Poor Elberta, Armillaria's Done Her In

By Jeanne Rose, retired Master Gardener

When I first became acquainted with my Elberta peach tree more than twenty years ago, she was a small sapling in a nursery. I brought her home and planted her in my back yard where she has lived fruitfully ever since. I knew of her need for regular watering, but at that time I didn't know the best way to trim and shape her. Because of my incorrect pruning, she suffered sunburn and borer attacks on her scaffold limbs, but she was a survivor and she has produced boxes of beautiful, drip-off-the-chin juicy freestone peaches each year since she reached maturity.

But, alas several years ago something strange started to bother Elberta and she would lose a small branch or two each year. Still she continued to produce the same high quality peaches. I really wasn't certain what was ailing her since there were no outward signs to assist with a diagnosis.

Amillaria mushrooms at tree base

Then about four years ago a beautiful, sulfur-yellow mushroom appeared at the base of her trunk. It started out as a small rounded blob, but within three or four days it had developed into a flattened eight-inch, wavy-edged mass. In three or four days it turned tan. When I removed the mushroom and examined the area just under the bark at the crown of the trunk, I discovered a mat of bright white netting, a telltale symptom that helped me confirm the diagnosis. The tree was suffering from Oak Root Fungus (*Armillaria mellea*), which is nearly always fatal. Poor Elberta, Armillaria's done her in.

The mushrooms produced by Armillaria can be either yellow or brown. I once had a fruitless mulberry in my yard also suffering from Armillaria and it produced golden brown mushrooms at the tree base. Within a few years of the first appearance of symptoms, all the major roots were gone from one side of the tree and it became so unstable that I had to remove it.

Oak Root Fungus is prevalent in soil in areas such as ours where oak and other native forests once grew. It shows up in landscapes that are planted in these old forests, especially in riverbeds or areas subject to flooding. Armillaria fungus infects and kills the cambial tissue (the parts that transport water and food) in tree roots, which causes the large roots and the crown of the trunk near the ground to die.

Young plants susceptible to Armillaria often die quickly; mature trees may die quickly or slowly. My Elberta peach tree has lost major roots on one side and started leaning dangerously in the opposite direction; it has also developed a vertical crack from ground level up about 18 inches on the tree where the roots are gone. It now has two sturdy props under the large leaning scaffold limb in an attempt to save this year's peach crop; the tree will be taken down as soon as the fruit is off.

Armillaria root rot thrives in moist conditions, such as when lawn is planted around the roots of California native oaks. It can develop slowly, and symptoms may not appear until the disease is well established. The fungus can survive for many years in dead or living tree roots.

There are few things one can do to manage Armillaria. Prepare the site well before planting and provide appropriate cultural care, especially proper irrigation. Keep water away from the crowns of plants.

In areas where this disease has been a problem you should plant resistant tree species. Your local nursery can help you decide, but unfortunately the list is not that extensive. Before planting into a known infested area, remove as many old roots from the soil as possible as these can harbor Armillaria and let the soil air-dry before planting. If you remove an infected tree and want to replant, the best advice is to wait for a minimum of three years before planting in the exact same spot just because there is so much fungus inoculating the area.

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