

## Appendix D. Symptoms Associated with *P. ramorum*



### Symptoms of *Phytophthora ramorum*

Ramorum Foliar  
Blight and Dieback



### Foliar Blight and Dieback Hosts



#### Selected Hosts:

- Camellia
- Rhododendron
- Pieris
- Viburnum
- Kalmia (Mountain laurel)
- Syringa (Lilac)
- Pyracantha
- Honeysuckle
- Yew
- Douglas-fir
- Grand fir
- Coast redwood

## Appendix D. Symptoms Associated with *P. ramorum*

### Camellias

- Symptoms can be subtle – Pinhead lesions
- Look for irregular-shaped brown lesions on the leaves
- Sometimes only the tips of leaves are brown
- Look for lower leaves that have fallen off



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### Camellias

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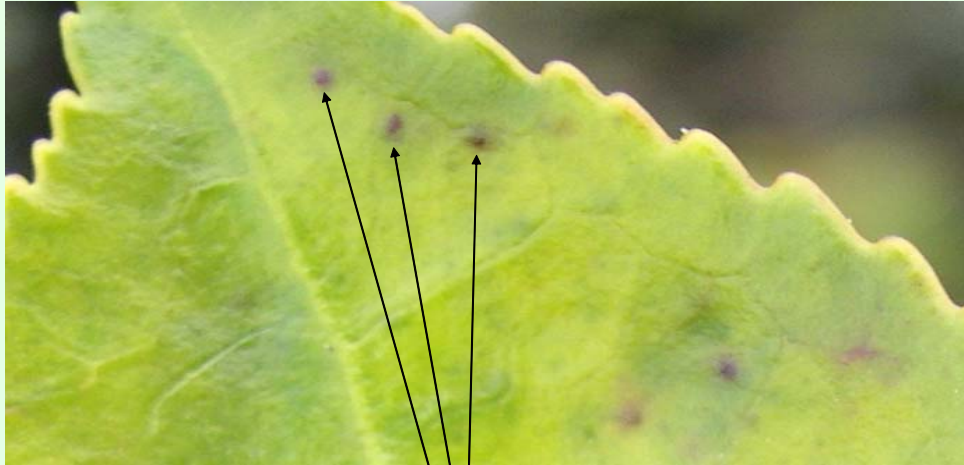


Photos: Oregon Dept. of Agriculture & Cheryl Blomquist, CDFA

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## Appendix D. Symptoms Associated with *P. ramorum*

### Camellias



Pinhead lesions

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### Camellias



Photo: Cheryl Blomquist, CDFA

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### Camellias



Older Symptoms

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### Camellias



Recent Symptoms Have More Diffuse Edges and Water Soaked Appearance

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### Camellias



Leaf  
Drop



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### Camellias



Sun scorch on  
camellia

Photo: Carrie Harmon, University of Florida

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### Camellias



Sunscald on Camellia

Tomas Pastalka, CDFA

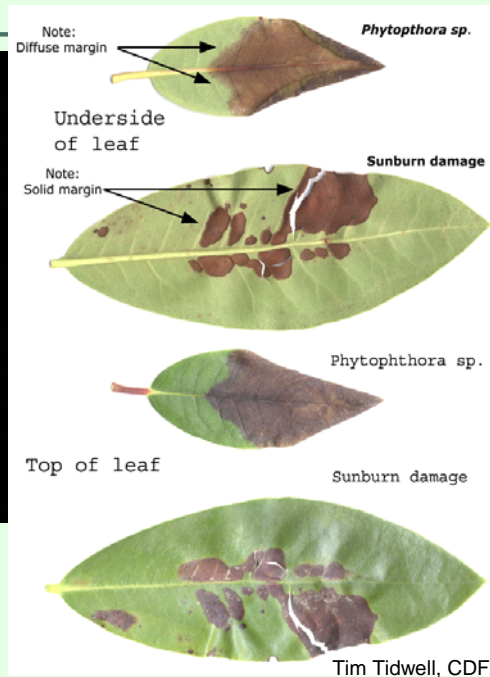
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### Rhododendron



Dave Rizzo, UCD

*Phytophthora ramorum*-  
Infected Rhododendron  
leaves



Tim Tidwell, CDFA

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### Rhododendron



#### *Rhododendron macrophyllum*



Shoot dieback



Foliar blight



Foliar blight

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Photo: Everett Hansen, Oregon State University

