



## Armed Rachis Can Leave You Bloody

Thorns, prickles, spines what is the difference? They all hurt when you encounter them in the garden or elsewhere. They are different botanically because they all derive from different parts of the plant.

Botanically roses do not have thorns, but are armed with what should be called prickles. However, calling rose prickles thorns goes back so far and is so familiar that there is not much likelihood that it will ever change in the minds of rose fanciers.

But botanically what is the difference? Let's start with thorns. There are a number of plants that are blessed with thorns. Some common ones are the locust trees. Both Honey Locust and Black Locust have impressive thorns which may be quite large and branching. Another common thorn plant is the Hawthorn.

What is it that makes a thorn a thorn *botanically*? Thorns are modified stems and grow much like stems because they originate from the nodes on the branches of the plant usually occurring from the axil of a leaf. They are not removable from the plant in most cases unless they are physically cut off of the stem. They also continue to grow as time goes by and can become rather large and scary structures.

The next sharp objects that plants produce are called spines. The spine is another structure that has evolved to protect certain plants from

interlopers in the environment. The plants that most of us are familiar with that have spines are the cacti.

Whereas spines can originate anywhere on the plant, they are found where leaves would be on a non-spiny plant. The origins of the spine are the same as a leaf and spines are considered modified leaves. You may notice plants, like cacti, have no structures that look like leaves. Instead all the potential leaves are replaced by spines.

Finally we get to the prickles. A prickle is different in its origin from the other two. A prickle originates at random from the epidermal cells covering the stems of the plant.

In the rose almost all of the prickles are located on the canes of the rosebush. Because of their superficial origin they are often easy to snap off from the stem. Roses, with very few exceptions, all have a lot of prickles, but the number can and does vary greatly from one variety of rose to another.

One California rose hybridizer spent many years producing roses without prickles. He succeeded somewhat, and did market a number of roses with the first name smooth. The hybridizer was Harvy Davidson and there are about twenty or more varieties listed on the website

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*Prickles of Falling in Love Rose*



*Thorns growing on a Honey Locust Tree*



*Spines from a cactus plant*

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[helpmefind.com](http://helpmefind.com). Just use the phrase “starts with” and put in smooth if you would like to see these. Many of them are in commerce but none locally that I noticed. A few of the varieties are *Smooth Lady*, *Smooth Delight*, *Smooth Melody* and *Smooth Perfume*. I have never grown any of these varieties because the number of prickles on a rose plant in my garden was never an important factor in their selection.

So what is a rachis? In describing a rose leaf it is botanically an innately compound structure with leaflets originating from a central petiole. Because many words are often used interchangeably and correctly for structures in botany, this central petiole is alternatively called the rachis. However the rachis is covered with an epidermis, just like the canes, from which prickles may and do grow.

Whereas rose gardeners usually wear gloves to protect themselves against the large prickles that are present on most of the canes, they are not the only ones which can cause harm. These tiny prickles, as shown in the three pictures below from three random roses in our garden, are tiny in size and varying in shape. However they can and often do produce bloody scratches on my hands and arms when reaching into a bush for various reasons while not wearing protection.

So always beware of the large prickles, but beware of the tiny ones as well. They are almost too small to see, but they are big enough to be felt.

—Rich Baer, Master Rosarian,  
reprinted from the July 2019 Rose Chatter,  
newsletter of the Portland Rose Society



Rose Prickles,



Rose prickles,



and still more rose prickles.

## All About Rose Suckers

Rosarians are often surprised when their rose bush suddenly sprouts a blossom that doesn't look like the others on the plant. Usually this bloom is growing on a cane that is called a “rose sucker.”

A rose sucker is a cane that is growing off the rootstock of the rose. Historically, most roses sold commercially are grafted. Grafted roses are created by attaching the desired rose variety (the scion) to another rose, the rootstock, that will provide the roots for the scion. When the time is right, the top part of the rootstock is cut away, leaving the developed rose that will be sold.

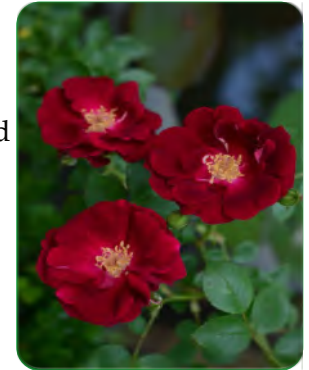
Roses that are not grafted are called own-root roses and identified as such when being sold. Rose grafting is profitable for big rose growing nurseries because it takes less time to get a grown rose to market than a own-root one.

