock formations with low evergreen plants to suggest mountain ranges. Streams are often used instead of ponds. Evergreens are used extensively, and green is preferred over other brighter colors.

Dry-Landscape

The typical dry-landscape or Zen garden is built in a small enclosed space that is as flat as possible. The enclosure of the garden is usually created by garden walls and/or building walls. Features of the garden represent mountains, valleys, or plains through the use of carefully placed rocks and low-spreading plants. Also common is the use of sand or gravel raked into stylized patterns representing water. Rock and plants provide an edge for the garden, often as a backdrop.

Tea-Garden Style

The Tea Garden style was created by the influence of the Japanese cultural practice of the tea ceremony. A path is created through the garden so that one can experience the calmness and subtle beauty of nature to soothe the spirit, remove worldly cares, and prepare the visitor for the tea ceremony. Often a small basin filled with water and dipping gourd are surrounded by large rocks or plants to make a screen behind which the visitor can clean before entering the tea house.

The tea garden requires just enough space for a path through a narrow outer garden to a tea house, located inside the enclosed inner garden. The size and arrangement of stepping stones can set the pace through the garden, while a large stone or rustic bench may invite the visitor to stop and sit.

The tea garden can be easily adapted to your own landscape by providing a place at the end of a path to enjoy solitude or share peace and quiet with a few friends. By using plants and rocks or other hardscape, it is possible to achieve the spirit of the tea garden without the presence of an actual tea house.

Stroll Style

The stroll garden and the hill and pond garden are similar with one major difference. To be properly appreciated, one must walk through the stroll garden and contemplate the garden from vantage points. The garden must be large enough to have a pathway traveling through it, but the entire garden may be relatively-small in size. It must be spacious enough, however, to allow the path to turn and change in levels as it moves through the garden. The stroll garden never reveals all or even most of

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itself from any one spot. It provides a quiet haven for meditation, but the viewer must actively participate by strolling through it. Meandering paths reveal new, unexpected vistas, offering different views of garden features seen at another point. The unique qualities of the stroll garden reveal themselves throughout the visit, rather than all at once.

Courtyard Style

Historically, courtyard gardens had been viewed from rooms or apartments, or in monasteries or temples, and were intended to provide a peaceful area for meditation. Even in the smallest of urban households, a tiny courtyard garden still provided enjoyment of the natural world outside.

Courtyard gardens usually include three traditional Japanese garden elements: stepping stones, a water basin, and a stone lantern. They are ornamental only, and no one ever walks in the garden itself. Most courtyard gardens use shade-tolerant evergreens. Some only use a stone lantern with a few plants and moss or gravel, some use plants and a water basin, and still others rely on a simple grouping of plants. Zen-inspired courtyard gardens use only rocks, gravel and moss.

Many homes in our area were built with atriums and courtyards that can easily be transformed into courtyard gardens. A small space set aside next to or behind the garage would work easily as well.

The Japanese Influence

If there's not room in your landscape for a full-size Japanese garden, it is still possible to create a "Japanese-influenced" area by incorporating elements of the above described styles. Many of the finest Japanese gardens are mixtures of two or more of the basic styles. Just remember that common to all is a sense of a space set apart from the everyday world for communion with nature.

Here are some ideas on how you can add a Japanese influence to your own home garden without building a full scale Japanese garden:

- At the entrance to your backyard, use a simple bamboo fence to block views of the world outside. Flank the gate with structural plants such as sago palms. Perhaps have a wind chime or fountain nearby whose soothing tones can be heard from

outside the garden.

