

P. ramorum symptoms on rhododendron



Shoot dieback



Foliar blight



Foliar blight

Rhododendron macrophyllum

Photo: Everett Hansen, Oregon State University

Phytophthora ramorum can infect both native rhododendrons and horticultural varieties of rhododendron. This slide shows shoot dieback (left) and foliar blight symptoms (center and right) on native Pacific rhododendron in the field. Note the dark discoloration that often follows the leaf midrib or petiole as shown by the white arrows.

P. ramorum symptoms on rhododendron



Rhododendron macrophyllum

Photo: Everett Hansen, Oregon State University

In this case it appears that the infection has moved from the shoot tip into the leaves.

P. ramorum symptoms on rhododendron



Photo: Bruce Moltzen, Missouri Dept. of Conservation

In the nursery, horticultural varieties of rhododendron infected with *P. ramorum* can develop symptoms like these.

P. ramorum symptoms on rhododendron



Rhododendron 'Unique'

Photo: Jennifer Parke, Oregon State University

P. ramorum symptoms may also occur where water (and spores) remain on the leaves for several hours. Note the brown lesions along the edges of the leaves where the water accumulated.

P. ramorum symptoms on eastern native rhododendrons (inoculation trials)



Photo: Paul Tooley, USDA-ARS

Infections on eastern native species of rhododendron have not been found in the wild, but artificial inoculation experiments in the greenhouse show us what symptoms may look like on these species.

Similar symptoms – submit sample



Foliar blight caused by *Phytophthora syringae*

Photo: Jay Pscheidt, Oregon State University

There are several other species of *Phytophthora* that commonly infect rhododendron leaves and cause symptoms similar to those caused by *P. ramorum*. In this photo, disease is caused by *Phytophthora syringae*. Lab tests are necessary to identify the species of *Phytophthora* that cause foliar blight. If you see symptoms like these, submit a sample to determine if it is *P. ramorum*.

Similar symptoms – submit sample



Foliar blight caused by *Phytophthora* species

Photo: Mike Benson, NCSU

Here are photos of rhododendrons in a North Carolina nursery infected with other species of *Phytophthora*. If you see a plant with similar symptoms – especially if it has been purchased since 2002 – submit a sample for testing.

Similar symptoms – not *P. ramorum*



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

Photo: Jay Pscheidt, Oregon State University

Several *Phytophthora* species can also cause root disease on rhododendron. The wilted plants in the foreground show symptoms of root disease, not leaf blight. If the whole rhododendron plant rapidly wilts and dies, it is likely caused by a root-infecting species of *Phytophthora*. *Phytophthora ramorum* is not known to cause root disease in a natural setting or in nurseries.

Similar symptoms – not *P. ramorum*



Sun scorch



Gray blight can develop on sun scorched rhododendron leaves

Photo: Rich Regan, Oregon State University

Not all brown spots on rhododendrons are caused by *Phytophthora*. On the left is a leaf with symptoms of sun scorch. Note the brown spot in the center of the leaf which does not extend along the midrib or petiole. Sun scorched leaves are susceptible to gray blight (*Pestalotiopsis sydowniana*), which gives the leaves a silvery look (right). Rhododendron leaves that look like this do not need to be submitted for sampling for *P. ramorum*.