

Plant Diseases

Powdery Mildew on Dogwood

The flowering dogwood (*Comus florida*) is a very popular native tree and has few equals when it comes to providing a spectacular show of spring color. However, this wonderful tree is not without its problems. Dogwood borers, errant lawnmowers, and *Discula anthracnose* have limited the life of many a dogwood. Now a new emerging fungal disease is disfiguring this tree and is being noticed by landscape maintenance personnel and homeowners alike. Powdery mildew, caused by the fungus *Microsphaera*, is widespread. Wherever the flowering dogwood is grown, powdery mildew is increasing in occurrence and severity.

Symptoms

Powdery mildew infections are occurring as early as mid-May and can be identified by the patches of white powdery fungal growth on the upper surface of newly emerging leaves. This infection will often cause the new growth to be twisted or deformed. Older, infected leaves have green-brown or green-purple blotches that progress into dark brown to tan dead patches as the summer progresses. The white fungus grows throughout the summer and fall. It is difficult to evaluate the effect powdery mildew infections have on landscape trees but the loss of photosynthesis and water due to leaf infections could be weakening trees. This weakening could make infected trees more susceptible to dogwood borers or *Botryosphaeria* canker disease. The aesthetic effects are obvious; the disease reduces the attractiveness of the trees.

Recent observations from areas with nursery production indicate that the disease is capable of reducing growth of very small trees that are used for rootstock and bud wood.

Control

There are several things that landscapers and gardeners can do to prevent powdery mildew:

- For existing trees discourage the disease by avoiding heavy nitrogen fertilizer use, heavy overhead watering and excessive pruning. These practices produce succulent growth that is more easily infected by the fungus.
- Provide a thin layer of mulch over the root system, prune out dead branches, and provide good air movement so the foliage dries quickly.
- Planting disease resistant cultivars is the best long-term solution to powdery mildew control.
- Plant pathologists and horticulturists have identified a number of disease resistant and moderately resistant cultivars of flowering dogwood. Ratings have also been taken of mildew resistance of Kousa dogwood and the new dogwood hybrids, *Cornus ruteriensis*.

