

GARDEN COLUMN FOR THE SALISBURY POST

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July 13, 2007

Lightning damage to trees is an unwanted by-product of our recent late afternoon and thunder storms. A number of homeowners have called reporting trees that have been damaged or destroyed by lightning strikes.

Lightning is basically static electricity seeking a ground. A bolt of lightning can range from 10 million to 100 million volts of electricity at 1000 to 300,000 amps. This massive amount of electricity can travel up to one mile.

Lightning can make a direct hit or a side flash damaging trees and shrubs. Damage to trees and other shrubs may vary from slight limb or twig damage to total annihilation. Electrical energy literally boils the sap, causing the bark to split open seeking the nearest ground. In some instances, the entire bark structure may be blown off the tree; in other situations, the only evidence of a lightning strike may be internal browning of the xylem with no visible sign of injury to the trunk of the tree.

Lightning is most likely to strike a lone tree, the tallest tree in a group, a tall tree at the end of a group of trees, those growing in moist soil or close to a body of water or trees closest to a building. Plants growing near or under lightning struck trees are often damaged or destroyed.

Ten species of trees that are most often struck by lightning are: maple, ash, poplar, pine, oak, hemlock, elm, and sycamore.

Those that are struck less often are: birch, beech and chestnut. High starch content in trees such as ash, maple and oak provide a better conductor than those high in oil such as the beech and birch.

Lightning protection can be achieved with the installation of lightning rods. This is an expensive task that should be done by professional arborist. Specimen trees, historic trees or a tree over a public shelter should be lightning protected.

Few trees survive a direct lightning hit. Since internal damage cannot be assessed immediately, promptly remove severely damaged or dangerous limbs. Damaged pine trees may attract southern pine beetles. These may need to be removed immediately.

Remove the damaged bark with a sharp knife or chisel. Pruning paint is not recommended for covering a wound since research has proved that pruning paint is of no benefit. Keep the wound covered if possible with a moist cloth or burlap, to prevent rapid drying of exposed xylem and cambium layers.

Liquid nitrogen should be applied to stimulate root growth. House plant food is a readily available source. Root growth will improve the supply of water and nutrients to the top of the tree.

This extra effort may increase the trees' chance of survival. Often trees damaged by lightning will continue to decline over the years and require removal. Ironically, trees in poor condition with hollow centers are usually able to survive a lightning strike much better than those in good condition.

Most often, the owner will know within a few weeks if the tree will survive.

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