

Boxwood Blight

An Emerging Threat to the Pennsylvania Landscape

Pathogen

Boxwood blight is caused by the fungus *Calonectria pseudonaviculata* (otherwise known as *Cylindrocladium pseudonaviculatum* and *Cylindrocladium buxicola*). Spores can initiate infection very rapidly under humid/wet conditions. Within a week the pathogen can produce spores again. These spores are extremely sticky and will cling to any dog, bird, insect, or person brushing past. The spores can then be deposited on a healthy plant and cause infection. Rain, irrigation water, and contaminated equipment and workers all can quickly spread the pathogen from plant to plant. Long-distance dispersal is the result of human plant movement. All boxwood cultivars, as well as *Pachysandra* and *Sarcococca* plant species, show some degree of susceptibility. Other plants in the Buxaceae family may serve as hosts as well. The production of hardened survival structures, called microsclerotia, allow the fungus to survive harsh conditions.



SANDRA JENSEN, CORNELL UNIVERSITY, BUGWOOD.ORG

Symptoms

The symptoms for boxwood blight are very well defined. New infection begins in mid- to late summer as dark circular spots on the newest foliage. Over time the spots will grow, and a concentric ring pattern will develop. The spots can then merge, forming lesions that take up a large portion of the leaf and lead to the death and dropping of the leaf. Characteristic black streaks can also be present on the twigs. Signs of the disease are the presence of white fungal structures mainly on the underside of the leaf, as well as on diseased parts of the stem. Other conditions can mimic signs and symptoms of boxwood blight. Sending a sample to a diagnostic laboratory is the only way to be sure.

Management

Proper sanitation is the best management strategy for boxwood blight. Infested tools can spread the infection from location to location rapidly. The transport of infected boxwood leaves or stems attached to clothes, shoes, or equipment can also lead to the spread of this disease. Do not chip boxwood-blight-infected boxwood cuttings for use in mulch, as the disease may spread



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this way as well. Current research is looking into the survival of the fungus through composting; at this time, composting infected boxwoods is not recommended.

Buxus species show a wide range of susceptibility to boxwood blight. *B. sempervirens* plants have been found to be extremely susceptible to boxwood blight, particularly the varieties 'Suffruticosa' (English) and 'American'. To learn more about tolerant *Buxus* species and fungicides available, visit the AmericanHort Knowledge Center—Boxwood Blight website, www.boxwoodblight.org.

Proper quarantine procedures for new shipments of boxwoods and a rigorous inspection routine should be implemented. This allows for early detection and helps increase the probability of successful eradication.



SHARON DOUGLAS

SHARON DOUGLAS

Leaf spots (left) coalesce to form lesions (right).



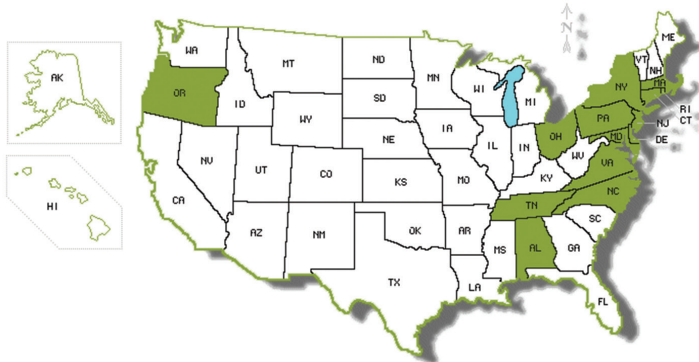
SHARON DOUGLAS, CAES

Black streaks present on the branches and twigs.



So I Think I Have or See Boxwood Blight, What Should I Do?

It is very important that suspected occurrences of boxwood blight are confirmed. If you suspect a boxwood is diseased, collect a sample, double bag it, and take it to your local Penn State Extension office. If you are a licensed nursery or nursery dealer, you may also contact your Pennsylvania Department of Agriculture regional office for assistance. Visit the Penn State Plant Disease Clinic website (see right) to learn more about collecting and sending plant samples. Do not dispose of the plant until instructed. Residential properties that have tested positive for boxwood blight are strongly encouraged to select alternatives to *Buxus* species when replanting.



Current states with confirmed boxwood blight presence.
(Rob Harvey, 2014)

Symptoms Often Confused with Boxwood Blight



Winter Injury



Boxwood Leafminer



Volutella

Contact Information

If you think you have found a boxwood with boxwood blight, bring your double-bagged sample to your Penn State Extension office. You can find the office in your county at extension.psu.edu/counties.

You may also send the sample directly to the Penn State Plant Disease Clinic. Pick up a Specimen Information Form from your Penn State Extension office or print one from the clinic's website at plantpath.psu.edu/facilities/plant-disease-clinic. Make sure to complete the entire form before mailing it and the sample to the clinic.

Helpful Websites

AmericanHort Knowledge Center—Boxwood Blight:
www.boxwoodblight.org

Penn State Plant Disease Clinic:
plantpath.psu.edu/facilities/plant-disease-clinic

Pennsylvania Department of Agriculture Boxwood Blight page: www.agriculture.state.pa.us (search programs for “Boxwood Blight”)

Pennsylvania Department of Agriculture Regional Offices:
www.agriculture.state.pa.us (click on “About PDA” and “Regional Offices”)

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extension.psu.edu

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