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ADVICE TO GROW BY » SONOMA COUNTY MASTER GARDENERS
Protecting your trees from decay of fungal invasion



An invasive fungus grows on a burned Douglas fir tree at Sugarloaf Ridge State Park. Photo by Kent Porter/Press Democrat 2021

Question: Several mature trees in my landscape have mushrooms growing on their trunks and at their base. How can I protect the health of these trees?

Answer: Honey-colored mushrooms growing at the base of a tree and bracket fungi growing on the trunk and branches are obvious signs of wood decay fungi, also known as heart rots, sap rots and canker rots. This large group of harmful pathogens can weaken or kill trees. Other signs of wood decay fungi may be small and unnoticeable, hidden beneath or in the crevices of bark or only present seasonally, making them hard to detect.

Even if you don't see evidence of fungal growth, you may notice other symptoms, such as wounds or cracks that don't close; loose bark; open cavities; soft, spongy, stringy, brown or brittle wood; oozing sap; abnormal swellings or bulges; dead branches; weakened wood; and insect infestations.

Unhealed wounds are an open invitation for wood decay fungi to establish within the injured tree. After a tree has been injured, fungal spores in the air or fungal fragments carried by insects can fall onto the exposed wood to cause an infection. Wood decay fungi can destroy storage and conductive tissues in the sapwood and reduce wood strength, usually in older trees.

Wounds may be caused by lawn mowers, weed trimmers, construction equipment, vehicle (auto, scooter, bicycle) collisions, wire, twine, improper pruning, herbicides, animals, insects, fire, sunscald, lightning and extreme weather.

In addition, poor environmental conditions can lead to bark cracks and splits that provide an avenue for infection. For example, a period of dry weather followed by wet conditions can lead to vigorous growth, causing splits in the drying stem tissues. Excessively late growth in the fall stimulated by warm temperatures, high humidity and high nitrogen levels can make a tree more susceptible to frost cracking when the weather turns cold.

Trees that are stressed by these kinds of conditions are more vulnerable to disease. If the tree is already weakened because of poor growing conditions, wounds as small as a nail hole can provide entry points for fungal organisms. Unfortunately, by the time you can see the signs and symptoms of wood decay fungi, the tree may already be suffering from advanced decay.



Fungus clings to a scorched tree along Lawson Trail at Hood Mountain Regional Park and Open Space Preserve in Santa Rosa. Unhealed wounds can be an open invitation for wood decay fungi to establish within the injured tree. Photo by Christopher Chung/Press Democrat 2020

Trees infected by fungal organisms are difficult to treat, particularly when infection is advanced. Diseased branches should be removed immediately to reduce spread of the pathogen. Proper pruning cuts are essential to the health of the tree.

Tree failures can cause personal injury, property damage or both. If you have trees near structures or other high-value potential targets, make sure they are regularly inspected by a certified expert for signs of wood decay and other structural weakness. Hazardous trees should be assessed by a certified arborist who can recommend

mitigation, including appropriate pruning or cultural practices. Depending on the extent of decay and the structural weakness, you may have to remove the tree.

Once fungal disease spreads throughout the tree it is too late to save it. Our best advice about disease prevention is to implement proper cultural practices and provide appropriate environmental conditions so that plants remain healthy and more disease-resistant.

The UC Integrated Pest Management Program Pest Note “Wood Decay Fungi in Landscape Trees” describes infection, damage and management of wood decay fungi and includes an excellent photo gallery online at <https://bit.ly/3TwOJtm>.

Contributors to this week’s column were Janet Bair, Laura Southworth, Patricia Decker and Karen Felker. The UC Master Gardener Program of Sonoma County (<https://sonomamg.ucanr.edu>) provides environmentally sustainable, science-based horticultural information to Sonoma County home gardeners. Send your gardening questions to scmgpd@gmail.com. You will receive answers to your questions either in this newspaper or from our Information Desk. You can contact the Information Desk directly at 707-565-2608 or mgsonoma@ucanr.edu.