

Dogwood Anthracnose: A Threat to Flowering Dogwood¹

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Dogwood anthracnose, a non-native disease caused by the fungus *Discula destructiva*, is currently threatening flowering dogwood populations in the eastern United States. Prior to the arrival of dogwood anthracnose, flowering dogwood was one of the most common understory species in eastern United States forests. In areas where anthracnose has been found, however, mortality of flowering dogwood (attributed to the disease) has been as high as 95% (Jenkins and White 2002). The disease has caused extensive mortality on ornamental dogwood trees as well.

Dogwood anthracnose is believed to be an exotic disease from Asia and was first noticed in New York in the late 1970s. Upon its arrival, the disease spread down the Appalachian Mountain range, reaching northern Georgia in the early 1990s. Currently the disease covers much of the historic range of flowering dogwood (Figure 1; Holzmüller et al. 2006).

The disease has not yet been reported in Florida, but because it has been reported in neighboring states, landowners should be aware that it may eventually arrive in Florida. This publication was prepared to teach landowners in Florida how to identify the symptoms of dogwood anthracnose.

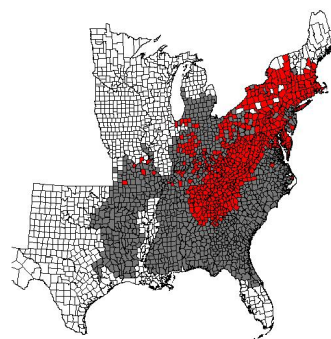


Figure 1. Native range of flowering dogwood shown in dark gray, with counties reporting dogwood anthracnose shown in red. Credits: Eric Holzmüller

Signs of Dogwood Anthracnose

Dogwood anthracnose progressively attacks all aboveground parts of infected trees. The leaves on the lower branches show the first symptoms of the disease, and leaves of infected trees typically have one or both of two types of leaf spots (see Figure 2).

Irregular light brown spots with reddish brown borders are formed when environmental conditions are less conducive to the fungus. Under favorable disease conditions, the other type of leaf spot forms, a leaf blight with black, water-soaked lesions

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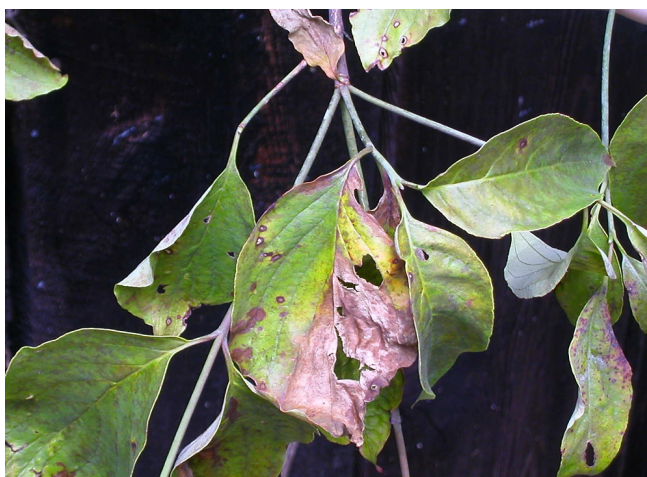


Figure 2. Leaf spots and blotches on a flowering dogwood with dogwood anthracnose disease. Credits: Photo: Michael Jenkins - National Park Service

typically initiating at the leaf tip and expanding along the mid-vein into the twig. Both types of leaf spots cause defoliation, and after 2 to 3 years of infection, smaller dogwood trees usually die from repeated defoliation. Larger dogwood trees resist death from anthracnose for a longer period of time compared to smaller trees. Typically, with large dogwood trees anthracnose spreads from the leaves into the twigs of the infected trees. These infected twigs die and fall off and the tree will begin to display an umbrella-like canopy due to the loss of lower branches (Figure 3).

The fungus eventually reaches the bole of the tree where cankers develop, girdling and killing large dogwood trees (Figure 4).

The leaf symptoms of dogwood anthracnose are similar to the symptoms of other less serious diseases that may infect dogwood, such as spot anthracnose caused by the fungus, *Elsinoe corni*, and leaf spots caused by the fungus, *Septoria* spp. Typically, these other diseases are mostly cosmetic in nature and do not result in tree mortality. Dogwood anthracnose is best distinguished from these other diseases by the observation of slimy beige fungal spores that ooze out of infected lesions during spring (Daughtrey et al. 1996).

What Can You Do About Dogwood Anthracnose?

If you think you have identified dogwood anthracnose in Florida, please contact your county



Figure 3. Flowering dogwood with an umbrella-like canopy. Credits: Photo: Michael Jenkins - National Park Service



Figure 4. Stem canker characteristic of the dogwood anthracnose disease. Credits: Photo: Michael Jenkins - National Park Service

extension horticulturist or county forester for verification. For more information about other forest tree diseases, visit the Division of Forestry webpage http://www.fl-dof.com/forest_management/fh_index.html.

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