



Entomosporium Leaf Spot of Photinia

M. A. Hansen, and Extension Plant Pathologist, Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech

Photinia, a shrub belonging to the plant family Rosaceae, is a popular landscape shrub in the southeastern U.S. Several species are grown, but the most popular is the hybrid *Photinia ×fraseri*, or “redtip”, so named for its bright red, immature foliage. The biggest drawback to growing photinia is a leaf spot disease caused by the fungus *Diplocarpon mespili* (syn. *Entomosporium mespili*) to which redtip is highly susceptible.

Symptoms

Leaf spots on photinia first appear as minute, reddish purple dots on either the upper or lower leaf surface. Older spots have a slightly depressed center with raised margins (Fig. 1). On the juvenile, reddish colored foliage of *P. ×fraseri*, these spots are darker red than the surrounding healthy tissue. Older spots (usually 3-4 mm in diameter) have a slightly depressed, light gray center with raised, reddish purple margins (Fig. 1). The centers of the necrotic spots are dotted with minute black specks, which are the spore-producing structures, or acervuli, of the fungus (Fig. 2). In severe infections, leaf spots may coalesce

and blight large areas of the leaf. Infection is mostly limited to the leaf blade, but occasionally spots also occur on petioles and tender, young shoots. Heavy infections cause premature defoliation.

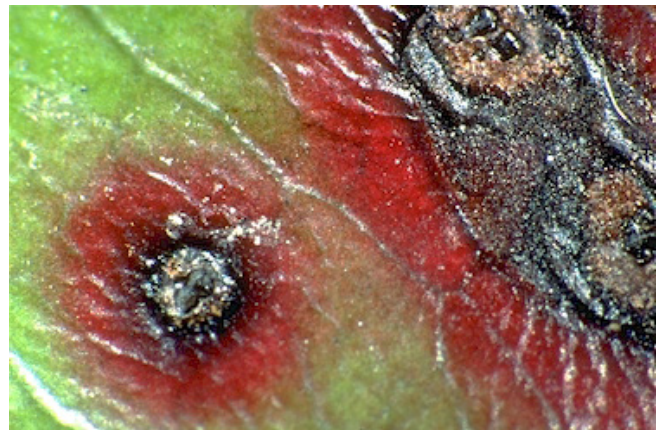


Fig. 2. Close-up of leaf spots showing acervuli, the spore-producing structures of the fungus. (Photo by E. Dutky-U. Md.)



Fig. 1. Leaf spots on photinia caused by *Entomosporium mespili*. (Photo by R. C. Lambe)

Disease Cycle

The fungus overwinters as mycelium in fallen infected leaves from the previous year. In the spring the fungus produces spores (Fig. 3) that are dispersed by splashing water to young leaves. Symptoms first appear on the new growth of the lowest branches and spread gradually upward. The fungus continues to

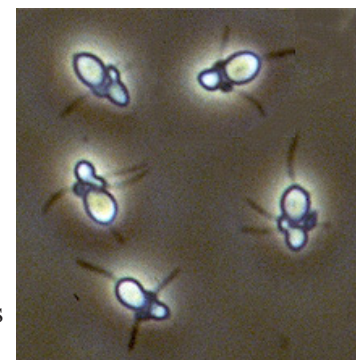


Fig. 3. *Entomosporium mespili* conidia (spores). (Photo by A. B. Sindermann-Md. Dept. of Ag.).

produce spores and cause new infections throughout the growing season. Because the fungus preferentially infects tender, new growth, cultural practices that stimulate succulent growth, such as summer pruning or frequent pruning or fertilization, favor disease.

Control

Cultural Control

Collect and remove fallen leaves in the fall to reduce sources of fungal inoculum before new growth appears in the spring. Plants pruned in late summer may develop symptoms on new growth into the fall. Avoid frequent pruning and summer fertilization, which stimulate succulent growth, and avoid overhead irrigation, which spreads spores. In nursery production, avoid taking cuttings from diseased plants.

Chemical Control

Fungicides can be used preventatively, but they must be applied regularly throughout the growing

season for effective control. Refer to the current Virginia Pest Management Guide for Home Grounds and Animals (VCE publication 456-018, <https://pubs.ext.vt.edu/456/456-018/456-018.html>) for details on recommended fungicides for home use and information on the proper use of pesticides. Refer to VCE publication 456-017 (<https://pubs.ext.vt.edu/456/456-017/456-017.html>) for recommendations for commercial production.

Resistance

Of the photinias, redbtip photinia (*P. ×fraseri*) is the most susceptible to Entomosporium leaf spot. No cultivars are known to be resistant. Japanese photinia (*P. glabra*) is less susceptible, but occasional outbreaks have been reported. Other plant species (all in plant family Rosaceae) that are reported to be susceptible to the disease include: *Amelanchier*, *Aronia*, *Chaenomeles*, *Cotoneaster*, *Crataegus*, *Cydonia*, *Eriobotrya*, *Heteromeles*, *Malus*, *Mespilus*, *Pyracantha*, *Pyrus*, *Rhaphiolepis*, and *Sorbus* species.