



Volutella Blight of Boxwood

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Introduction

Volutella blight of boxwood is an economically important disease that poses a significant and immediate threat to nursery production and landscape boxwood. The disease is caused by two distinct fungal species, *Pseudonectria buxi* and *Pseudonectria foliicola* (Yang *et al.*, 2021).

These pathogens have spread from initially infected nurseries through the long-distance transport of infected non-symptomatic plant material and via infected boxwood cuttings used in evergreen Christmas wreaths.

Symptoms and Signs

Early symptoms of volutella blight occur on infected stems as discoloration on the leaf tips during early spring. These leaves finally turn tan as the disease progresses due to canker girdling of the stem, resulting in dieback. Cankers at the base of boxwood branches supporting necrotic foliage often exhibit areas where the bark has loosened, revealing darkly discolored wood.

A distinguishing symptom of volutella blight, differentiating it from boxwood blight, is that necrotic leaves cup upward and remain attached to branches even after branch death, although defoliation will occur over time (Figure 1), while rapid defoliation is observed in boxwood blight.

During periods of high humidity, salmon-colored fruiting structures (sporodochia) emerge on infected leaves' abaxial (undersides of leaves) and stems (Figure 2). This is another distinguishing feature from boxwood blight, boxwood blight produces white structures.



Figure 1. Tan colored leaves on a Volutella blight-infected boxwood plant. Photo credit: Leonberger and Gauthier, 2017



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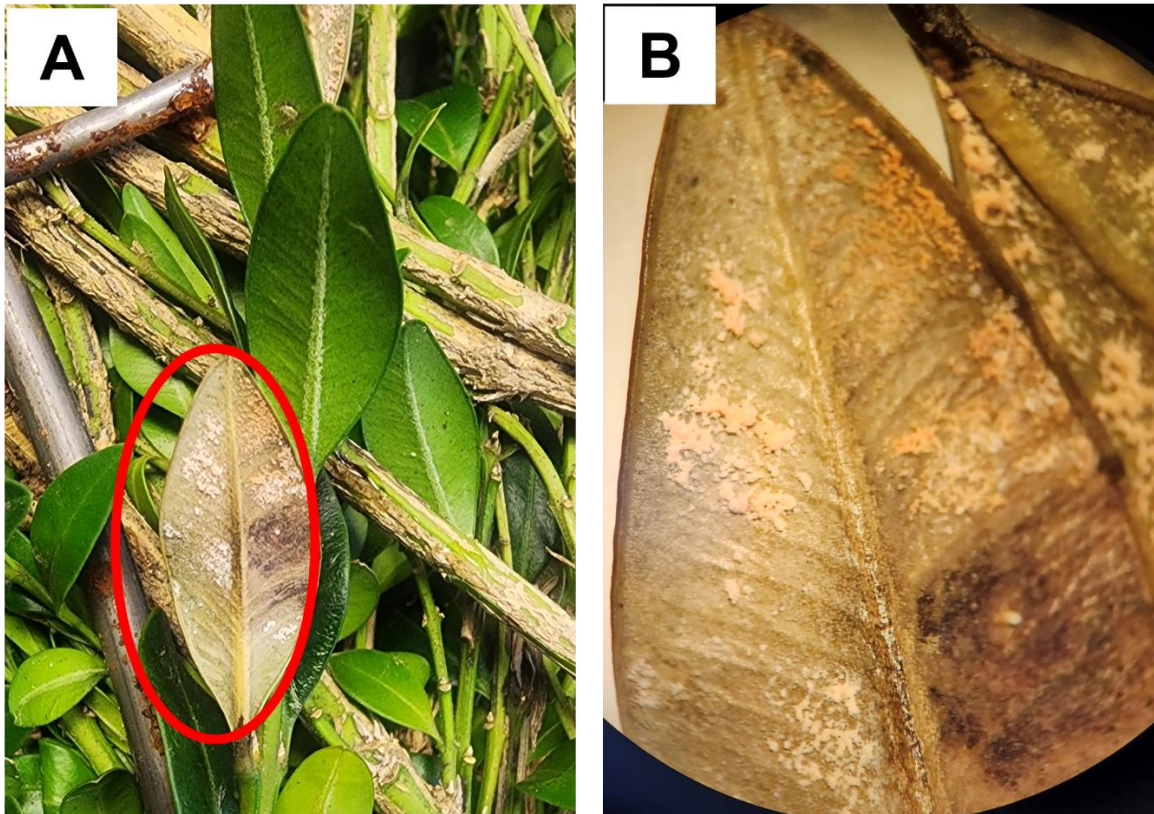


Figure 2. A-B; Salmon-colored fruiting structures (sporodochia) on the underside of infected boxwood leaves on a Christmas wreath

Transmission and Disease Cycle

Volutella blight pathogens overwinter in boxwood branches, leaves, and other plant debris that were infected the previous season. Primary infections occur in spring during the optimum temperature of 68°F to 77°F and high humidity that supports disease development. Emerging spores invade plant tissue via openings on wounded stems caused by pruning and winter damage.

Volutella blight is dispersed over short distances via overhead irrigation or rain splashes and contaminated tools. Long-distance spread is achieved via the movement of non-symptomatic but infected nursery plants and the use of contaminated tools.

Host Range

All current commercially available boxwood cultivars, including hybrids, are susceptible to volutella blight pathogens.



Disease Management

Preventing the introduction of volutella blight-infected plant material to a nursery or landscape, promoting plant vigor, and managing plant stresses are the most effective management strategies for this disease. Here are some best disease management practices for volutella blight:

- Prune diseased branches when foliage is dry to avoid spreading spore masses.
- Remove and destroy pruned infected plant parts or fallen leaves. **DO NOT COMPOST**
- Sanitize pruning tools between plants. Use 70% alcohol, 10% bleach solution, or a commercial sterilant.
- Prevent wounding plants during maintenance activities.
- Maintain plant health with proper nutrition and irrigation practices. Avoid overwatering and excess fertilizer.
- Maintain good air circulation by adequately spacing plants and pruning dense growth.
- Avoid winter damage by protecting plants from dry winds and extreme temperatures.
- Fungicides can help protect boxwood plants from volutella blight, but will not cure those already infected. For best results, apply fungicides just before new growth emerges in spring and continue every 7 to 10 days if conditions are favorable for infection and disease development.

Once the described symptoms are observed and the disease is suspected, accurate diagnosis and sanitation are critical for management. **Contact the Maryland Department of Agriculture, Plant Protection and Weed Management Section at 410-841-5920. Our inspectors will reach out to you**

For More Information Visit,

Horticultural Research Institute.
<https://www.boxwoodhealth.org/>

Boxwood Blight Task Force (Virginia Cooperative Extension) <https://ext.vt.edu/agriculture/commercial-horticulture/boxwood-blight.html>

References

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