



Diagnostic Facts



Center for Integrated Plant Systems
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Dogwood Anthracnose

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Help protect native flowering dogwood stands

Dogwood anthracnose has been swiftly destroying the native flowering dogwood tree, *Cornus florida*, throughout the Appalachians since its introduction into the United States in the 1970's. The disease first entered Michigan near Kalamazoo in 1990 on imported dogwoods. The cause of this disease is the exotic fungal pathogen *Discula destructiva*.

Here are some essential facts about flowering dogwoods and what you can do to help keep Dogwood Anthracnose from spreading throughout Michigan.

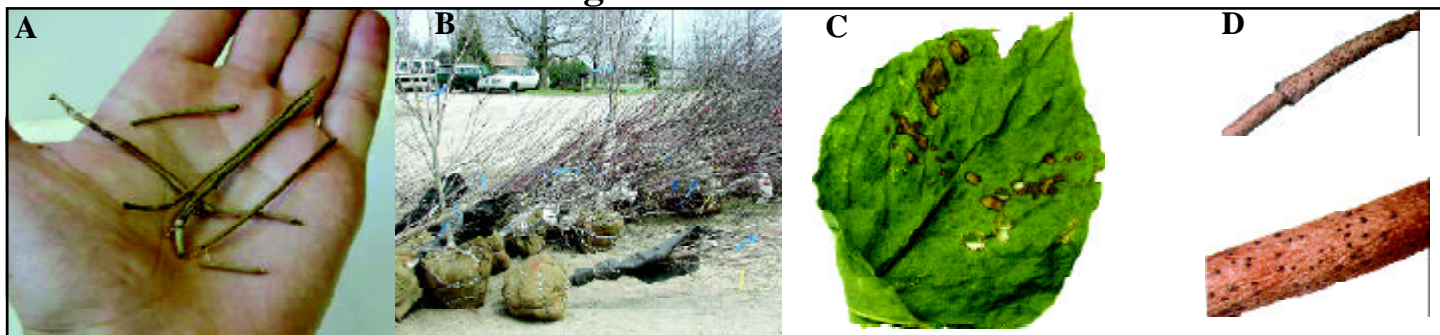
Why the dogwood is important:

- It's an important understory species in older growth forests.
- It's a valued food source for mammals and birds.
- It's an ornamental tree prized for its showy flowers.
- Native stands are found in many Michigan state and local parks.

Why dogwood anthracnose is a problem:

- Not all imported dogwoods are infected, but with overhead irrigation, infected twigs on even a few trees can produce enough spores to spread the disease throughout a planting.
- Symptoms can be very difficult to detect, especially on twigs, so avoid planting imported dogwoods near native stands.
- *C. florida* shows the most severe symptoms.
- *C. kousa* and flowering dogwood hybrids usually do not show severe symptoms but act as carriers.
- Homeowners often plant imported dogwoods near native stands, which can spread the disease.

What does dogwood anthracnose look like?



A. Small dead twigs infected with *Discula destructiva* collected from **B.** dormant imported nursery stock, **C.** Leaf spot symptoms, **D.** Black spots on infected twigs of dogwood are called acervuli. Each contains thousands of spores that allow the disease to spread rapidly.

Photo credit: Zachary Blankenheim

What conditions favor development and spread of dogwood anthracnose?

- Planting infected dogwoods near native stands; the disease is difficult to control after spreading into a forest.
- Spores are spread by splashing rain and overhead watering; it's unknown how far spores can travel and infect dogwoods, but in Michigan the distance isn't usually beyond a woodlot.
- Trees in heavy shade are more susceptible than those planted in part to full sun.
- Disease development is favored by high humidity, cool temperatures (60's) and shade.
- Trees planted in full sun are more susceptible to the disease when stressed by drought and winter injury.

The Michigan Department of Agriculture works hard to ensure infected dogwoods are not distributed in Michigan. Here's what you can do to help stem the spread of anthracnose:

- Avoid planting imported dogwoods near native stands; if infected, the closer they are planted to native trees, the higher the risk of infection.
- Plant dogwood trees in open areas with morning sun and good air circulation.
- Keep trees mulched to maintain soil moisture.
- Avoid overhead watering.



Photo credit: Sandy Perry

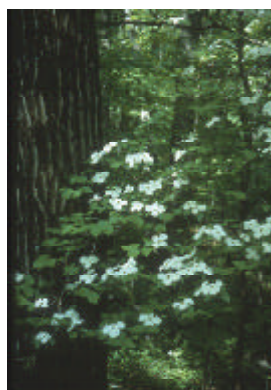


Photo credit: Bob Schutzki



A: Stem cankers caused by *Discula destructiva* on *Cornus florida*. **B:** Epicormic shoots produced by dogwoods weakened by *D. destructiva*.

Photo credit: Zachary Blankenheim

Web resources about flowering dogwoods and dogwood anthracnose

Growing and Maintaining Healthy Dogwoods, USDA Forest Service Southern Region:
<http://fhpr8.srs.fs.fed.us/pubs/dogwood/r8-fr14/r8-fr14.htm>

How to Identify and Control Dogwood Anthracnose, USDA Forest Service Northeastern Area Bulletin:NA-GR-18:
http://www.na.fs.fed.us/spfo/pubs/howtos/ht_dogwd/ht_dog.htm

Dogwood Anthracnose, Purdue University:
<http://www.agcom.purdue.edu/AgCom/Pubs/BP/BP-48.html>

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