

Rose Rosette Disease: Not a 'Rosy' Picture

STORY AND PHOTOS BY DOUGLAS A. SPILKER, PH.D.

This viral disease of roses has been spreading for years across the United States through weedy tangles of invasive multiflora roses. But now it is showing up in cultivated roses. Here's what you need to know to keep your roses healthy.



A later symptom of rose rosette disease is bunchy stem growth, called a "witch's broom," here on a Knock Out (*Rosa 'Radrazz'*) rose bush.

Rose rosette disease is truly the rose gardener's worst nightmare. This disease, caused by a virus, has been spreading for years in the wild rose population of much of the United States. This tragic disease is now showing up in cultivated roses. The good news is that roses (*Rosa* spp.) are the only plants susceptible to the disease. Although multiflora roses (*Rosa polyantha*) are particularly vulnerable, many types of roses are susceptible, including climbers, floribundas, hybrid teas and miniature roses. In recent years, the Knock Out series of roses has been heavily planted because of their adaptability to various landscape conditions and their resistance to most diseases, but unfortunately they are very susceptible to rose rosette. Therefore rose rosette has become a serious issue, particularly in mass plantings.

What does rose rosette disease look like?

A key symptom of rose rosette disease is the failure of new leaf buds to expand, causing a rosette-like appearance at the end of branches, thus the name "rose rosette" disease. However, it just as easily could have been called "witch's broom" or "red thorny" disease.

Infected plants produce succulent bright red shoots with distorted stems and leaves. The shoots may be covered by an abundance of soft, close-set thorns. Flower and leaf buds will be deformed or fail to open. The twisted growth may be



The presence of distorted, bright-red shoots is a warning sign of an infected plant.

mistaken for damage caused by a plant growth-regulator herbicide such as 2,4-D, but roses commonly outgrow temporary herbicide exposure. The later symptom of rose rosette is bunched stem growth, called a “witch’s broom,” which indicates that the whole plant is infected. Once infected, plants are highly susceptible to other diseases, such as black spot and powdery mildew. All this weakens the plant significantly and it dies in two to five years.

New growth of roses is often bunched together and red in color, but if healthy, it should expand to normal internode length and turn green. With rose rosette, it will stay red with a very obvious distortion. Symptoms are more pronounced during spring and fall. The hot, dry conditions of summer seem to inhibit the virus, but do not be fooled into thinking the virus has gone away. Death usually occurs in three to four years, but it is imperative to remove the infected bush before the disease can spread.

How did my rose bush get it?

Rose rosette disease is spread by an eriophyid mite (rose leaf curl mite) that inhabits the new growth of rose buds and leaf petioles. The mite alone causes little damage. Eriophyid mites are extremely tiny, about three to four times smaller than an average spider mite. These small mites move easily with wind currents.

Mites carrying the virus pass it from plant to plant as they feed on the plant sap of tender stems. Once a plant is infected, the virus moves throughout the entire plant, including the roots. There are no

chemical cures for rose rosette disease, and no roses are known to be resistant. When you see a “disease resistant” rose description, this does not pertain to rose rosette. Miticides that kill spider mites are ineffective on the rose leaf curl mite.

Parting is such sweet sorrow

Since there are no pesticides available to homeowners to help control this disease, management focuses on removing the pathogen by removing the infected

plants. Once the plant has developed symptoms, the entire plant, including the roots, should be removed and destroyed. While the pathogen does not survive in the soil, it will survive in any remaining roots. Do not to put the removed shrubs in compost bins — destroy the shrub. Any tools used to prune affected plants should be disinfected thoroughly in between use. You might lose a favorite rose bush, but removal of an infected plant may save the rest of your rose bed from a similar tragic

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Infected canes often show an overabundance of pliable thorns.

end. If the roots are completely removed, roses can grow safely in the same spot, but it is best to wait for a few weeks or until the next growing season to replant. The area can be replanted with a non-rose species immediately.

The only weapons in your arsenal are vigilance and prevention. Inspect all roses before planting, and scrutinize all roses in your garden on a regular basis. Start by purchasing disease-free plant material from reputable nurseries. When planting new roses, leave enough space between plants for good air movement and separation from overlapping foliage of neighboring roses. This extra space not only will help prevent mites from crawling from one plant to another, but discourage fungal diseases.

Rose rosette disease can be a curse, but be vigilant and do not give up on growing roses. Beautiful roses can be an important asset to any home landscape. ✂

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When removing plants infected with rose rosette disease, be sure to clear the area of all root material before replanting.



Another disorder of hybrid tea roses is caused by the rose mosaic virus, which produces any number of unique designs in the leaf tissue.

The 'Art' of Rose Mosaic Virus

Rose mosaic virus, another viral rose ailment, results in very interesting leaf patterns including green/yellow mosaics, ring spots, yellow zigzags, vein-clearing and even an oakleaf pattern. At times symptoms may be mild, but infected plants commonly have decreased vigor, produce fewer flowers, and are more susceptible to winter kill. Rose mosaic virus is not transmitted by a mite or insect; it is spread through grafting, the traditional propagating method for hybrid tea roses. If you have a severely infected plant, dig it up and destroy it because there is no cure. Pruning infected canes simply removes the symptoms; the plant is systemically infected, and will eventually develop symptoms on other leaves and canes. A serious rose gardener should always start out with "clean" stock by routinely purchasing healthy roses certified as "virus free."

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