

BOXWOOD BLIGHT IS ON THE MOVE

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April 18, 2019

Driving around East Hampton in the winter, one can easily identify the boxwood that grace so many of East Hampton's gardens—with its small waxy evergreen leaves standing out in a bleak landscape or frequently wrapped snugly in burlap.

It's thought that boxwood first arrived in America at Sylvester Manor on Shelter Island in the 1650s. But as it was widely used in European gardens for hundreds of years before this, it undoubtedly also arrived with other colonists, who propagated and shared the plant and its various cultivars with one another. Boxwood quickly defined early American gardens up and down the Eastern seaboard. George Washington planted it at Mount Vernon, sending cuttings to a sea captain in Sag Harbor in the late 1700s, where the shrubs, now over 10 feet tall, continue to thrive today. *Buxus sempervirens*, or standard boxwood, can grow up to 12 feet high and 15 feet wide, as they do at Sylvester Manor, and live for hundreds of years. Along with its cultivars, which vary in size, it can be pruned into formal shapes to edge garden beds or create imaginative topiary shapes from spheres to spirals, clouds, swoops, and more. In recent decades, interest in the plant has surged because boxwood is delightfully deer resistant and low maintenance, requiring pruning only once a year.

But now this ubiquitous and beloved garden plant is threatened. In just the last few years, the boxwood blight, caused by a fungus whose scientific name is *Calonectria pseudonaviculata* (sometimes referred to as *Cylindrocladium buxicola*), has arrived locally. The disease devastates the plant by attacking its leaves and stems in the heat of summer, quickly defoliating large sections. It first appeared in England in 1994. It then was found in Ireland, Belgium, Italy, France, Holland, and New Zealand, and was finally detected in the US, probably having arrived on infected nursery stock, in 2011. It appeared on the East End several years ago, and last summer's hot, wet weather accelerated its spread. **Now plant pathologists and experts anticipate that this fungal disease is on the brink of an explosive outburst in our gardens over the coming summer, especially if rainfall and/or humidity are above normal.**

It's important to be aware that *Calonectria* also will infect pachysandra and sweet box (*Sarcococca*), which are in the boxwood family. While it causes much

less damage to these plants, it can hide undetected among them and spread to any nearby boxwood.

Luckily *Calonectria pseudonaviculata* produces relatively heavy spores and therefore is not spread by wind. It can arrive on your property on new boxwood, pachysandra or sweet box plants, or on landscapers' gardening tools if they've recently pruned infected plants at another property under their care. Movement by domestic and wild animals is another possibility. Once you have an infected plant, the fungus can spread to nearby plants via spray from an irrigation system or rainfall when water droplets bounce off of infected plant material or even debris lying in the soil.

There are simple ways to protect your boxwood. But they require vigilance and working with landscapers to ensure compliance with best practice protocols.

The Garden Club of East Hampton and the East Hampton Library are cosponsoring a symposium on boxwood blight on Monday, June 6 featuring husband and wife team Andrea Filippone and Eric 'T' Fleisher of F2 Environmental Design, LLC and Margery Daughtrey, plant pathologist with Cornell University's Long Island Horticultural Research & Extension Center. Described by Paige Dickey as "a plant collector with a brilliant eye for design," Ms. Filippone is a director of both the American Boxwood Society and the European Boxwood and Topiary Society. She and her husband grow over 50 cultivars of boxwood from around the world at their renowned gardens in Pottersville, New Jersey. Mr. Fleisher is a soil science expert who has studied boxwood in its native habitat in Macedonia, where it is rarely affected by disease and thrives in a harsh climate, to better understand its cultural needs and requirements from the soil up. Daughtrey is New York's lead plant pathologist specializing in disease management of flower and nursery plants. She is actively investigating best treatment protocols for managing boxwood blight and is in touch with other researchers searching for better tests to rapidly identify the disease in the field. The symposium, which will be underwritten by McMaster Bros. Inc, a local landscaping firm, is free and open to the public.