In addition, rootstocks provide a vigorous root system that more quickly establishes the rose in the garden, allowing it to grow bigger faster than an own-root rose. Grafted roses do have some disadvantages; the growth of suckers is one of them. Growth from an own-root plant belongs to the bush you planted.

Several rose varieties are used by rose growers as rootstock. The most well known one is *Dr. Huey*, a hybrid banksia rose which sports a red bloom.

*Fortuniana* is a variety that has gained popularity because it does well in loose, sandy soils, is nematode resistant, and is very vigorous.

*Multiflora* is a species rose that has diminished in use because it has become an invasive species in



*Dr. Huey*



*Fortuniana*



*Manetti*

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several parts of the country. *Manetti's* roots are flexible and less prone to breakage.

All of these varieties have a vigorous, rangy growth habit. That vigor is what produces canes from a plant that is, for the most part, underground.

Given a chance *Dr. Huey* will take over a plant as it “sucks” the nutrients from the soil. Suckers can grow off the roots of the rootstock, from the part of the rootstock that is close to the bud union, and below the ground sprouting up a distance from the rose.

Once you have seen a sucker or two, it becomes easier to tell them from the desired plant's cane. They grow fast so they quickly become taller than other canes, and they are whip-like and flexible.

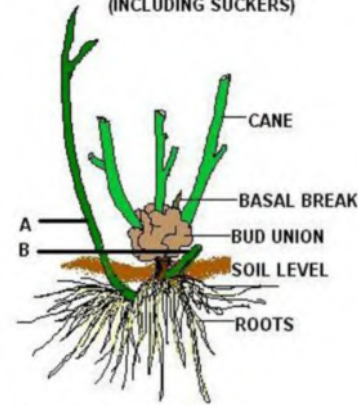
They may not bloom, but when they do, the bloom will be red (*Dr. Huey*), white (*Fortuniana*, *Multiflorais*) or pink (*Manetti*). You may decide you like the rootstock blooms, but know that the thriving rootstock will diminish the growth of the purchased rose and eventually take over.

You cannot successfully cut off a sucker — it will grow back. The way to get rid of it is to locate its origin, even if it is beneath the ground, twist it, and tear it off. You want to inflict superficial damage to the area it's growing from so the cane will not re-sprout.

There are times when different blooms appear on a plant that are not from suckers. A plant can produce a sport, which is a mutated part of the plant that creates a new bloom form that is a different color. Many roses eventually prevail if you do not trace it back to its beginning and tear it away.

Many roses sold commercially, such as *Blushing Knock Out*, are sports. A red bloom on this variety could be a reversion to the original variety

THE PARTS OF A GRAFTED ROSE  
(INCLUDING SUCKERS)



A = Sucker from the roots  
B = Sucker from rootstock, below grafts

*KnockOut*, which has a cherry-colored bloom. Or your different-looking bloom could be a new sport.

It's a good idea to check the lineage of a rose or see if the flower looks like a rootstock bloom if you are not sure where the different bloom came from.

If your different bloom is from rootstock, it's a sucker that will eventually prevail if you don't trace it back to its beginning and tear it out.

—Carolyn Elgar, OCS Master Rosarian  
Reprinted from April/May Rain Drops,  
Rainy Rose Society, WA, Sue Tiffany, Editor

## Other Rosy Links

Just in case you wondered what other information might be available from **YouTube** specifically addressing growing roses in our desert, I looked around and found several fairly recent ones. Since we're inside:

*Arizona Garden In September: What To Do & Plant — Plus Tips For Fall Gardening* (08/28/2020)

<https://www.youtube.com/watch?v=YPPtCPFwnUQ>

*Growing Roses in Triple Digit Temperatures - AZ* (05/30/2020)

<https://www.youtube.com/watch?v=bN-MI8ALT6w>

*Should I Grow Roses in the Sonoran Desert?* (05/19/2020)

[https://www.youtube.com/watch?v=nPlpwCH\\_Hm4](https://www.youtube.com/watch?v=nPlpwCH_Hm4)

*Deadhead Roses for More Flowers*

[https://www.youtube.com/watch?v=nPlpwCH\\_Hm4](https://www.youtube.com/watch?v=nPlpwCH_Hm4)

*Climbing Roses in 110+ Heat in the Sonoran Desert in Phoenix AZ* (08/24/2020)

<https://www.youtube.com/watch?v=hqXeYxSylfQ>

*Roses in 110+ Temperatures; How are my Roses doing in the Phoenix Summer*

<https://www.youtube.com/watch?v=znjppyahDSQ>