

## Plant Pathology Fact Sheet

# Twig Blights of Juniper

Nicole Ward Gauthier, John R. Hartman  
and Brian Eshenaur

Twig and branch dieback is a common sight in many juniper plantings in Kentucky. While other factors can cause these general symptoms, two fungal diseases are frequently responsible for the dieback.

These fungi (*Phomopsis juniperovora* and *Kabatina juniperi*) attack several species of *Juniperus*, including red cedar, common juniper and creeping juniper. Arborvitae is also susceptible.

### Phomopsis Twig Blight

#### SYMPTOMS

This disease begins as a foliar infection, which then spreads to and kills stem tissues. Newly developing needles in the yellowish-green stage are especially susceptible, while more mature, darker green needles are not. *Phomopsis* blight can occur during the growing season anytime there is new shoot growth. Symptoms are evident a week or two after infection. When the fungus invades young stem tissue, terminals and branches distal to the point of infection become light green, red- brown and finally ashen-grey.

Small branches up to about ½ inch in diameter are generally girdled by the disease. When a side shoot is infected, *Phomopsis* twig blight may progress to a main branch. Lesions on larger branches, however, develop into cankers, but they seldom girdle the branch.



SYMPTOMS OF PHOMOPSIS TWIG BLIGHT ON JUNIPER (TOP). *PHOMOPSIS* PRODUCES BLACK FRUITING BODIES ON DISEASED NEEDLES, WHICH APPEAR LIKE TINY BLACK SPECKS TO THE UNAIDED EYE (BOTTOM). (PHOTOS: BRUCE WATT, UNIVERSITY OF MAINE, BUGWOOD.ORG)

Fungal fruiting bodies (pycnidia) develop within 3 to 4 weeks after infection. Well-developed pycnidia can be found on needles and twigs that have dried up and turned grey. The pycnidia appear as tiny black specks at the base of the infected portion.

#### DISEASE MANAGEMENT

- Use regular, season-long applications of an approved fungicide to protect twig tips from infection. Weekly applications are generally needed as long as there is new shoot growth occurring. Contact your county Extension agent for currently recommended fungicides.
- Prune out and destroy infected twig tips. Pruning should be done when the twigs are dry in order to minimize the spread of fungal spores.
- Overhead irrigation should be done early enough in the day that water has a chance to evaporate from the foliage prior to sunset.
- Avoid planting highly susceptible cultivars. Instead, select varieties that are known to be resistant to *Phomopsis*.

### Kabatina Twig Blight

#### SYMPTOMS

This twig blight disease causes symptoms very similar to those due to *Phomopsis*. *Kabatina* fruiting bodies (acervuli) are also produced at the base of infected tissues. The acervuli are initially white to grey in color, later becoming black.



SYMPTOMS OF KABATINA TWIG BLIGHT, ABOVE, ARE SIMILAR TO THOSE OF PHOMOPSIS TWIG BLIGHT (CHERYL KAISER, UNIVERSITY OF KENTUCKY)



KABATINA FUNGAL FRUITING BODIES. (BRUCE WATT, UNIVERSITY OF MAINE, BUGWOOD.ORG)

#### DISEASE MANAGEMENT

- Prune out and destroy infected twig tips. Pruning should be done when the foliage is dry in order to minimize fungal spread.
- Use an approved insecticide to control insect pests. It is possible that insects, such as the juniper midge, create the wounds necessary for *Kabatina* infections.

### Which is Which??

Because the diseases are so similar in appearance, the time of symptom development can be helpful in distinguishing between the two. *Kabatina* twig blight symptoms develop early in the spring before new growth begins, presumably as the result of infections that occurred the previous summer or fall. *Phomopsis* twig blight symptoms, on the other hand, can develop any time during the growing season. If twig blight symptoms are evident in the spring on junipers that appeared healthy in the fall, *Kabatina* is likely responsible.

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