



Figure 1. Dark leaf spots (left) are small, round, either dark brown or black that may cover entire leaf. Spores of the fungus on the lower leaf surface (right).

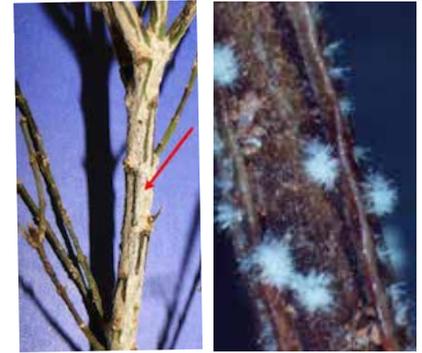


Figure 2. Black stem lesions. (left) Fuzzy, white spores on a stem. (right)

Boxwood Blight

Calonectria pseudonaviculata

A Sustainable Places® Fact Sheet

Boxwood Blight, *Calonectria pseudonaviculata*, (previously called *Cylindrocladium pseudonaviculatum* or *Cylindrocladium buxicola*) is a devastating disease for American, English, and Korean Boxwood (*Buxus*) shrubs. The disease was first found in the United Kingdom in the mid 1990's. It is now widespread throughout Europe, this disease was first discovered in the U.S. in 2011 in North Carolina and Connecticut and has now spread to more than twenty states and three Canadian provinces. The disease is caused by a fungus that attacks the above-ground portions of the plants, not the roots. Symptoms begin with dark leaf spots that coalesce to form brown blotches. The undersides of infected leaves will show white fuzzy masses. Rapid defoliation usually starts on the lower branches and moves upward into the canopy. Black streaks develop on green stems, causing black canker and twig death. During periods of high humidity, white fuzzy masses that consist of numerous clumps of spores will emerge from the black stem cankers. The spores can be seen with a hand lens. Infected leaves often drop off of the plant. The groundcover plant, *Pachysandra* is also effected.

Habit and Control: Three major characteristics: 1. Leaf drop, 2. Black streaks on stems, 3. Leaf drop. Research has shown that the disease may have up to 3,600 organisms per leaf. No sign of disease may show immediately, but is most easily identified in Spring and Fall when temperatures are cooler and favor the organism. The disease has three stages, an active stage, a spore dispersal stage where it is infective, and a dormant stage. Infection increases within 5-8 hours of being wet and decreases with leaf age and temperatures over 82°F.

Boxwood Blight is primarily spread through the purchase of infected nursery stock and by homeowners and landscape workers who fail to properly sanitize their clothing and equipment as they move within a property and from one property to another, moving infected plants, soil, and/or equipment. The pathogen also spreads by wind-driven rain or splashing water over short distances and is most infective during conditions of high humidity. Wildlife can also spread the disease. The pathogen has been found to survive over the winter in infected plants, fallen leaves, and in the soil for up to 5 years. Proper removal and destruction all of affected leaves and branches with sharp tools is essential to stop the spread of the disease. Mulch has been found to reduce the spread of the disease, keeping the spores from splashing from the soil onto the plants. Research has shown that beneficial fungi makes the plants less susceptible to the disease. Kong et al 2017 Crop Protection 98:124-127. Virginia Tech Chuan Hong, Virginia coop Rosee Rosette Disease Pub 450-620.

1. Do not shear boxwood when they are wet to reduce the chance of spreading the disease.
2. Disinfect all pruning equipment with bleach or hydrogen peroxide before moving to a new area.
3. Collect trimmings from pruning and destroy.
- 4. Fungicides will not cure plants with the disease.**
5. Avoid bringing in new boxwood.
6. Avoid bringing in mulch that may contain the disease.

Boxwood Blight Photos

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Figure 3. Infected Boxwood leaf spots.



Figure 4. Infected Pachysandra leaf spots and stem lesions.



Figure 5. Boxwood Blight Symptoms (above).



Figure 6. Boxwood Blight Spore masses that stick to clothes, shoes, equipment, animals, and vehicles.

The images on this page will help you correctly find and identify the Boxwood Blight in its various stages. Black or dark brown diamond-shaped linear cankers are clearly defined against the green stems. Other more common Boxwood diseases do not cause defoliation.