- Choose a single architectural plant to add a Japanese influence to the garden. Japanese maples are able to survive our climate if given a little afternoon shade and plenty of water while becoming established. Good varieties for our area include: Arakawa (small green leaves and rough bark), Crimson Queen (red lace-leafed weeping), and Glowing Embers (green leaf tree with great orange-red fall color. Also, good heat and drought tolerance). Clumping bamboos can also add architectural elements to the garden. Clumping bamboos are not invasive and do not "run" like other bamboos. There are many sizes and colors to choose from, but reliable performers in our sometimes cold winters include Alphonse Karr (Lemon-Lime Bamboo), *Textilis Gracilis* (Slender Weavers Bamboo), *Bambusa Ventricosa* (Buddha Belly Bamboo).
- Add a stepping stone path that leads around the corner of your house. A winding path leads the eye past its current view and suggests the possibility of vistas not yet taken in. Plant Corsican Mint or Irish Moss between the stepping stones. Placing the stepping stones at irregular intervals will cause people to look down and appreciate the low growing plants.
- Most Japanese gardens rely on subtle differences in color and shape. Evergreens add soothing shades of green for year-round interest. Good choices for our area include viburnums like Walter's Viburnum or Whorled Class; pittosporum like the variegated Mojo or the glossy-leafed Nannum, and Camellias like Pink Icicle or Yuletide. Some plants can be shaped to echo the pyramidal form of pagodas or spirals, like boxwoods and Japanese holly. Others, like creeping or prostrate juniper, can be used to frame features with their low, spreading branches.
- Place a stone lantern next to a pool or pond so that both the lantern and its reflection may be seen. Stone lanterns shaped like pagodas are staples of Japanese gardens. They also can provide a charming glow in the evening garden.
- Shaded sections of a Japanese garden rely on

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Seasonal Garden Checklist: Jan./Feb.

By Dr. William C. Welch,
Professor & Extension Landscape Specialist
Landscape Horticulturist

- Make flower and vegetable garden plans now before the rush of spring planting. Time spent in armchair gardening will pay off in improved plant selection.

- Sow seeds in flats or containers to get a jump on plant growth before hot weather arrives. Petunias, begonias, and impatiens should be sown in early January. Warm temperature plants, such as tomatoes, peppers, marigolds, and periwinkles, should be sown in late January or early February.

- Apply a light application of fertilizer to established pansy plantings. Use one-half pound of ammonium sulfate per 100 square feet of bed area. Repeat the application every 4 to 6 weeks, depending on rainfall. Dried blood meal is also an excellent source of fertilizer for pansies.

- Prepare beds and garden area for spring plants.
- Check junipers and other narrow-leaf evergreens for bagworm pouches. The insect eggs overwinter in the pouch, and start the cycle again by emerging in the spring to begin feeding on the foliage. Hand removal and burning of the pouches are ways of reducing the potential damage next spring.

- The life of the plant received as a Christmas gift can be prolonged with proper care. Keep the soil moist, but provide drainage so that excess moisture can flow from the pot. Keep the plant out of range of heating ducts and away from heating units. Keep in a cool room at night, preferably at 60 to 65 degrees F.

- Don't fertilize newly set out trees or shrubs until after they have started to grow, and then only very lightly the first year.

Visit <http://aggie-horticulture.tamu.edu/> for more in-depth seasonal updates from Dr. Welch and other Texas A&M Horticulture Department staff.

4-H Club at Seven Lakes Jr. High

By Angela Bosier
4-H Program Assistant

Seven Lakes Jr. High 4-H Club is Fort Bend County's first in-school 4-H club. The club was founded in the Spring of 2013 and is managed by the teachers of Seven Lakes Jr. High School. The club got off to a great start

and has been exposed to all the different educational opportunities that Fort Bend 4-H and Texas A&M AgriLife Extension Services have to offer. The first meeting a year ago consisted of presentations from 4-H members about the various project areas available through the 4-H program. Soon after, Boone Holaday, the Horticulture Extension Agent in Fort Bend County, spoke to the club about establishing a school garden and the great opportunities that could come from the project. The kids were excited about the project and it was decided that once school started in the fall, they would begin cultivating their own school garden.

This past fall, the 4-Hers at Seven Lakes Jr. High started the new school year off strong. Through hard work and immense dedication, the students were able to not only produce a fruitful school garden, but also expand it. To get started, the students wrote letters to Enchanted Nurseries in Richmond, Texas, to ask them to sponsor their garden. Enchanted Nurseries was more than happy to help, and donated all the materials needed for the students to plant their garden, including: soil, fertilizer, plants, seeds, and mulch. The students were also assisted by the Fort Bend County Master Gardeners in planting the vegetation. Eight Master Gardeners volunteered their time and knowledge to the students to ensure that they were successful in their first attempt at gardening, educating them on the proper way to plant and construct their cylinder garden.