### Rhododendron



#### Stem Canker and Leaf Symptoms of *P. ramorum*



Rhododendrons in Europe

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## Rhododendron



Photo: Everett Hansen, Oregon State University

*Rhododendron macrophyllum*

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## Rhododendron



Photo: Jennifer Parke, Oregon State University

*Rhododendron 'Unique'*

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## Appendix D. Symptoms Associated with *P. ramorum*

### Rhododendron



Foliar blight caused by *Phytophthora* species

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Photo: Mike Benson, NCSU

### Rhododendron



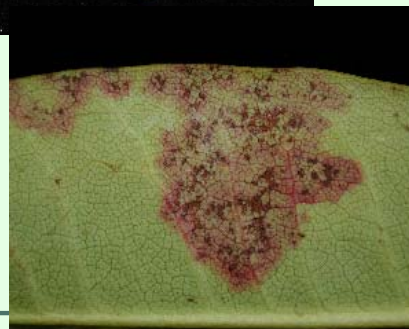
Foliar blight caused by *Phytophthora syringae*

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Photo: Jay Pscheidt, Oregon State University

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### Rhododendron



### Abiotic Diseases of Rhododendron

Photo: Steve Tjosvold, UCCE

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### Rhododendron



Phytophthora root rot -  
not caused by *P. ramorum*

Photo: Jay Pscheidt, Oregon State University

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### Rhododendron



Sun scorch

Photo: Rich Regan,  
Oregon State University

Gray blight can develop on sun  
scorched rhododendron leaves

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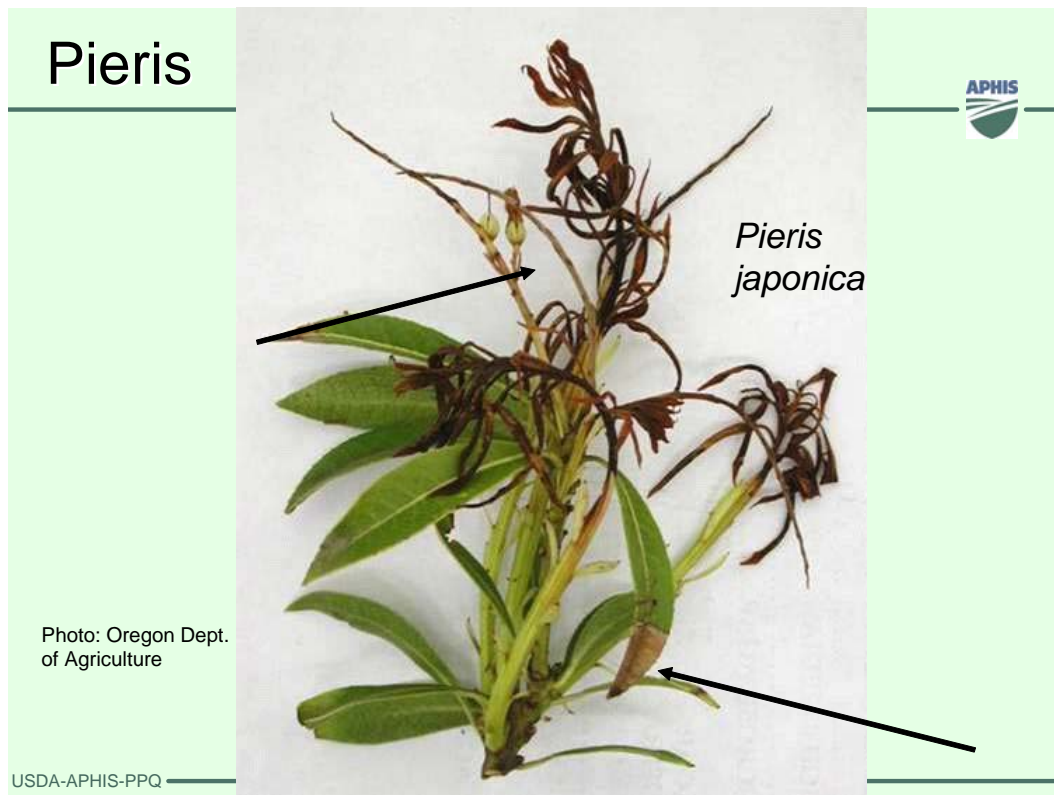
### Pieris



