

Black Canker of Weeping Willow

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Black Canker of weeping willow is caused by a fungus called *Glomerella miyabeana* and this disease is one of common willow diseases. *Glomerella miyabeana* and the other fungus *Venturia saliciperda*, the causal agent of willow scab disease together can result in a serious disease called willow blight.



Figure 1. Symptoms of willow black canker on a weeping willow stem

Photo: Marsha Parsons, Franklin County Extension

Name: *Glomerella miyabeana*

Symptoms and Signs: Symptoms usually begin as brown to black lesions on the leaves in the early spring. As the disease progresses, these lesions expand to the whole leaf and spread to the petiole. The leaves turn brown and wilt and eventually fall off the stem. Once the lesion spread to the stem or twig, this disease can cause black colored cankers with various size, normally in the junction position of twig

and petiole (Figure 1). Once these cankers become mature, black fruiting bodies called acervuli developed on the canker and produce asexual spores called conidia (Figure 2).

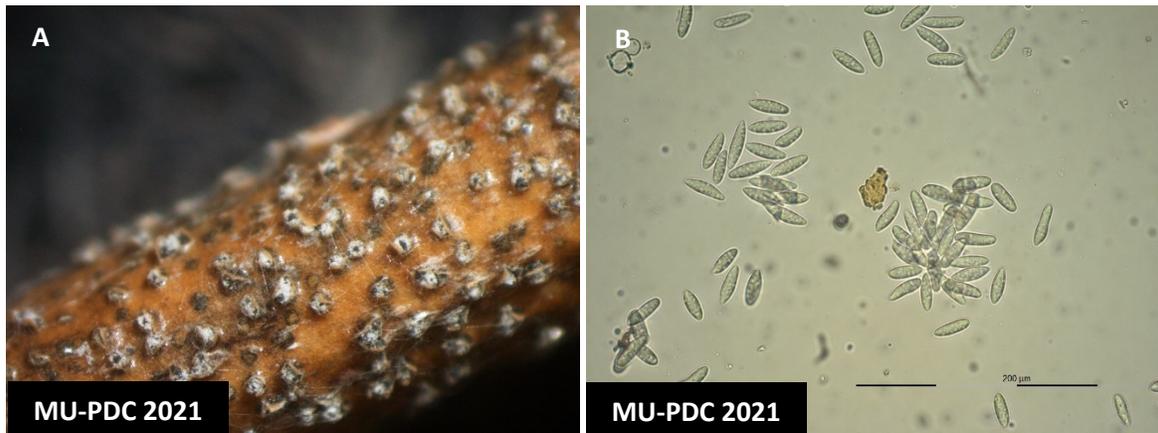


Figure 2. A) Pycnidia of on the stem; B) Conidia observed under a compound microscope 200×
Photo: Peng Tian

Life cycle: Black canker disease survives on the infected plant debris from the previous year. In the spring, when weather becomes warm and humid, asexual and sexual fruiting bodies (acervuli and perithecia) release conidia that can be transmitted by wind or rain splash. These asexual spores can infect the plant tissue repeated through the season.

Host range and damage: Black canker can cause severe health problems especially on the trees that suffer from environmental or cultural stress. It may be rare that this disease causes the death of the tree, but it may cause the extensive dieback or declining of the tree over time if no effective disease management is implemented or when the disease continue to attack the tree for consecutive years.

Disease Management:

1. **Plant a variety that is tolerate to the black canker.** John Bonkowski from Purdue Extension cited a chart of willow species and their tolerance to black canker. Please visit this chart here: <https://www.purduelandscapereport.org/article/black-canker-of-willow/>
2. **Keep plants healthy.** This can be done by proper care including watering, fertilizing, providing a well-draining soil medium, adequate lighting, and air circulation.
3. **Chemical control is usually not recommended.** Effective chemical treatment requires proper timing of fungicide application. This can help to reduce disease development and spread but not cure already existing disease. In most cases, chlorothalonil fungicide can be applied to control black canker and please follow the label and instructions.

References:

1. **Black Canker of Willow**, Purdue Extension, landscape report <https://www.purduelandscapereport.org/article/black-canker-of-willow/>
2. **Black Canker**, Cornell University, Department of Plant Pathology and Plant-Microbe Biology <http://plantclinic.cornell.edu/factsheets/willowblackcanker.pdf>