Tree Pest and Diseases

Sometimes trees become susceptible to pest, disease or cultural problems. Many plant disorders once diagnosed can be managed.

Plant disorders are separated into two categories: biotic (living; e.g., insects, fungi, bacteria) and abiotic (nonliving; e.g., watering, temperature, nutrient deficiency). Biotic disorders are caused by living organisms affecting the health of a tree and are most commonly fungi, bacteria and insects. Insect pests are characterized by their mouthparts: sucking, piercing or chewing. Typical symptoms are holes in leaves or bark and distorted growth or stippling of the leaves. Also, what these insect leave behind can be diagnostic including: honeydew, cast skins, fecal pellets.

Borers (adult and larva)

Aphids

Fungi fruiting structures (e.g., mushrooms) can often be seen in landscapes. Most fungi are saprophytic feeding on dead organic matter and are beneficial to the environment. Damage-causing fungi produce toxins and enzymes that disrupt normal plant growth. Plant symptoms include darkened, necrotic or sunken lesions, yellow or brown spots, distorted foliage, masses of powdery spores, droopy leaves or shoots and profuse twig growth. Many can stay alive in a dormant state for months, so garden sanitation is important in disease prevention.

Armillaria (mushrooms)

Powdery mildew

Bacteria infect host plants by entering through wounds or natural openings. The symptoms are very similar to damaging fungal diseases and also include galls, vascular wilt and cankers. They can spread by water, insects or human activity.

Anthracnose

Accurate diagnosis is essential to proper disease management. Careful examination of all aspects of the plant symptoms, location, plant history, past and present weather conditions and maintenance practices are necessary for accurate diagnosis. Correct plant identification is essential to recognize natural characteristics that may resemble a plant problem.

Redhumped caterpillars

Most plants can tolerate some level of injury from a pest or disease. Treatment is only needed if a plant's health is affected or symptoms are aesthetically unfavorable.

Not all plant problems are caused by a pest or disease. Many problems are abiotic in nature and may result from poor plant selection or improper maintenance practices. Such disorders can be caused by too much or too little watering, nutrient deficiency or toxicity, intolerable soil pH, drastic temperature changes, excessive soil salt concentration, poor soil texture, air pollution and mechanical injury that may lead to secondary pest disorders.

Spider mites and webbing

To avoid plant problems, select plants that are known to be resistant to pests or diseases. Avoid plant species not suited to the chosen location, soil conditions or climate zone.

Scales

Consult a trained diagnostician, industry professional or UCCE Master Gardener for a proper diagnosis and recommended treatment plan or for further information on specific plant problems.

For more information about tree pests and diseases, refer to the ANR website at http://anrcatalog.ucdavis.edu, the IPM website at www.ipm.ucdavis.edu, call your local UC Cooperative Extension office, or consult a certified arborist.

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