# William T. Kemper Center for Home Gardening

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A Visual Guide: Rose Problems



# Black spot of rose

Black spot is the most important disease of roses and one of the most common diseases found everywhere roses are grown. The disease does not kill the plant outright, but over time, the loss of leaves can weaken the plant making it more susceptible to other stresses and to winter damage.

Black spots, one-tenth to one-half inch in diameter, develop first on upper leaf surfaces. Later, areas adjacent to the black spots turn yellow and leaves drop prematurely, usually beginning at the bottom of the plant and progressing upward.



Lookalikes: Spot anthracnose (shot-hole disease) is not a major problem unless it is very hot (too hot for black spot). Spots caused by black spot are fuzzy around the edges, then turn yellow and brown. Spots caused by anthracnose are smooth edged and the centers turn grey and drop out. Treatment is the same, but if a pesticide is used, it must be labeled for black spot or anthracnose, whichever disease you are treating.



#### **Rose rosette**

Rose rosette disease, also known as witches'-broom of rose, is a virus or virus-like disease, that is spread by a microscopic eriophyid mite. The main symptom is a tightly grouped, proliferation of distorted, usually bright red foliage (a witches'-broom). Affected canes may be excessively thorny, thicker than unaffected canes and slow to mature. The canes are also soft, as are the prickles, and will break off with little pressure.

Lookalikes: rose flower proliferation or bullhead (affects flowers only, not foliage or stems, click here for picture), new growth (often bright red but without the proliferation of buds and prickles and with stems that are firm, not soft)





#### **Rose mosaic**

Symptoms of this viral disease can include a general dwarfing of the plant, lack of proper chlorophyll production resulting in a mottled appearance on foliage, yellowing and in some cases rings on leaves or fruit as well as necrotic (dead) areas. Often only a cosmetic problem. The disease can be spread by feeding insects or mites, or mechanically through hands and tools.

Lookalikes: Herbicide damage, environmental problems or other disease organisms



C. Calderon, USDA APHIS PPQ, Bugwood.org

# **Powdery mildew**

Powdery mildew is caused by a fungus and is seen as a light gray or whitish powder on the upper surface of leaves. It occurs following warm days and cool nights with high relative humidity often seen in the spring and fall. The disease is considered more unsightly than harmful.

Tip: If powdery mildew appears on only one or two plants, cut off the infected parts and destroy. Doing this between sprays can help control the spread and eliminate the need for an extra spray.



Crown gall on wintercreeper euonymus

# **Crown gall**

Crown gall is a bacterial disease that causes abnormal growths or galls on roots, twigs, and branches. The galls are often found at the base of a plant or just below the soil surface. The pathogen enters through wounds, either natural or caused by pruning, mechanical injury or chewing insects. The bacterium stimulates the rapid proliferation of plant cells that results in the galls, which are usually rounded, with a rough, irregular surface. As the galls enlarge, they become woody and hard. The outer layer turns brown and corky. Roses that are not responding to fertilizer and general good care, may be affected by a gall under the soil surface.

Lookalikes: Sometimes the galls can have a smooth surface, making them difficult to distinguish from callus growth at the base of the rose or the graft union.



#### **Deer**

Deer love all members of the rose family and all parts of a rose, including the thorns. Look for missing flowers, leaves, and stems with ragged cuts. If hungry enough, they will ignore all repellents.



# Rose and pear slugs

Sawfly larvae chew the upper surface of rose leaves leaving behind the papery, translucent lower leaf surface and the veins. Heavy defoliation gives plants a brown scorched appearance. Look for sawfly larvae in mid-spring (rose sawflies) or early summer (pear sawflies). Inspect both upper and lower surfaces of the leaves.

Lookalikes: Japanese beetle damage (late spring and summer)



Adults feeding on an oakleaf hydrangea leaf

# Japanese beetles

Japanese beetles are 3/8" (8-11 mm) long and ¼" (5-7 mm) wide, brilliant metallic green insects with copper-brown wings. The larvae stage is found in the soil where they feed on the tender roots of vegetables, lawn grasses, and other plants. Beetles congregate in large numbers on rose flowers. Adults chew holes in flower buds, flower petals and on foliage between the veins, giving the leaves a lacelike, skeletonized appearance.

Adults are active for about six weeks in the summer. They overwinter as a partially grown grub in the soil below the frost line. The grubs resume feeding on grass roots in the spring, and then pupate near the soil surface.

Lookalikes: Rose and pear slugs (damage)



The Dow Gardens Archive, Dow Gardens, Buawood.ora



W. Cranshaw, CSU, Bugwood.org

#### Rose curculios

Adults are snout-nosed beetles (curculios) that feed on flower buds, usually yellow or white cultivars. Females deposit eggs inside unopened or opened flower buds. Opened flowers will be riddled with ragged holes or the buds will die.

Lookalikes: Rose chafer beetle



#### **Leaf-cutter bees**

The most characteristic symptom of leaf cutter bees are the half-moon shaped holes they make on the edges of leaves as they remove disks of leaf tissue to take back to their nest cells. They are one of the most important native pollinators and damage is only cosmetic. No treatment is recommended.





