

## **Yard and Garden – 08-27-2011- Ted Griess / Extension Horticulture Assistant**

Eventually, all trees like people develop ailments. Either they are minor conditions, which eventually disappear on their own, or the problems become serious, requiring urgent care. Repeatedly I hear the question, “What is wrong with my tree?”

If you are on the verge of asking that same question consider this. Unlike humans, ailing trees are incapable of describing what ails them. Developing a keen eye and an acute awareness sharpens your diagnostic skills and better prepares you to communicate with a professional arborist.

The major contributors to a tree’s mortality are insects and disease. This applies to natural forests as well as urban forests. A community’s urban forest is comprised of street trees, park trees and those trees found in people’s home landscapes. Millions of dollars are spent annually on assorted pesticides to protect these precious trees. In some cases, this expenditure is worth it, while at other times, it is a waste of money. Knowing when to treat and when not to treat takes practice.

The first line of defense is maintaining a healthy and vigorous tree. Trees under stress are more susceptible and often unable to fend off pests. Stress can be avoided. For example, before planting a new tree, remember the slogan, “The right tree in the right place.” Selecting a tree that is hardy for the area is a critical factor for a stress-free tree. Practicing quality cultural care keeps a tree healthy. This includes watering during dry periods, mulching around the base of the tree and proper pruning.

When you know your tree is ailing, the next step is to determine the cause. Narrowing down the cause to four possibilities speeds the diagnosis. The four possibilities include insects, diseases, natural causes (environmental) and human error.

Damage from insects is sometimes easy to diagnose, especially if the insect is present. Other times one sees only symptoms. These symptoms may include chewed foliage or blossoms, leaves curled into a web, holes in the bark, or insect waste products. Recognizing the symptom can often determine the pest. For example, cottony fibrous material can indicate the presence of mealy bugs, scales or whiteflies. The presence of a sticky substance called honeydew and/or a sooty mold often indicates aphids. Dieback of twigs or holes in the bark can be symptoms of woodborers or bark beetles.

Identifying tree diseases can be difficult especially since insects spread some diseases. Determining the cause to be either the pathogen or the insect complicates the diagnosis. Most tree diseases are caused by fungi, bacteria or virus. A diseased tree generally requires a laboratory analysis to determine the specific agent. Fungi generally cause foliage diseases. Examples include apple scab, cedar apple rust, powdery mildew and needle and tip blight. Fire blight, crown gall and wet wood of elm are vascular bacterial diseases. Bacterial diseases generally target the cells that transport water, disrupting the movement of nutrients within the tree. Insects frequently spread Mosaic diseases caused by virus.

Environmental causes of tree problems include such conditions as the soil being too dry or too wet, soil deficiencies, lightning, or wildlife damage by rodents, deer or squirrels.

Human error causes many tree problems, especially in the urban landscape. Some of the major human contributors include planting errors, improper selection, girdling of roots, planting too deeply, and failure to remove planting stakes and guy wires. Others human problems may include lawnmower or weed cutter damage, chemicals and soil compaction.

Like people, eventually all trees develop ailments. Either they are minor conditions, which eventually disappear on their own, or the problem becomes serious, needing urgent care. An awareness of what to look for and knowing the potential causes sharpen one's diagnostic skills. The more information you can provide a professional arborist, the more accurate the treatment.