

Ardsley Community Center Garden Beds Rehabilitation Project

~~~ September 2014 ~~~

V of A Environmental Task Force (ETF)

Tr. Gary Malone / Chairperson

Eti Katoni, Bernie Preisser & Lorraine Kuhn

V of A Department of Public Works

Richard Thompson, /Foreman & Patrick Lindsay/Assistant Foreman

Laurie Goldstein, Maryanne Reda, Scouts & SW Intern Brian Evans

**Community Center shrubs were destroyed by Boxwood Blight disease.**



**Diseased plants were filled with weeds and invasive vines.**

**Dead Boxwood plants were removed and bagged for disposal. Garden beds were excavated to a depth of 24 inches, and diseased soil was bagged for disposal.**



**A 6 inch deep layer of gravel was added for drainage.**



After installation of the gravel drainage layer, the excavated bed was backfilled with 12 inches of new, clean topsoil.

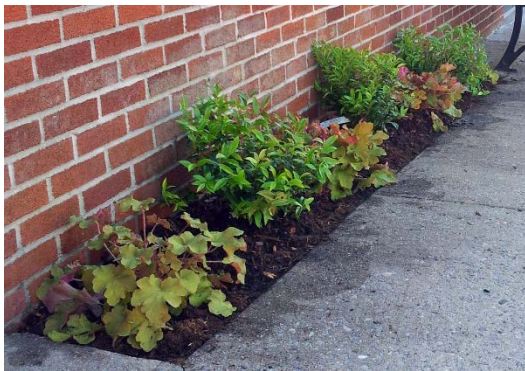
Native sustainable replacement plants were chosen. They require little or no watering, fertilizer or pesticide treatments, so they are “stormwater-friendly”. They are drought-resistant and salt-tolerant, suitable for a sidewalk location on a busy downtown street.



*Heuchera villosa*  
*'Caramel'*



*Leucothoe axillaris*  
*Coast Leucothoe*



After planting, a six inch layer of mulch was applied to the garden beds. This combats weeds and helps retain moisture.

*For more information about Boxwood Blight, please see the following 2 pages from Cornell Cooperative Extension :*

## The following is a list of guidelines for removing infected shrubs from the landscape:

1. Talk to your landscaper about removal. A licensed landscaper will know of the correct procedure to remove sick plants without further spreading the infection.
2. If you do your own landscaping, all above-ground parts of the plant must be removed from the landscape. Depending on the size of the shrub, prune out stems and place them in a plastic garbage bag. Once you reach the base of the plant, be certain to bag the top 1/2 inch of soil from beneath the shrub, as well as all leaves. This is a tedious but necessary step since leaves left on the soil surface may harbor the fungus and become a source of infection for healthy boxwood on your property or your neighbor's! If you wish to replant in this area, dig up the stump, shake off the excess soil, and place in a garbage bag. If the sick shrub is part of a hedge, prune out stems that came into contact with the infected shrub.
3. Bring the bagged plants to your local transfer station and inform the attendant that you have diseased boxwood. Plants will either be buried or incinerated.
4. Replant with an appropriate alternative to boxwood. Replanting with boxwood in the same areas will likely lead to re-infection (unless fungicide treatments are made regularly by a professional arborist). If this is a hedge planting, you may want to replant with boxwood, but purchase boxwood from a reliable local source.
5. Switch to trickle irrigation and move boxwood to sunny areas with good air circulation and drainage. Adjust lawn sprinkler heads so they do not directly spray your boxwood and mulch under plantings (2-3" mulch layer is sufficient) to reduce splash from the soil.
6. DO monitor the remaining boxwood on your property for the disease.
7. DO NOT remove and destroy all boxwood that appear sick. First consult with your landscaper or get accurate diagnosis from a plant diagnostic lab.
8. DO NOT compost an infected shrub.
9. DO NOT replant with boxwood unless it is absolutely necessary; boxwood blight can be avoided by switching to an alternative plant species.

