

Perennial Nectria canker

The fungus *Nectria galligena* causes perennial Nectria canker on branches and stems of trees and shrubs.



Host plants:

Perennial Nectria canker affects over 60 species of trees and shrubs including: alder, apple, ash, mountain ash, aspen/poplar, basswood, birch, cherry, dogwood, elm, filbert, sweet gum, hawthorn, hickory, holly, hornbeam, hophornbeam, horsechestnut, magnolia, maple, mulberry, oak, pear, quince, redbud, sassafras, serviceberry, sourwood, sumac, tupelo, walnut, and willow.

Description:

One year old cankers are small, discolored areas that are flattened relative to adjacent bark, and only visible on thin-barked branches and stems. As a perennial Nectria canker infection grows, rounded, corky rolls of callus and bark develop a target-like pattern.



Several years old perennial Nectria canker with target patterned callus growth.

Photo: Robert L. Anderson, USDA Forest Service, www.forestryimages.org

Perennial Nectria cankers rarely girdle stems several inches in diameter, but trees and shrubs exposed to strong winds or heavy snow load can fracture at the canker.

Disease cycle:

Initial infection occurs at leaf scars, branch stubs, cracks in branch axils, sunscald lesions, and other wounds to the bark that expose the cambium. Most spores are wind and rain splashed during the spring and the fall from nearby established cankers. The tree typically responds to a perennial Nectria canker by compartmentalizing the infection with, among other responses, a cork barrier. Once established in the cambium the *Nectria* fungus grows through the callus during the dormant season, killing the bark, cambium, and the outermost sapwood as it progresses. Clumps or individual red to orange fruiting structures can appear from autumn to spring on the surface of young cankers. The next growing season the tree responds to the breach in its defenses around the canker by forming another compartmentalization barrier. During the ensuing years as the tree and the Nectria fungus alternate with their respective growth responses, the series of callus ridges develop a target pattern.

Management strategies:

Once perennial Nectria canker establishes itself in a tree, interventions focus on sustaining the vitality of the tree. Remove infected branches when the weather is too cold or dry for the fungus to infect the pruning wounds, and dispose of the debris away from the trees. Irrigate when conditions are dry, fertilize if soils are deficient in minerals, prune to preserve sound branch structure, avoid wounding the bark, and maintain 2-3 inches of composted mulch over as much of the root zone as possible.

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