In the meantime, Daughtrey and F2 Environmental Design, LLC offer the following advice for anyone with boxwood plants in their garden:

1) **Be vigilant.** Initial symptoms are round, black or dark brown spots on leaves and black streaks on the surface of young shoots. In warm, wet weather the disease attacks healthy plants in as little as 7 days, spreads quickly, and results in conspicuous, catastrophic leaf drop. Property owners should not rely on overworked landscapers to detect the disease and should scout boxwood carefully after each rain during the growing season, especially when temperatures are consistently over 60 degrees.

2) **Require your landscapers to use ONLY shears you provide when pruning your boxwood.**

- If you haven't added any new boxwood to your property over the last several years, the disease vector you need to worry about is your landscaper, whose tools and equipment may carry the disease from one property to the next.
- Instruct your landscaper to use ONLY the pruning tools you provide for your boxwood, and make sure these are properly disinfected and at hand when needed.
- Make sure the individuals on your landscaper's team don't start pruning your boxwood without discussing the work first with you.
 - Prune to thin with a goal of getting more air circulating in the center of your plants when the weather is cold in late winter (February to March), a time when the *Calonectria* fungus is dormant.
 - Shearing, a type of pruning typically done in early summer, is not recommended as tightly sheared plants are more susceptible to blight.
- Clean your tools before and after pruning, and, in particular, clean after pruning any *individual* boxwood plant or stem you suspect may be infected. Otherwise, the sticky spores will cling to your shears and spread to the rest of your plants as you continue pruning.

- Specifically, wipe your tool down, dip for 5 minutes in alcohol and allow to air dry. Use 71% isopropyl alcohol, available at local pharmacies, or a solution of 1-part bleach to 9-parts water, freshly mixed.

3) Don't buy any new boxwood if you have a valuable boxwood collection.

- The disease often travels on plants via the nursery trade, and adding new boxwood is an easy way to "borrow trouble."
- If you must bring in boxwood, stay away from English and American boxwood which are more susceptible to boxwood blight. But also, be aware that any new plants you buy, including sweetbox and pachysandra, may harbor the fungus without showing visible signs.

4) Good preventive maintenance is essential.

- Clean out dead leaves and debris under your boxwood each fall and dispose of this material in sealed plastic bags. These should be dropped in the nonrecyclable bin at your local recycling center. Don't put this material in your own compost or the Town's compost pile at the Recycling Center, as doing so will spread the disease to others. And please be sure your landscaper follows these guidelines, too.
- Apply no more than an inch of mulch under your boxwood to physically cover any fungus that may survive in the soil. This will help prevent its spread via up-splash from rain or overhead irrigation.
- Give your boxwood trickle irrigation and don't allow lawn irrigation to land on foliage. Water on foliage—from irrigation, rain and even dew—plays an important part in the severity of the disease.
- Tightly sheared plants are more susceptible to blight, so consider changing how you prune to allow better air circulation in the interior of the plant and a looser overall shape. Rather than a flat-topped hedge, prune to a pyramidal shape that sheds water.

5) If tests confirm your plants are infected with boxwood blight, prune and spray ASAP.

- Testing is necessary to confirm that your plants are infected with boxwood blight, as the disease looks similar to *Volutella*, another boxwood disease that requires very different corrective actions. Speak to your landscaper about where to send samples for testing.
- Once *Calonectria* is confirmed, you have two options: remove the plant or prune out infected branches. If it is an English Boxwood, which is the canary in the coal mine, consider removing it and replacing with a blight resistant cultivar. The other option is to prune out diseased parts of the plant, clean up any dead and infected branches and leaves from the ground, and dispose of the infected debris carefully, as above. Then spray the plant with a fungicide to avoid the spread of the disease. The chemicals Daughtrey and F2 Environmental Design recommend are not available to homeowners, so you'll need to find a New York State certified spray applicator.
- *Calonectria* can live in the soil for 5 or more years. So once diagnosed on your property, you must continue to be vigilant and follow best cultural practices outlined above.