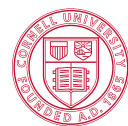
### Cornell Cooperative Extension Horticulture Diagnostic Laboratories on Long Island

- **Suffolk County, Horticulture Information Hotline**  
631-727-4126  
<http://ccesuffolk.org/horticulture-diagnostic-laboratories/>
- **Nassau County, Garden Helpline**  
516-565-5265 x7  
<http://www.ccenassau.org/horticulture>

### Additional Links

- **Cornell Cooperative Extension Fact Sheet with Susceptible Species & Cultivar List**  
<http://ccesuffolk.org/assets/Floriculture/Boxwood-Blight/Boxwood-Blight-Fact-Sheet.pdf>
- **Boxwood Blight Information Page of the Connecticut Agricultural Experiment Station**  
<http://www.ct.gov/caes/cwp/view.asp?a=3756&q=500388>
- **NC State Department of Plant Pathology Ornamental Crops**  
[plantpath.cals.ncsu.edu/ornamentals](http://plantpath.cals.ncsu.edu/ornamentals)

*This publication was prepared by Margery Daughtrey and Mina Vescera in December 2013.*



Cornell University  
Cooperative Extension  
of Suffolk County

Cornell Cooperative Extension of Suffolk County, 423 Griffing Ave, Ste 100, Riverhead, NY 11901-3071 • [www.ccesuffolk.org](http://www.ccesuffolk.org) • 631-727-7850

Cornell University, Long Island Horticultural Research and Extension Center, 3059 Sound Avenue, Riverhead, NY 11901-1098

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# Frequently Asked Questions: Boxwood Blight

## What is Boxwood Blight?

Boxwood blight is a new fungal disease that can infect the many different kinds of boxwood available for sale and those already in the landscape. The disease compromises the health of an infected shrub, destroying its ornamental value. It is also contagious, so boxwood near an infected specimen are at risk of catching the disease.

## What does boxwood blight look like?

An infected shrub goes through two stages of symptoms. Initially, dark brown or black leaf and stem spots are visible, followed by leaf drop. A section of the shrub or the entire shrub may lose its leaves.

## What do I need to do if I think my boxwood is infected?

If you suspect you have a sick shrub, take a sample to your local plant diagnostic lab for diagnosis. There are numerous diseases, insect pests and environmental stresses that may affect boxwood. Proper diagnosis is the first step to remedying the problem. You may learn your boxwood has a problem that can simply be pruned out. When taking a plant to a diagnostic lab, be certain to choose a portion of the shrub that is still alive and displays the symptoms you are concerned about. Locations for Suffolk and Nassau County plant diagnostic labs are listed on the back page.

## How does infection occur?

This disease attacks both perfectly healthy and stressed boxwood. There are various ways your shrub may get infected. You may have purchased an already diseased shrub that hadn't yet begun showing symptoms, or the sticky, microscopic fungal spores (disease-spreading units) were transferred to your shrub by people, animals, or shearing/transplanting



Close-up of leaf spots.



Infected boxwood hedge in the landscape displaying typical symptoms of the disease.

**BE DESTROYED.** There is no need to remove boxwood with symptoms of stress, insect injury, or less damaging diseases such as *Volutella* blight.

## Can I protect my boxwood from this disease?

Yes, there are careful maintenance practices that can be followed. If you already have a valuable boxwood collection, do not introduce new boxwood to your property unless it's from a trusted source. Only use clean pruning tools when shearing or pruning your shrubs. Tools can be disinfected by cleaning with a 10 percent bleach solution (9 parts water to 1 part bleach)—wipe off tools to remove debris, soak for 10 minutes in 10% bleach, and rinse in clean water before use.

## Are only boxwood susceptible?

No, there are other plants that are susceptible to the disease, but the symptoms differ. Pachysandra and sweetbox (*Sarcococca* sp., a low-growing, evergreen shrub) are both considered hosts for the disease. When diseased boxwood are removed, pachysandra and sweetbox should be removed as well if new boxwood will be brought into the affected area.

## Will my boxwood die if it becomes infected?

Whether or not your boxwood dies from the infection depends on plant vigor, weather, and factors such as irrigation type and shading. Even if not entirely killed, a shrub's value as an ornamental is often destroyed by boxwood blight.

