New Diseases in the North Bay

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Boxwood Blight

*Calonectria pseudonaviculata* (=*Cylindrocladium buxicola*, anamorph)

Found on east Coast in 2011

Images: Kathy Kosta, CDFA
Easily moved by touch
Sweeps through plantings quickly
Humid and rainy conditions promote spread

Images: Kathy Kosta, CDFA
The fungus grows in leaves and stems. Leafy debris harbors the pathogen and infests the soil for at least 5 years.

Images: Kathy Kosta, CDFA
Other Diseases of Boxwood With Similar Symptoms

- *Volutella* – branches +
- Winter Browning

*Phomopsis* dieback – tips, small black dots

Images: Kathy Kosta, CDFA
If you see this, call your Local Agricultural Commissioner

Look for the black stem lesions!

Images: Kathy Kosta, CDFA
Take extreme caution in disposal

Wear disposable gloves, booties and suits if possible

Double bag and safely transport to the landfill

Sanitize all equipment used

Slide: Kathy Kosta, CDFA
Boxwood Blight Identification Guide

**INITIAL SYMPTOMS**

- Dark leaf spots (left) and spores of the boxwood blight fungus (*Calonectria pseudonaviculata*) on lower leaf surfaces (right).
- Zonate leaf lesions.
- Black stem lesions.

**LANDSCAPE AND NURSERY SYMPTOMS**

- Infected boxwood and pachysandra in the landscape (left) and leaf spots on pachysandra (right).
- Foliar and stem symptoms result in severe defoliation leading to decline and death of boxwood plants. Boxwood blight affects all species of boxwood, pachysandra, and sarcococca.
- Stem lesions on pachysandra (left) and fungal spores on lower surface of pachysandra leaves (right).

All photos from CAES.
Funding from FY2013 Farm Bill, USDA-APHIS.

For more information:
www.ct.gov/caes/boxwoodblight
www.boxwoodblight.org
 Lots of Info on the Internet

Best Management Practices for Boxwood Blight in the ... - Virginia Te...

Boxwood blight, is a serious fungal disease of boxwood that results in defoliation and decline of susceptible boxwood. In Virginia boxwood blight was first ...

Prevention and Management of Boxwood Blight - NC Cooperative ...

Common names of the disease: Boxwood blight, box blight, Cylindrical box ... Scientific name: Most literature refers to the fungus that causes box blight as ...

Boxwood Blight--A New Disease for Connecticut and the US - CT.gov
www.ct.gov/.../boxwood_blight-a_new_disease_for_connecticut_and_the_u.s__12-...

by SM Douglas • Cited by 3 • Related articles

was tentatively identified as boxwood blight, caused by the fungus Cylindricalium buxicola (syn. C. pseudonaviculatum). Since this fungus had not been ...

Boxwood blight - Wikipedia
https://en.wikipedia.org/wiki/Boxwood_blight

Boxwood blight is a widespread fungal disease affecting boxwoods caused by Cylindricalium buxicola (also called C. pseudonaviculatum). Contents. [hide].

Boxwood Blight | Fine Gardening
www.finegrowing.com/boxwood-blight

Since the first confirmed case in the United States about a year ago, boxwood blight (caused by Cylindricalodium pseudonaviculatum) has spread to 10 states ...

Boxwood Blight-Cylindricalium buxicola - Saunders Brothers
www.saundersbrothers.com/index.cfm/fuseaction/home.showpage/.../index.htm

Boxwood Blight Update. We hope everyone is having a great winter, but more importantly, we hope everyone is ready for spring to start very soon. We are back ...
Laurel defoliation

- Calonectria sp.
- Symptoms
  - Spotting / blackening leaves on vigorous bay laurel
  - Extensive leaf drop / defoliation
  - Only reported in rainy years
    - Newly introduced?
- Confirmed from San Mateo and Santa Cruz
- Trees with similar symptoms seen in Marin & Sonoma Counties in 2017
Strawberry Tree

- Arbutus ‘Marina’
- Arbutus unedo
- 3 Species of Phytophthora
- Cankers
  - Eutypa?
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Ericaceous twig borer

- Starts as a leaf miner
- Moves down midvein to petiole
- Becomes a cambium miner
- Microlepidopteran
  - (small moth)
  - Species unknown
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• **Hosts:**
  – Arbutus unedo
  – Arbutus x’Marina’
  – Arbutus menziesii
  – Arctostaphylos spp.

• **Effects:**
  – Premature leaf drop
  – Dieback distal to infestation point
    (multiple hits req.d)
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Ericaceous twig borer

- **Lifecycle:**
  - Native hosts:
    - Single generation?
  - Strawberry trees
    - Two generations
  - Infestation correlates with blooms
  - Cambium mines often intersect
    - Multiple larvae

- Genetic sequencing in progress

- Tentative ID: Nepticulidae
Ericaceous twig borer

- **Larvae:**
  - Unique head capsule
    - Super delicate!
  - 2-4mm long
  - Consistency of jello

- **Known distribution:**
  - SF North Bay
    - Marin, Napa, Sonoma
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Phytophthora ramorum

- New additions to the host list
- Not “typical”
  - Lophostemon
    - Tristania
  - Bartlett & CDFA
Phytophthora ramorum

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Image: CDFA, Suzanne Latham
Phytophthora ramorum

- New additions to the host list
- Not “typical”
  - Camphor
  - Bartlett & CDFA
Phytophthora ramorum

Lophostemon (Tristania)

Camphor

9 species of Manzanita

Image: Suzanne Latham, CDFA
Phytophthora ramorum

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Image: Suzanne Latham, CDFA
Phytophthora ramorum

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  – 9 species of Manzanita since 2015
  – Bartlett & CDFA

Image: Suzanne Latham, CDFA
Phytophthora ramorum

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Phytophthora ramorum

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Asian Citrus Psyllid (ACP)

- *Diaphorina citri*
- ~4mm long (1/6 inch)
- Head down pose
- Curlycue wax filaments
- Carries Huanglongbing (HLB) disease
Asian Citrus Psyllid (ACP)

- ACP found recently in Pacifica (<20), San Jose (>25) Stockton (<10), Napa (<10), and others
- If you suspect you’ve found it, please report immediately
Tamarixia radiata

- Biocontrol introduced into Florida and California
- Still evaluating efficacy

Photos courtesy CSIR
Huanglongbing (HLB)

- *Candidatus liberibacter asiaticus*
- Bacterial pathogen vectored by ACP
- Fatal to citrus trees
- Brought Florida’s citrus industry to its knees
  - Loss of >8,000 jobs
  - 2.72 billion $
Acknowledgements

- Suzanne Latham, CDFA: *Calonectria* and some *P. ramorum* photos
- Kathy Kosta, CDFA: Boxwood blight photos
- Presentation will be on-line at: [http://ucanr.edu/MarinIPM](http://ucanr.edu/MarinIPM)
- Steven Swain: svswain@ucanr.edu
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