The 4-Hers were dedicated and continued to care for their garden even when it was hit by hard times. Mid-fall, the students discovered that most of the vegetation that had grown was eaten by a pregnant rabbit. Instead of succumbing to defeat, the club decided to build a fence around the garden and by the end

Spotlight: The Rose Garden

By Jane Gray

Landscape Director & Earthkind Specialist
Fort Bend County Master Gardeners

February is the month for celebrating presidents' birthdays, groundhogs weather predicting abilities, love, and roses.

A visitor to the Ft. Bend County Master Gardener demonstration gardens will observe roses in the cottage garden, around the vegetable garden, in the Earthkind garden, and around the Outdoor classroom gazebo. The garden that best demonstrates the type of roses that do well in Ft. Bend County is the rose garden in front of the Bud O'Shieles Community Center.

The one characteristic all these roses have in common is that they are grown on their own root (not grafted). This criteria, along with plant selection, provides us with hardy, disease resistant, low care roses that require less water, no pesticides, and very little fertilizer.

These roses may be old garden roses, members of the Earthkind series, or from breeders such as Dr. Griffith Buck, David Austin, or Kordes. They are

often fragrant, supply an abundance of blooms, come in a variety of sizes and growth habits, and offer many colors.

In order to have an abundance of blooms roses require full sun (6 to 8 hours per day) to provide good growth.

In February, we pay special attention to roses, not only to give on St. Valentine's Day, but also because this is the time that they get their major pruning to insure wonderful blooms the rest of the year.

Here are some major points about pruning of roses:

- Be sure to sharpen and sterilize pruners to deter the spread of disease.
- Remove dead canes, those that grow toward the center of the plant, and those that rub against another cane.
- Open the center of the plant to improve air circulation.
- Cut back and shape the plant. You may choose to cut back one-third of the plant or give it a more ruthless trimming down to 18 to 24 inches from the ground.
- Clean out any debris around the plant and add mulch, leaving space around the base.

Seven Lakes Jr. High continued

of the semester, the students were able to harvest the mustard greens, bok choy, and romaine lettuce they had planted. This year, Seven Lakes Jr. High 4-H Club has extended the garden to Phase 2, which includes bigger planting structures that will allow them to increase the quantity and varieties of vegetation. I am personally impressed with the dedication not only from the students but from the community as well, including Enchanted Nurseries and the Fort Bend County Master Gardeners.



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Mark Your Calendar and Save These Dates

Feb. 15 - FBMG Vegetable-Herb Sale Preview

Feb. 22 - FBMG Vegetable-Herb Sale

Backyard Basics Program Series:

Mar. 22 - Vegetable Gardening

April 26 - Backyard Fruit Production

May 10 - Culinary Herbs

For details visit <http://fbmg.com>

Understanding and Identifying Rose Rosette Disease

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gardeners to disinfect their pruning equipment after working on a plant (especially one exhibiting symptoms of any disease process).

Symptoms

Some symptoms of RRD resemble other rose maladies and it is **important** to understand that one symptom alone does not confirm the presence of RRD. RRD is often confused with roses damaged by herbicides, plant growth inhibitors, pest damage and/or have a nutrient deficiency. For these reasons it is important not to panic if some RRD-like symptoms appear in your roses. Confirmation of the correct source of disease-like symptoms is extremely important.

It is also important to understand that RRD symptoms can vary between roses of different parentages. RRD symptoms can also vary depending on the season and environmental conditions, as well as the stage of plant growth at the time of infection.

The following chart identifies symptoms common in RRD-infected plants. Some of the same symptoms can result from other causes. Just because you see a symptom or two from the following chart—does not mean that you have RRD in your garden—as these symptoms are commonly caused by other things.

However, RRD causes some very specific symptoms that taken in context with the above to help identify and confirm the presence of the virus. The table below shows unique symptoms that are prevalent in roses infected with RRD.

