

Lightning Strikes on Trees

Texas A&M AgriLife Extension Service — Galveston County Office



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PHOTO CREDIT: Joanne Hardgrove

Lightning can inflict significant damage to a tree as it did in March to the pine tree pictured above growing in a home landscape in Clear Lake. Being struck by lightning does not automatically spell doom to a tree as many such trees are able to make a remarkable recovery given good care and time.

Lightning evokes a range of human emotions from fascination to fear. I was amazed when viewing television replays of a lightning strike that occurred on the grounds at the PGA Tour Championship series in Atlanta last Saturday. A bolt of lightning struck a tall pine tree and shattered the bark all the way to the

bottom of the tree trunk. Fortunately, no one was killed but several people sustained injuries.

A few days before that incident, several TV news outlets showed a lightning bolt nearly striking a man in South Carolina while he was walking in the rain with an umbrella. The numerous thunderstorms occurring in

our area have also produced remarkable displays of lightning.

I've received several calls and e-mails from homeowners asking what care might be given to help the tree survive or recover.

Lightning striking a tree in one's landscape is a





traumatic experience for both the tree and its caretaker. After checking to see if one's own limbs are intact, attention quickly shifts to the welfare of the tree.

A lightning strike can affect a tree in many ways. Some are immediately obvious and some are not. Sometimes the trunk and/or large branches are splintered. A strike may make continuous grooves in the trunk or main branches.

In many cases, the apparent damage may appear minimal while internal injury to the vascular tissues of the trunk and roots is extensive and gradually manifests itself over a period of months or even years.

In some cases, the majority of the damage occurs to the main roots of a tree as the electrical discharge (up to 100 million volts at thousands of amperes) vaporizes the water inside the roots, creating superheated steam. People standing above such roots during a storm may be electrocuted even though they are standing a good distance from the tree's trunk.

It is difficult to predict which trees will be struck by lightning and which are most likely to be seriously injured. In general, lone trees, those tallest in a group or those growing in moist soil have the highest probability of being struck.

In the considerable body of lightning lore, certain tree species are commonly listed as more lightning-attractive than others. These include maple, ash, tulip tree, sycamore,

poplar, oak, elm, pine, spruce and hemlock. Some of these species, like sycamores, are likely targets because they tend to tower over other species. Pines and hemlocks may be lightning-prone because of the water that collects on their needles during thunderstorms.

Homeowners typically want to take immediate action to help a damaged tree survive the aftermath of a lightning strike. In most cases, however, there is little that can be done to help a tree recover.

Should one apply any of the various wound dressing concoctions commonly used? While most wound dressing concoctions do no harm to the tree, many dressings develop cracks over time that can harbor insects or hold water that lead to decay. Applying a wound dressing may make the caretaker performing the operation feel better, but it is not recommended.

If the lightning damage has created hazardous broken branches, these should be taken care of quickly. However, in most cases, it is best to wait 6 months before doing major (expensive) corrective work.

If, during this waiting period, the tree shows no obvious signs of decline, then it may be worth the expense to do major corrective pruning. In many cases, it will become obvious at some point during the waiting period that the tree will not recover and that removal is the best option.

My experience has been that a lightning strike does not automatically spell doom to a tree as many such trees are able to make a remarkable recovery given adequate care and time.

Gardening Q&A

Question: My sago palm produced a basketball-shaped structure in the top center of the plant. My neighbor's sago palm produced a large, pine cone-like structure. Are these different types of sago palms?

Answer: Although both plants are sago palms (*Cycas revoluta*), your plant with the basketball-shaped structure in the top center is a female sago palm and your friend's plant is a male sago palm. Plants such as sago palms are known as dioecious because male and female flowers are produced on separate individual plants of the same species.

Sago palms of both sexes must be within fairly close proximity in order to produce seed. The flower produced by male plants develop as a large upright cone in the center while the flower structure produced by female plants are basketball- or globe-like in shape and slightly flattened. The seeds mature later in the fall season and are bright red. Interestingly, sago palms are not true palms but are cycads which include pines and yews.