Photo: Oregon Dept.  
of Agriculture

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### Viburnum



Photo: Oregon Dept. of Agriculture

*Viburnum x bodnantense*  
'Dawn'

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### Viburnum



*Viburnum plicatum tomentosum*  
'Mariesii'

Photo: Jennifer Parke, Oregon State University

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### Viburnum

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stem  
canker



Photo: Sabine Werres, Institut für Pflanzenschutz im Gartenbau, Germany

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### Viburnum

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### Kalmia (Mountain Laurel)



Photo: DEFRA

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### Kalmia (Mountain Laurel)



Photo: J. Fallacy, WSDA

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### Kalmia (Mountain Laurel)

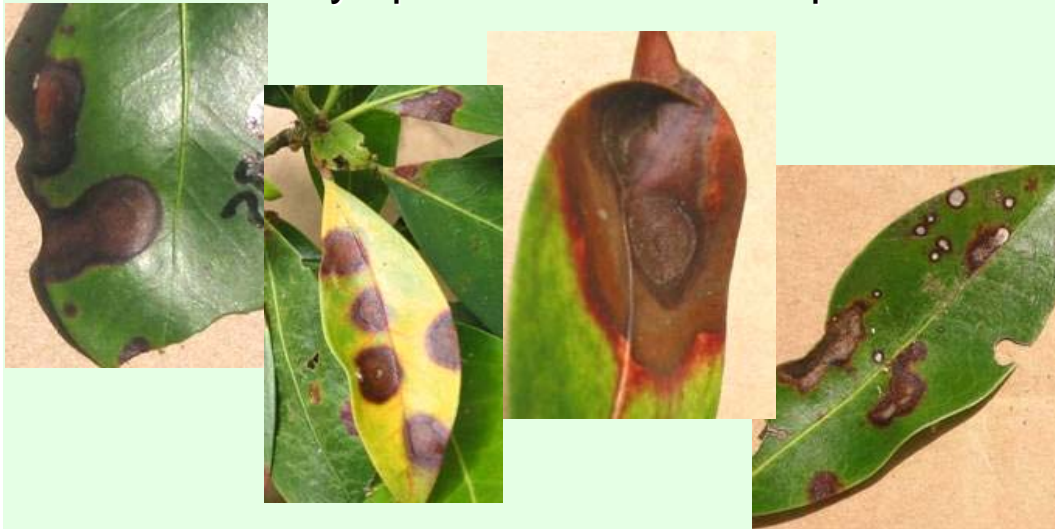


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### Kalmia (Mountain Laurel)



Similar symptoms – submit sample



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Photo: Peter Angwin, USDA-Forest Service



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### Syringa (Lilac)

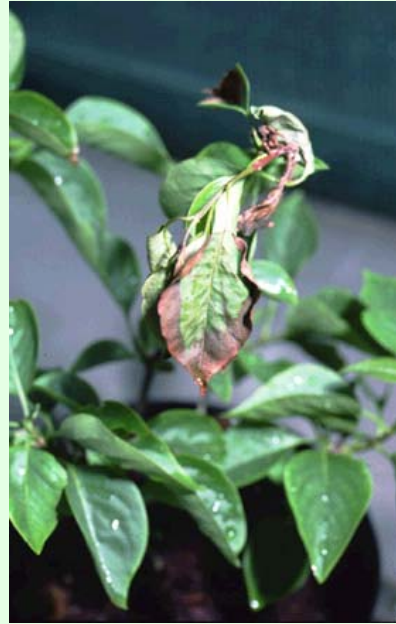


Photo: Alexandra Schlenzig, Scottish Agricultural Science Agency

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### Conifers



Grand fir

Douglas-fir

Photo: Santa Clara Co. (CA) Agriculture Dept. & Dave Rizzo, UC Davis

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## What to Sample



Many foliar diseases and conditions can look like *P. ramorum*

- If you are not sure
- If you have any suspicion
- If the lesion just doesn't look "right"

Submit a sample

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## For More Information and Images



- APHIS:  
[www.aphis.usda.gov/ppq/ispm/pramorom](http://www.aphis.usda.gov/ppq/ispm/pramorom)
- California Oak Mortality Task Force:  
[www.suddenoakdeath.org](http://www.suddenoakdeath.org)
- North Central Integrated Pest Management Center:  
[www.ncipm.org/sod](http://www.ncipm.org/sod)

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