



## "Bot canker" in Ornamental Trees

*Botryosphaeria dothidea*, or Bot canker, as it is commonly known, is a serious pathogen of landscape and ornamental trees. This fungus is opportunistic and generally requires a weakened or damaged host. Many environmental stress factors, such as heat, drought, freeze injury, and compacted soil, can predispose trees and shrubs to infection and colonization by *Botryosphaeria* fungi. Providing irrigation to trees during dry periods and protecting plants from sudden temperature drops can reduce stress and likelihood of infection. Bot canker is a common pathogen of apple, cherry, dogwood, elm, oak, persimmon, redbud, willow, sycamore, hickory, holly, Leyland cypress and sweetgum.

*Botryosphaeria* fungi colonize plant tissue through mechanical wounds, growth cracks, leaf scars and lenticels. In some species, *Botryosphaeria* has been shown to initiate infections on flower stems and colonize tissue progressively downward, causing branch dieback. *Botryosphaeria* fungi may also initially colonize dead branch tissue and move down the branch into healthy bark and sapwood. Spread of these fungi occurs through air movement or splash dispersal of spores, and also through the use of contaminated pruning tools.



Bot canker lesions vary in size, depending on the species and its condition at the time of infection. Cankers are often surrounded by callus tissue. Diseased twigs often die but larger branches may tolerate several cankers without dying. Numerous cankers may girdle the branch.

*Botryosphaeria* fungi will overwinter as fruiting bodies on dead tissue. The spores can also survive on bark or evergreen tissue. *Botryosphaeria* fungi are not host-specific and impact many species with varying levels of aggressiveness. Bot canker can be misdiagnosed as gummosis on some species of fruit trees.

It is important to remember that under optimal growing conditions, trees and shrubs are typically able to resist infection and colonization by *Botryosphaeria* fungi and there are no effective fungicide controls for *Botryosphaeria* dieback. The best defense against this commonly occurring disease is to minimize plant stress, employ sound cultural practices and proper sanitation, and to prune damaged tissue as it occurs.