

# Discula "Dogwood" Anthracnose

## *Ornamentals*

Pest  
Fact Sheet 39

### Introduction

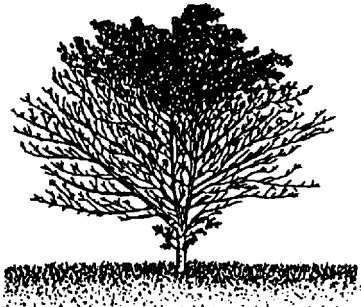


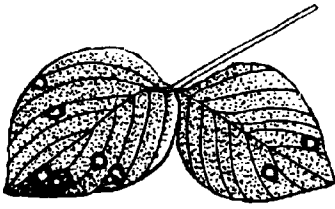
Fig. 1 Severely diseased flowering dogwood with only active branches in the top of the crown and water sprouts around the trunk.

The native flowering dogwood, *Cornus florida* is a popular ornamental tree that thrives well in the warmer areas of New Hampshire. The southern part of the state is included in the northern transitional zone, where patches of dogwoods occur sporadically, usually on dry south-facing slopes. The northern most natural stand in the state occurs along the Barrington-Rochester town line. However, our native and ornamental dogwoods are threatened by a relatively new fungal disease, Dogwood Anthracnose, *Discula destructiva* Redlin. The first cases of Dogwood Anthracnose in New Hampshire were confirmed in June 1990 at the University of New Hampshire's Plant Disease Diagnostic Clinic. Here we provide information on how this disease can be identified and controlled.

In the late 1970's unusually high dieback of native flowering dogwood, *Cornus florida*, was observed in parts of western Connecticut and southern New York. The disease agent *Discula destructiva* was isolated from dogwoods showing similar symptoms in both the eastern *Cornus florida*, and the western *Cornus nuttallii*. In the East the disease spread to include most of Connecticut and New Jersey, southern New York, eastern Pennsylvania, northern Delaware and northeastern Maryland, with isolated incidences in Massachusetts, Virginia and West Virginia. The reason for the simultaneous outbreaks of the disease in the East and the West is uncertain. According to one theory, recent shifts in climatic patterns of cooler springs with more rainfall conducive to the disease, might account for the outbreaks in both geographic areas. The future spread of the disease is being monitored in the Northeast by the CAPS (Cooperative Agriculture Pest Survey), a informative program of the USDA.

### Symptoms

Leaf dieback first occurs in the lower crown and works up the tree (Fig. 1). Leaves develop tan spots with purple borders or tan blotches which often expand, killing the entire leaf (Fig. 2). The white bracts of flowers may also become spotted if rainfall is overly abundant in the spring. Infection moves from the leaves to the twigs, and cankers develop from leaf nodes and cause twig dieback. Dead twigs appear tan and are often covered with black, pin-point, fruiting bodies of the fungus (called conidiomata) and in wet weather the conidiomata produce masses of orange spores. Water sprouts (succulent shoots) may develop on the trunk as a result of twig dieback. The disease spreads from the twigs to the main branches with multiple cankers



**Fig 2. Infected Leaves**


coalescing to girdle individual branches. If unchecked, and conditions favoring spread of the disease persist, the entire tree may die in two to three years.

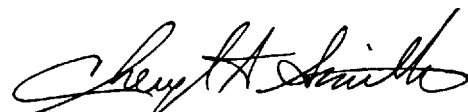
## Control

Early detection of the disease is important, because trees with extensive dieback and only a few active branches cannot be saved, and should be removed. (To obtain lab confirmation from the UNH Plant Diagnostic Lab on presence/absence of the disease, you should submit twig and leaf samples in a partially sealed plastic bag.) If a tree shows only initial signs of the disease, i.e. leaf spots and twig canker, pruning and fungicides can save it. In the spring apply fungicide sprays to protect new leaves and shoots, starting at bud break and repeat every 10-14 days until the leaves are fully open. Spray again in late summer when the flower buds form. High nitrogen fertilizers that produce lush succulent shoots with greater susceptibility to the fungus should be avoided. During the summer remove all water sprouts that may develop around the base. See that trees get sufficient water during summer droughts. However, it is important to water trees at the bottoms only, so that leaves and twigs remain dry. Place nursery stock in well ventilated areas, where they may dry quickly if they should happen to get wet. In the fall rake and remove fallen leaves. Also, remove all dead twigs and leaves attached to the tree.

**Resistant Dogwoods:** Chinese dogwood, *Cornus kousa* is resistant to *Discula* anthracnose and is recommended for nursery stock and replacement of dogwoods that have been killed by the fungus. Another possible substitute is Cornelian cherry, *Cornus mas*. Several "stellar" hybrid crosses between *C. florida* and *C. kousa* are quite resistant to the disease.

**Stop!** Read the label on every pesticide container each time before using the material. Pesticides must be applied only as directed on the label to be in compliance with the law. All pesticides listed in this publication are contingent upon continued registration. Contact the Division of Pesticide Control at (603) 271-3550 to check registration status. Dispose of empty containers safely, according to N.H. regulations.

  
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