Symptoms	Common Causes	RRD
Leaf & stem reddening	Normal plant development, new growth starts off red and turns green; environmental conditions impact the length of time it takes for the color change	Sometimes present, in roses infected with RRD, stems may not turn green
Leaf distortion	Pest feeding (i.e., spider mites, chili thrips); herbicide or mechanical injury	Usually present
Rapid stem elongation	Normal plant development; plant response to temperature fluctuations and fertilization	Often present
Leaf chlorosis (yellowing) with mosaic patterns	Exposure to saline irrigation water; nutrient deficiencies, other viral diseases, lack of water or too much water, heat stress	Sometimes present
Thickened canes	Normal plant development; environmental conditions; excessive fertilization; plant response to temperature fluctuations	Sometimes present
Premature dev. of	Pest feeding (i.e., chili thrips); herbicide damage	Often present

Treatment. There is currently no known cure for Rose Rosette Disease. Because of the possible infection of healthy roses, it is recommended that rose bushes with confirmed infection of this viral disease be dug up, bagged and sent to a landfill or burned. Do not compost plant material that has symptoms of Rose Rosette Disease.

Visit www.fbmng.com/library/roserosettedisease.pdf to view images of rose canes infected with Rose Rosette Disease. These canes were removed from two rose bushes in North Texas.

East Meets West

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subtle color contrast and bold textural differences to create interest. In a shady section of your yard, add textural contrast by planting soft, green plants such as peacock ginger or ardisia around the base of a tree. Or try ornamental grasses such as Pink Muhly or Purple Fountain Grass surrounding a bed to soften the edges.

- Do deer frequent your garden? There is a clever bamboo device called a "Shishi Odoshi," which is designed to frighten deer away from the area. An upper bamboo tube drips water into a larger, lower tube. When the tube fills, the weight of the water causes it to clunk against a bamboo mat resting on a stone. The sudden sound startles deer and reportedly scares them away. Even if deer are not visitors in your garden, this is a great way to add a Japanese element to the garden. And you can build it yourself!
- Japanese gardens usually contain a lot of symbolism or representation. You can create the illusion of water in your garden by lining dry streambeds or drainage areas with rocks or gravel and then lining the edges with ferns like Holly Fern or Cinnamon Fern or ornamental grasses like Dwarf Fountain or Bamboo Muhly to create a creek bank or shoreline. Ornamental grasses symbolize wind movement, an important feature in Japanese gardening. You can also carefully arrange tumbled river rock of uniform size and color to create the illusion of flowing water. Adding a stone lantern next to it helps solidify the illusion.

Many of the above elements can be seen in the Japanese Garden at the Fort Bend County Master Gardeners Demonstration Gardens in Rosenberg. Our garden is fashioned after Stroll Gardens constructed during the 18th & 19th Centuries in Japan, and it also contains elements of the Hill and Pond, Zen, and Tea Garden styles of Japanese Gardens. The tranquility of the garden is achieved through a blend of natural plants, water, and rock. We invite you to walk, to sit, to contemplate your surroundings in our garden and to experience the feeling of being part of nature. Perhaps you will be inspired to create your own Japanese-influenced garden or even just add your favorite element to help bring that sense of peace and of a space apart to your landscape

Understanding and Identifying Rose Rosette Disease, Continued

Symptoms	Common Causes	RRD
Abnormal leaflets have feather-like appearance and/or are drastically smaller than normal healthy leaves on the plant	Herbicide damage & contact with plant growth inhibitors. Roses can outgrow herbicide damage. Sometimes also caused by chili thrips feeding.	Most RRD infected roses demonstrate feather like leaves on infected canes
Stems and thorns become rubbery & easily pliable	1 to 2 day old rose canes are tender & pliable. These canes usually harden up within a week of development.	An RRD infected stem does not harden up & remains pliable & can usually be bent in half w/out dam-
Multiple distorted stems are produced at terminal end of branches or form a dormant bud eye resulting in a 'witches broom' effect	No known alternative cause	The most common & definitive symptoms of RRD
Bloom distortion & bloom color changes	Bloom distortion is caused by host of problems (chili thrips, downy mildew, powdery mildew, weather)	Bloom distortion with a change in floral color is an indication of RRD
Increased thorniness	Sometimes seen in herbicide damage	

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DATES TO REMEMBER

Saturdays with the Fort Bend Master Gardeners
First Saturday of the month 9:00-11:00 a.m.

Fort Bend Beekeepers Meeting
Second Tuesday of each month, 7:00 p.m.

Backyard Basics Education Series
Beginning in March 2014

Coastal Prairie Master Naturalist
Programs, First Thursday of the month

For full information on events call (281) 342-3034 or visit

<http://fortbend.agrilife.org>

<http://fbmg.com>

<http://txmn.org/coastal/>

<http://fortbendbeekeepers.org/>