



## Phomopsis and Kabatina Tip Blights of Junipers

Phomopsis tip blight and Kabatina tip blight are two common diseases of junipers found in most states east of the Mississippi. Both diseases are caused by fungi and the damage they cause on nursery stock, transplants and certain juniper varieties in the landscape can be severe; however, most established junipers in the landscape are seldom killed. The disease is most serious on younger plants and becomes less serious as plants get older.

There are many varieties of juniper that vary from very susceptible to highly resistant. Junipers are generally considered as low maintenance because they are relatively free of major diseases and insect pests; however, these diseases can adversely affect the appearance and health of these trees in certain locations and under the proper environmental conditions.

Although Phomopsis and Kabatina blights cause almost identical symptoms, aspects of their development and control do differ. Therefore, it is important to distinguish between the two diseases.



*Close-up of Phomopsis tip blight on juniper.*



*Close-up of Phomopsis tip blight on juniper.*

### Symptoms and Causal Organisms

Phomopsis tip blight caused by the fungus *Phomopsis juniperovora*, damages new growth and succulent branch tips of junipers from mid-April through September. Older, mature foliage is resistant to infection; therefore, most blighting occurs on the terminal 4 to 6 inches of the branches. Affected foliage first turns dull-red or brown and finally ash gray. Small gray lesions often girdle branch tips and cause blighting of foliage beyond the diseased tissue. Small, black, spore-containing fungal fruiting bodies develop in the lesions. Use a hand lens to view these diagnostic fungal structures more easily.

Spores of the *Phomopsis* fungus are produced, throughout the summer, and infection can occur whenever young foliage is available and moisture or humidity is high. Most infections usually occur in

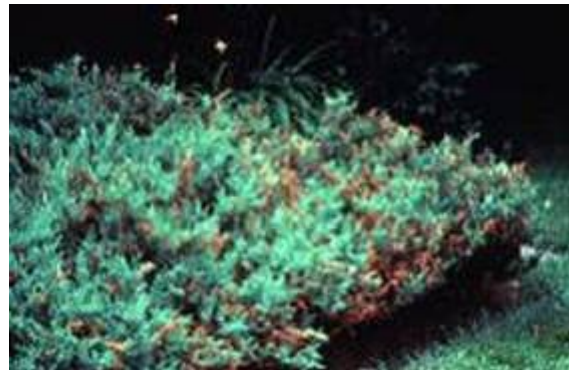
April through early June and again in late August through September. Very few infections occur in mid-summer or during the winter months. Repeated blighting in early summer can result in abnormal bunching (witches' broom) and discoloration of the foliage, stunting of young trees or shrubs, or in severe cases plant death. Be cautious in diagnosing witches brooming and stunting because similar damage can be caused by the dwarf tip mite. With juniper problems, it is always a good idea to have problem diagnosis confirmed by a diagnostic laboratory.

Kabatina tip blight, caused by the fungus *Kabatina juniperi*, first appears in February and March; and well before symptoms of *Phomopsis* tip blight appears. The terminal 2 to 6 inches of diseased branches throughout the juniper turn dull green first, then red or yellow. Small ash-gray to silver lesions dotted with small, black fruiting bodies of the fungus are visible at the base of discolored tissue. The brown, desiccated foliage eventually drops from the tree in late May or June. Foliar blighting occurs only in early spring; it does not continue through the summer. Blighting is also restricted to the branch tips and does not cause extensive branch dieback or tree death. Be cautious in diagnosing witches brooming and stunting symptoms because similar damage can be caused by the dwarf tip mite.

With juniper problems it is always a good idea to have problem diagnosis confirmed by a diagnostic laboratory. The primary infection period for the *Kabatina* fungus is thought to be in autumn even though visible symptoms are not apparent until late winter or early-spring. Infection often is associated with small wounds on branch tips caused by insect feeding or mechanical damage.

### Control

1. When purchasing new plants, select those that have been reported to have disease resistance.
2. Space new plantings to provide good ventilation and air circulation and avoid heavily shaded areas. Avoid wounding plants, especially in spring and autumn.
3. Water plants in early morning so the foliage will dry as soon as possible. Maintain adequate fertility, but do not over fertilize.
4. Prune out diseased branch tips during dry summer weather and destroy them. Do so only when plants are dry and no rain or overhead irrigation is expected for several days. Avoid excessive pruning or shearing.
5. Chemical control of these tip blight diseases normally is not necessary in established landscape or windbreak plantings. Occasionally, fungicide applications may be needed on susceptible junipers to control *Phomopsis* blight. *Kabatina* blight infections occur in the fall, and there currently are no fungicides labeled for control of this disease.



*Severe infection of Phomopsis tip blight on juniper.*



*Appearance of Phomopsis tip blight on juniper.*

Information obtained through the Ohio State Extension Factsheet HYG-3056-96



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