

A2173

# Crabapple disorder: Scab

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## Symptoms and effects

From late spring to early summer, foliage of several cultivars of ornamental crabapple may become infected with the fungus that causes scab. The disease primarily affects leaves, although it frequently blemishes fruits, too. Severely infected trees may be defoliated by mid- to late summer.

In the field you can best identify scab by carefully inspecting infected leaves. Scab lesions or spots are roughly circular and range in size from less than a pinhead to ½ inch in diameter. The margins of lesions are typically fuzzy or feathery. Spots may occur on both sides of leaves but are more common on the upper leaf surface. Scab lesions are velvety and olive green to black. Heavy attacks of scab affect entire leaves, which turn brown as they become coated with a gray-green moldy covering. People sometimes confuse severe scab infections with fire blight disease.

Older leaves gradually become somewhat resistant to scab, but most crabapple varieties continue developing new leaves into late summer. Thus, new infections can occur on young leaves nearly all summer long in wet seasons.

The leaves on heavily infected trees begin to turn yellow and drop in July and August, and trees may be virtually defoliated by early September. Heavy leaf loss may cause poor flowering the next season, as well as reduce tree vigor and life expectancy.

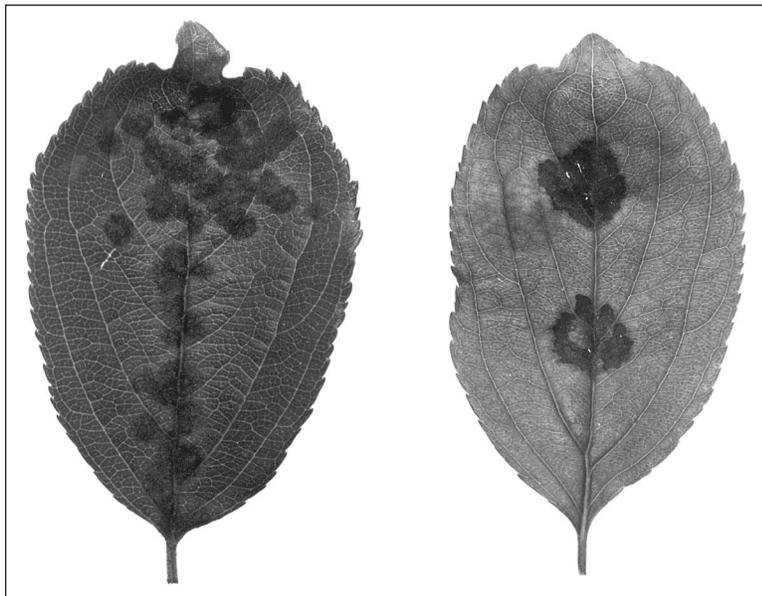
Field observers usually can identify scab accurately. If necessary, laboratory examination can confirm scab. Press suspect leaves flat, clear them of excess moisture, and take them to your county Extension office. The office will either confirm the diagnosis or will forward the leaves to a disease diagnostic laboratory.

## Cause

The scab fungus, *Venturia inaequalis*, produces two types of spores. Spores from the previous year's infected leaves lying on the ground cause infections in spring. These spores, called ascospores, are produced sexually and are spread by wind and splashing rains. Ascospores infect plants through late June in Wisconsin. Wet spring weather favors disease development.

Fungal lesions on new foliage or fruit reproduce through asexual spores, called conidia, that are easily spread by wind and rain. Because the fungus reproduces sexually, different strains can appear. Different fungal strains cause cultivars to react somewhat differently from year to year and from one location to another.

In Wisconsin, scab is the most common ornamental-crabapple disease and is also the most important disease affecting apple orchards. Scab occurs throughout the state. Weather conditions strongly influence scab development. Wet seasons bring epidemics; scab is unusual during dry years.



Circular scab lesions are velvety and olive green to black and range in size from smaller than a pinhead to ½ inch in diameter.

**CRABAPPLE DISORDER: SCAB**

**Control**

The best way to control scab on ornamental crabapples is to prevent it. Today, many cultivars are resistant to scab. Due to the severity and frequency of this disease, limit plant selection to cultivars that have scab resistance before selecting for blossom color, fruit color and size, and plant shape.

Ornamental crabapples reasonably isolated from other susceptible crabapples, hawthorns, or apples benefit if you thoroughly clean up diseased leaves. For best results, rake and remove leaves in fall before they become brittle and break up, or before they blow into inaccessible areas.

Composting infected leaves is not recommended unless high temperatures

are maintained throughout the composting process. Removing leaves destroys the local source of early spring inoculum (ascospores) and often eliminates infestations unless asexual spores blow in after June from outside sources. Sanitation works better in dry years than in wet years.

**Selected scab-resistant cultivars**

<b>Cultivar</b>	<b>Height</b>	<b>Flower</b>	<b>Fruit</b>	<b>Form</b>
Anne E	S	white	red	weeping
<i>baccata</i> cv. Jackii	M	white	red-purple	rounded
<i>baccata</i> cv. Walters	M	white	yellow	upright-spreading
cv. Bob White	M	white	yellow	rounded
Coralburst	S	pink	bronze	rounded
cv. Donald Wyman	M	white	red	rounded
Floribunda	M	white	yellowish	spreading
Golden Raindrops	M	white	yellow	upright
cv. Liset	M	rosy	purple	round
cv. Louisa	M	pink	yellow	weeping
cv. Ormiston Roy	M	white	orange, yellow	upright-spreading
cv. Prairifire	M	rosy	red	upright-spreading
cv. Professor Sprenger	M	white	orange, red	upright-spreading
Red Jewel	M	white	red	upright-spreading
cv. Red Peacock	S	white	red	spreading
<i>x robusta</i> var. <i>persicifolia</i>	L	white	red	upright-spreading
<i>sargentii</i>	S	white	red	spreading shrub
<i>sargentii</i> cv. Tina	S	white	red	spreading shrub
cv. Sentinel	M	white	red	upright-narrow
cv. Spring Snow	L	white	none	upright-spreading
Sugar Tyme	M	white	red	rounded
cv. White Angel	M	white	red	upright-spreading

\* S= small, under 15 feet; M = medium, 15–25 feet; L = large, over 25 feet

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