## What needs to be done if my boxwood are diagnosed with boxwood blight?

If your plant is diagnosed with boxwood blight, the infected shrub and any fallen leaves around it should be removed from the landscape and destroyed—in order to protect other boxwood on the property. **ONLY SHRUBS WITH A LAB DIAGNOSIS OF BOXWOOD BLIGHT SHOULD**

**Alternatives to Boxwood: *Buxus sempervirens* 'Suffruticosa', *B. sempervirens* and *B. microphylla***

The introduction of boxwood blight (caused by the fungal pathogen *Calonectria pseudonaviculata*, also listed as *Cylindrocladium pseudonaviculata* or *C. buxicola*) to the Long Island landscape has prompted the need for alternative planting options that serve a similar function. Selections are grouped in order of greatest similarity to boxwood form, texture, and function in the landscape and are broad-leaved evergreens unless noted otherwise<sup>1</sup>.

| Group                                                                                                      | Scientific name                                 | Common name                              | Suggested cultivars                                                | Mature size (height x width) | Growth rate       | Form                                       | Salt-spray tolerance <sup>2</sup> | Deer resistant? <sup>3</sup> | Notes                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------|--------------------------------------------------------------------|------------------------------|-------------------|--------------------------------------------|-----------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Group 1: Similar in foliage, growth habit and landscape use                                                | <i>Euonymus japonicus</i>                       | Japanese Euonymus                        | 'Green Spire'                                                      | 6' x 6-8'                    | medium to fast    | columnar fastigiate                        | moderate                          | no                           | Susceptible to crown gall, anthracnose, leaf spots, scales.                                                                               |
|                                                                                                            | <i>Euonymus kiautschovicus</i>                  | "Manhattan" Euonymus                     | 'Manhattan'                                                        | 8' x 12'                     | fast              | rounded, spreading                         | moderate                          | no                           | leaf spot, crown gall; scale                                                                                                              |
|                                                                                                            | <i>Ilex crenata</i>                             | Japanese holly                           | 'Beehive', 'Helleri', 'Sky Pencil', 'Soft Touch', 'Steeds' + more! | varies                       | very slow to slow | densely mounded or fastigiate              | low                               | no                           | Thielaviopsis root rot, spider mites.                                                                                                     |
|                                                                                                            | <i>Ilex glabra</i>                              | Inkberry holly                           | 'Compacta' & 'Shamrock'                                            | 4-5' x 5-6'                  | slow              | upright, mounded                           | high                              | may browse                   | Susceptible to leaf spot & Thielaviopsis root rot. Occasional scale or leafminer.                                                         |
|                                                                                                            | <i>Lonicera nitida</i>                          | Boxleaf honeysuckle                      | 'Baggesen's Gold' & 'Lemon Beauty'                                 | 4' x 6' & 3' x 3'            | fast              | spreading, arching stems                   | not documented                    | may browse                   | Golden or variegated foliage.                                                                                                             |
|                                                                                                            | <i>Lonicera pileata</i>                         | Privet honeysuckle                       | 'Hohenkammer'                                                      | 2' x 8'                      | fast              | spreading, arching stems                   | not documented                    | may browse                   | Not common in trade.                                                                                                                      |
| Group 2: Differ in texture and form, but similar landscape function                                        | <i>Cephalotaxus harringtonia</i>                | Japanese plum yew                        | 'Duke Gardens' & 'Fastigiata'                                      | 2-3' x 3-4' & 10' x 6-8'     | slow              | spreading or upright/columnar              | low                               | yes                          | Yew-like, needled evergreen.                                                                                                              |
|                                                                                                            | <i>Chamaecyparis obtusa</i>                     | Dwarf Hinoki falsecypress                | 'Nana'                                                             | 3' x 5' or so                | very slow         | compact, somewhat rounded                  | moderate                          | no                           | Scale-like evergreen foliage. Prefers sheltered, sunny locations.                                                                         |
