



How to Care for Tree Wounds

One of the most common types of tree disease is wound or trunk decay. Decay in a tree can result in dangerously weak trees, unsightly trees, or in shortening the life of the tree. Decay in a tree cannot be cured. Proper tree care can, however, prevent decay or greatly limit the progress of decay in the tree.

Decay is a condition that results from the digestion of wood by fungi and other microbes. Wounds through the bark start the processes that lead to decay. Wounds that expose the wood can be caused by animals, insects, birds, fire, storms, breezes, and the activities of humans, such as pruning. Of course, not all wounds lead to decay. Proper care of tree wounds can lessen the chance that decay will result.

When a tree is wounded, a natural-process begins that results in the covering of the wound by bark and new wood. This is called wound closure, "callusing over" or "wound healing." Natural processes also begin that make wood beneath the wound unsuitable for growth of decay organisms. Proper treatment of wounds can hasten both of these processes.

Proper care of tree wounds begins with practices that promote callusing growth. Recent research work has shown that when a tree produces callus rapidly, the extent of the natural discoloration of the wood in the trunk above and below a wound is less than when callusing is poor. This is important because decay takes place only in discolored wood. Rapid callus production commonly occurs in the spring when trees are growing vigorously. Thus, to reduce decay hazard, the best time to make large pruning wounds is from the time that buds start to swell until the leaves are nearly fully expanded. This is usually in March, April, or May for much of Ohio. The sort of large wounds we are referring to are those involving branches larger than 1 ½ inches in diameter.



Figure 1. Trim branches without collars flush to the trunk



Figure 2. Trim branches with collars or other natural projections at the collar edge.

In the past it has been recommended that the bark around ragged wounds on the trunk or large branches be trimmed away from the wound in an elliptical form, with the greatest dimension of the ellipse above and below the wound. Recent research suggests that when wounds are made in the spring (as recommended above) this is not a good practice. This is because trimming away healthy bark may lead to increased wood discoloration and hence to increased decay. Elliptical trimming may not be important when wounds occur in late summer or fall either. The bark over these sorts of wounds tends to die and become loose in an elliptical fashion naturally.

Healing associated with branch stubs may often be delayed and lead to increased decay within the tree if the stub is not properly pruned off. Cutting flush with the tree is generally best (Figure 1). Some branches have collars; "shoulders" or other natural projections. These should not be trimmed off (Figure 2). When natural projections or collars are removed, not only is there a larger area to be callused over, but chances of decay organisms entering the wound and, becoming established are greater. Branch stubs previously incorrectly pruned should be corrected as promptly as possible. Care should be taken, however; not to cut into the new callus tissue that has begun to form in response to the wound.

Try to keep wounded trees growing vigorously. This will increase the rate of wound closure and reduce the amount of discolored wood and decay associated with wounds. Trees should be fertilized properly and watered during droughts. Aerate the soil if it is compacted. Do not plant trees that will grow to be large too close to a house, paved area, or other restrictive object or soil, situation: Thin out less valuable, competing trees. Take measures to control debilitating insect infestations. Protect the tree from wounds made by careless mowing or weeding practices. Prune badly broken branches promptly. You may use wound dressings if you wish; however, some tree care specialists feel that wound dressings interfere with healing or callusing.

Trees in the urban landscape must be helped. Early in the life of the tree establish sound maintenance programs for all trees. Part of such maintenance is the prevention wounds, maintenance of tree vigor, and proper wound care.

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