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Artillery Fungus and Other Things That Grow in Mulch

Introduction

Landscape mulch usually consists of hardwood shreds or bark chips. Wood mulch provides a nice cover in landscape beds that holds moisture and adds beauty. The wood in the mulch also provides a food source for many fungi. Fungi are the natural and helpful decomposers of our woodlands and landscapes, breaking down plant material and utilizing the organic matter. Without fungi, leaves and twigs and branches would remain, cluttering our forests and landscapes. When fungi are active in areas close to our homes, we sometimes see their fruiting bodies. After much growth of their threadlike bodies in mulch, fungi will produce spore bearing fruiting bodies to reproduce. The most recognizable of these are mushrooms. Often the fungi and other organisms that grow in mulch will produce fruiting bodies that we are not as familiar with, such as:

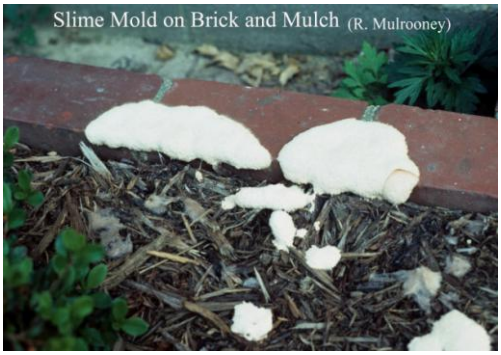
Slime Molds

A commonly seen organism is the slime mold (ex. *Physarum sp.*) that will rapidly grow over the surface of mulched areas, characterized by a yellow, orange, or white, soft gooey mass. They are harmless, and can be raked away. Left undisturbed, they will produce spores and then dry up, but may grow again after later rains.

Stinkhorns

Stinkhorns (ex. *Mutinus sp.*) are common, characterized by a long tube like structure that may reach 6 to 7 inches in height overnight. Stinkhorns have a slimy, smelly cap (hence their name) where spores are produced. The smell attracts insects to the cap where they

may pick up spores and carry them to new locations. The stinkhorns are harmless and may be broken up by raking lightly over the mulch.

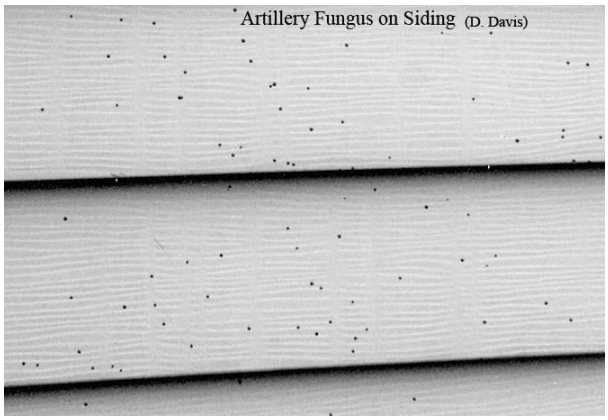


Bird's Nest Fungi

Another common one is the Bird's Nest Fungus (ex. *Cyathus sp.*). There are a couple of types that produce small (1/4 inch or smaller) cup-shaped fruiting bodies on top of mulch, usually in groups. These cups have very small round spore bodies (peridioles) in the bottom, which look like miniature eggs in a bird nest. The round spore bodies are splashed out of the cups during rains, or moved around by animals or man, spreading the spores of the fungus to new food sources of organic matter. This fungus too is harmless, and may be raked over to stop the production and movement of spores.

Artillery Fungus

The artillery fungus, *Sphaerobolus spp*. may become problematic in mulch, due to the production and release of its spores. This fungus produces very small, inconspicuous cup shaped fruiting bodies (about 1/10 of an inch) that contain a dark round spore body (peridiole). The accumulation of water and nutrients in the fruiting body eventually leads to a pressure release of the spore. That spore is shot toward any light source up to a distance of several feet. With windy conditions, spores can travel even further. When



they land on light colored siding, building foundations, or cars, the material can be very unsightly. The spore bodies have a very sticky substance on them which can make removal extremely difficult. Soap and water with a scrub brush can be effective, before the material gets dry. Increased reports of artillery fungus causing problems may be due to use of hardwoods in mulch, excessive rainfall, or irrigation of foundation plantings. Artillery fungus may be more problematic on the north side of buildings where shade maintains more moist conditions. The use of bark mulch or pine bark nuggets rather than hardwood may provide a less favorable substrate than hardwood mulch for artillery fungus. Use of mulch derived from trimming of dead and diseased trees should be avoided. Adding fresh mulch yearly can also suppress the fungus, but plantings should not be mulched too deep. Removal or raking of infested mulch to disturb the growth of the fungus may help. Dr. Don Davis of Penn State University has a web site with more information and answers to frequently asked questions: http://www.personal.psu.edu/faculty/d/d/ddd2. Dr. Davis and his colleagues have done recent research indicating that the use of fresh mushroom compost blended with landscape mulch, at the rate of ≥40%, can be effective in reducing or suppressing the artillery fungus. This can be a good strategy in sites that have had problem with artillery

fungus previously. Addition of the fresh mushroom compost adds organic matter, a rich dark color, and beneficial microbes that may compete with the artillery fungus offering some control. For more information, see the UD Plant Clinic Web site http://ag.udel.edu/plantclinic or the PSU web site or contact your County Extension Office.