Rose Rosette Disease

By Debbie Hodges, Guilford County Extension Master Gardener

“I don’t know whether nice people tend to grow roses or growing roses makes people nice.”
Roland A. Browne, author of For Better Gardens and The Rose Lovers Guide

Roses are America’s favorite flower and we spend hundreds of hours and dollars on making sure that our roses are the standouts of our gardens. We selflessly spray our David Austins and hybrid teas weekly to make sure they perform their very best. We scour the nurseries and catalogs looking for new varieties to add to our gardens, for no one of us has just one rose; we either have none or we have entire rose beds, and we are constantly surveying our landscapes in search of more open plots to add more roses! We even have a national Rose Garden at the White House.

When one of our roses is threatened by disease or insect, we stoically go on the attack to eliminate the beast. But what happens when you come face to face with Rose Rosette Disease and find yourself not with that glorious sweet smelling rose of Romeo and Juliet fame ("a rose which called by any other name would smell as sweet,” William Shakespeare), but a rose more akin to Macbeth’s Three Witches’ brooms, the classic telltale sign of Rose Rosette Disease?

Background
**Rose Rosette Disease (RRD for short)** was first identified in Wyoming in the early 1940s among the multiflora roses that were used as a natural fence line. The multiflora rose is an Asian rose that is today considered to be an invasive plant here in the United States. RRD is a virus that is spread by the microscopic mite, *Phyllocostes fructiphilus*, an eriophyid. This mite has no wings but is carried by wind currents. It can also crawl short distances to affect nearby roses other than its host plant. Grafting an infected cane is also a secondary cause of the spread of RRD. While RRD took many years to travel the distance, in the last ten years or so it is now found all along the east coast and has spread to infect landscape roses, including the two most disease and insect resistant roses, the *Knockout* and *Drift*. In 2007, the Brooklyn Botanical Garden had to remove many of its roses due to RRD, and in 2012 the Raleigh (North Carolina) Rose Garden discovered RRD among its roses and in a traffic circle on Hillsborough Street. Patricia Lunn Adsit, Guilford County (NC) Master Gardener Volunteer on the Rose Team, discovered a rose infected with RRD in our Demo Garden in 2011, as shown in this photo below.
Sadly, there is no cure for RRD and, once infected, the plant will begin to show signs of distress within 17 days to nine months and will die within five to six years, sometimes sooner, depending upon the variety and health of the plant. Rose Rosette Disease is a systemic virus, which means that it infects and affects the entire plant. Removal of a cane or canes will not stop the disease.

**Signs of Rose Rosette Disease**

One of the most easily recognizable signs that your rose may be infected with RRD, is the classic *witches’ broom*. Signs of witches’ broom include: multiple new shoots, closely bunched together, bright red in color (most of the time but not always) with clusters of thorns that are most often soft and pliable, not random and prickly like those found in a healthy plant. The leaves are small and often the canes are “blind,” meaning they have no flowers. If flowers are present, they too will be small and deformed. Be mindful, however
, that exposure to the chemical glyphosate, a weed and grass killer found in numerous
garden centers under several different trade names (Roundup™ being only one brand), can also cause witches’ broom. While there is a molecular test that will absolutely confirm RRD, North Carolina State University’s Plant and Insect Disease Clinic does not currently offer this testing. Their advice is to look for the excessive “thorniness” that is unique to RRD.

**What to do if you suspect your rose has RRD**
Rose Rosette is an incurable disease that left unchecked can spread quickly to
surrounding healthy roses. The only sure way to rid yourself of this disease is to remove
the plant entirely, roots and all. It is also recommended that if you have a bed of roses
that you remove those closest to the infected plant. Proper removal involves bagging the
entire plant before attempting to remove it. Bagging will help prevent the microscopic
mites from being transported inadvertently to any nearby rose bushes. Once the rose has
been removed and the roots bagged, make sure that any leaves on the ground from the
infected plant are also bagged. If you live in a county that allows burning, you may burn
the infected plant. However, if you live in a city, proper disposal is to put the plant, bag
and all, in the regular trash and not in the leaf and stem pile, and never in your compost.
Make sure to thoroughly clean any tools used for removal with a disinfectant such as
Lysol™, including gardening gloves. Once the plant/plants have been safely removed
from your garden, do not plant another rose in its place for two years. Because RRD is
systemic, any pieces of root stock left behind can produce a new plant that will also be
infected and thus will simply infect your newly planted rose bush. When choosing a new
replacement, look for resistant species that include the native *Rosa setigera* and *Rosa Carolina*. Look at your garden bed of roses and make sure the plants are spaced far
enough apart that there is no touching of leaves, stems, or flowers. If plants are touching,
dig them up and space them further apart.

**Future of RRD**
The major growers of roses in America are well aware of the spread of RRD and have committed millions of dollars in research to find a solution to this growing problem. They too realize that the rose is America’s favorite flower and something must be done. In the meantime, be vigilant about inspecting your roses and note any unusual characteristics you see. Thoroughly inspect all new plants before bringing them home for any signs of the disease and buy only from reputable nurseries. Look for signs of RRD in early June when most roses here in the Piedmont are in their vigorous growth period. Be mindful of the weather…a hot dry summer is a conduit for the spread of this disease, and remember to inspect your roses next year at this time for signs of RRD.

Remember, as of right now there is no cure for this disease, so please do not try to save an infected plant at the risk of infecting your other roses. As the famous French poet/novelist, Jean Richepin once said, “One may live without bread, not without roses.”

**Further Reading**
Ann Peck, a Rosarian with the American Rose Society, has written a web book on Rose Rosette Disease that is a wealth of information on this disease. It includes numerous photographs of the disease on many different rose species. [http://www.rosegeek.com/index.htm](http://www.rosegeek.com/index.htm)

**Sources**

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