Damage on Brugmansia leaf

# **Spider mites**

The two-spotted spider mite is smaller than the head of a pin (top image). They tend to feed on the underside of the leaves, removing chlorophyll and causing leaves to have a "bronzed" and/or stippled appearance (bottom image). Silken webbing may be present on underside of leaf. Heavily infested leaves turn brown, curl and drop off.

Lookalikes: hopper and leafhopper damage



Nymph on wintercreeper euonymus



Cottony secretions and cast skins on maple leaf

# **Hoppers and leafhoppers**

Hoppers can move with equal ease either forwards, backwards, or sideways like a crab. In addition, they can hop to escape danger or to move to another host plant. Feeding damage from some species causes small white spots (stippling) to appear on the upper leaf surface, usually beginning near the leaf midrib. Stippled areas can unite into larger whitish blotches on mature leaves. Also, check under leaves for white, papery cast skins that remain from the molting process. Females deposit eggs into the canes creating wounds that allow disease pathogens to enter the host plant.

Lookalikes: Spider mite damage



#### Scale

Scale are insects that pierce and suck plant juices, reducing plant vigor but usually not enough to kill the plant. The main problem with scales is the large amounts of honeydew they produce that can cover leaves and fruit and act as a growth medium for black, sooty mold. Honeydew also attracts ants, flies, wasps, and bees that can become a nuisance.

They normally appear as a colored raised area on a leaf or stem that can be flicked off with the point of a knife or a fingernail. They vary in size but are usually about 1/8 inch long.



W. Cranshaw, CSU, Bugwood.org

# **Aphids**

Symptoms of aphid damage include malformed flowers and leaves that curl and pucker, turn yellow or brown and fall off. Look for aphids at the beginning of the growing season. They are often abundant on new, tender growth. They multiply more rapidly with high nitrogen levels (producing more new growth). Aphids suck more plant sap than they can use so they exude a sticky substance called honeydew onto leaf surfaces creating an ideal growing medium for black, sooty mold on leaves.

# Rose midges

Rose midges are microscopic flies that can kill rosebuds and leaves. The destructive, whitish larvae (maggots) usually hatch after the first bloom cycle and rasp tender plant tissue as they feed, causing leaves and blossoms to blacken and shrivel. An unchecked, heavy infestation can eliminate bloom from late spring to early fall.



#### **Thrips**

Thrips are minute insects that have rasping-sucking mouthparts to slurp up plant fluids. Emerging leaves are distorted and twisted, with yellow flecking or streaking. Flower buds are deformed and fail to open or fall off prematurely. Blossoms can become streaked with brown and can wither. Look for damage in early to mid-summer.

Lookalikes: Botrytis blight (irregular flecks and spots on flower petals versus streaks)



#### **Botrytis blight**

Botrytis blight causes buds and flowers to develop abnormally and turn brown. It may also cause cane canker. Flowers may have irregular flecks and brown spots; older flowers tend to rot quickly. Soft, brown spots appear on leaves, stems, and flowers following periods of low temperatures and wet conditions. Affected parts of roses may be covered with a gray mold and buds fail to open. The fungus usually requires a wound to invade the tissue and can persist year-round on plant parts and in the soil. Prune out at first appearance.

Lookalikes: Thrips (streaks on flower petals versus irregular flecks and spots)



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#### Rose canker

Cankers may be caused by many different organisms, including Botrytis blight mentioned earlier. A canker may appear as a localized lesion on a stem (e.g., Coniothyrium, brand canker, top image) or as a larger discolored or distorted area (e.g., Leptosphaeria, middle image). In other cases, cankers can appear similar to normal tissue, but show up as flat patches on branches. They commonly enlarge to girdle stems, killing the water-conducting tissues and causing the death of upper branches or terminal growth. This form of dieback can also be caused by root rot fungal pathogens that have invaded the roots or the crown of the plant at the soil line.

Certain cankers cause symptoms late in the season that include small, dark, wartlike fruiting bodies that are lined up in rows (e.g., *Phomopsis*, bottom image). The canes will wilt and die back above the canker. Other symptoms occur below the union. The bark darkens into a water-soaked, black region. Canes may not die but will produce fewer flowers. Canes can be pruned as soon as you notice symptoms. Fungicides may be used on newly cut areas.



J. Solomon, USFS, Bugwood.org



UGA Plant Pathology Archive, UGA, Bugwood.org

#### Cane borers

Raspberry cane borer (top image, on raspberry): Twigs are girdled causing younger shoot tips to wilt and eventually die. The base of girdled areas show a purple discoloration.

Red-necked cane borer (bottom image): Larvae are typically located at the base of the roses, although they are found in the stems, canes or both, tunneling in the vascular system or center of the stems. This leads to wilting and branch dieback. Infested areas may swell at the base. Attacks are often on weakened or stressed roses.



A shoot (bottom left) growing from the rootstock of a climbing rose

# Plant or flowers "change" color or form

Many roses are grafted. This means that a bud from a preferred species is inserted into the rootstock of a different species, usually known for its vigor and longevity. Any shoots that grow from stems above the graft union will produce flowers from the preferred species, but any shoots that grow from stems or roots below the graft union will produce flowers from the rootstock. The two will usually differ in flower and foliage form and color. Trace the canes from the rootstock to their point of origin and remove; otherwise, they will replace the preferred species.