|                                                                                                            | <i>Nandina domestica</i>                        | Heavenly bamboo                          | 'Wood's Dwarf'                                                     | 2-2.5' x same                | medium            | compact, mounded to spreading stems        | low                               | no                           | Lovely, red winter foliage; powdery mildew may be a problem.                                                                              |
|                                                                                                            | <i>Osmanthus heterophyllus</i>                  | False holly                              | 'Rotundifolius'                                                    | 4-5' x same                  | slow              | dense, rounded dwarf                       | moderate                          | most of the time             | Small, ovate green leaves.                                                                                                                |
|                                                                                                            | <i>Thujopsis dolobrata</i>                      | Hiba Arborvitae                          | 'Nana'                                                             | 3-4' x 4-6'                  | slow              | dwarf, rounded form                        | not documented                    | may browse                   | Scale-like evergreen foliage with striking white streaks on lower sides.                                                                  |
| Group 3: Similar landscape function, but may differ in form. All have additional features such as flowers. | <i>Abelia x grandiflora</i>                     | Glossy Abelia                            | 'Little Richard', 'Rose Creek', & 'Sherwoodii'                     | 2-3.5' x 3-4'                | medium to fast    | dense, rounded growth                      | low                               | most of the time             | Lovely white flowers in spring; susceptible to leaf spots, mildew, & root rots. Deciduous to semi-evergreen                               |
|                                                                                                            | <i>Gardenia jasminoides</i>                     | Gardenia                                 | 'Doublemint', 'Klem's Hardy', & 'Pinwheel'                         | 3' x 3'                      | medium            | mounded                                    | low                               | may browse                   | Prune to maintain dense foliage. Dark green leaves. Susceptible to many pests and diseases. Marginally hardy to zone 7b.                  |
|                                                                                                            | <i>Kalmia latifolia</i>                         | Mountain laurel                          | 'Minuet', 'Little Linda', & 'Elf'                                  | 3' x 3'                      | very slow         | dwarf                                      | very low; avoid exposure          | no                           | Prune to maintain dense habit. Scales occasionally; susceptible to many leaf spots & Phytophthora root rot. Avoid exposed sites.          |
|                                                                                                            | <i>Pieris japonica</i> var. <i>yakushimanum</i> | Cavatine Pieris                          | 'Cavatine', 'Prelude', & 'Sarabande'                               | 3' x 3'                      | very slow         | upright, rounded habit for dwarf cultivars | very low; avoid exposure          | yes                          | Leaf spots, Phytophthora, lace bug, wax scale, spider mites, and more. Avoid exposed sites.                                               |
|                                                                                                            | <i>Rhododendron</i> sp.                         | Azalea                                   | Gumpo Pink', 'Gumpo White', & 'Kaempo'                             | 3' x 3'                      | slow              | upright, slow-growing dwarf                | very low; avoid exposure          | no                           | Large flowers cover the shrub in late spring.                                                                                             |
|                                                                                                            | <i>Skimmia japonica</i>                         | Japanese Skimmia                         | straight species commonly used                                     | 3' x 4'                      | slow              | dense, rounded                             | moderate                          | most of the time             | Early spring blooming followed with red berries on female plants only. Avoid exposed sites. Prefers rich, moist soils in protected shade. |
|                                                                                                            | <i>Viburnum obovatum</i>                        | Small-leaf Viburnum or Walter's Viburnum | 'Reifer's Dwarf'                                                   | 4' x 5'                      | slow              | compact, mounded                           | low                               | no                           | Red winter foliage; shears well                                                                                                           |

<sup>1</sup> This list is adapted from suggestions offered by Vincent A. Simeone (Director, Planting Fields Arboretum, Oyster Bay, NY), Atlantic Nursery (Dix Hills, NY) and the Boxwood Blight Advisory Group (comprised of Cornell Cooperative Extension of Suffolk County educators and horticultural professionals who have volunteered their time to advise the Nursery and Landscape Program).

<sup>2</sup> Salt-spray tolerance information was compiled from various Cooperative Extension Bulletins, professional horticultural journals, and personal field observations

<sup>3</sup> Deer resistance ratings are from Rutgers Cooperative Extension Bulletin E271: Landscape Plants Rated by Deer Resistance and Dr. Mark Bridgen's trials (Cornell University Long Island Horticultural & Research Extension Center)