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URBAN FORESTRY NEWSLETTER

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BURLS

Burls are abnormal growths on the trunks and branches of trees. The tumor-like growths are caused by a number of factors, some of which are unknown. Some disease organisms, such as the *Phomopsis* fungus, cause a swelling of woody tissues, rather than a sunken canker typical of *Nectria* and other common tree diseases. A grown-over branch collar on the trunk of a tree will leave a bump, but that's not really a burl. A true burl is not caused by a pathogen (as far as we know). The uncontrolled growth of tissue in a burl leaves a hemispherical bump on the tree without typical growth rings and wood structure.

Apparently, little research has been done into the causes of burls. Computer search engines yield all sorts of information for woodworkers, and sources for buying burl wood, but next to nothing about the biology of burls on trees. Burls may serve as infection courts for diseases, but as a rule they do not appear to be harmful to the trees. They certainly should not be removed, since that would expose a large wound that would surely allow decay or diseases into the tree.



A huge burl adorns the trunk of this water oak on the campus of the SC School for the Deaf and Blind.



The burl on this oak in Fort Mill is about the size of half a basketball.

SOMETHING NEW TO WORRY ABOUT...

As Paul Harvey often says, "In case you've run out of things to worry about..." there's a new, exotic insect in the U.S. that threatens our Southern pines. The European Wood Wasp, *Sirex noctilio*, was found in a sample collected as part of the New York State Cooperative Agricultural Pest Survey last February. Another was found in Beltsville, MD in 2002. The pest has invaded and become established in South Africa, Australia, New Zealand, and South America. It could potentially establish anywhere in North America where pine occurs.

The *Sirex* wasp is attracted to stressed trees, much as the Southern Pine Beetle is. Like the Southern Pine Beetle, it carries a fungus into the tree. The larvae feed on the fungus as they tunnel in the wood. In Australia, the European Wood Wasp is managed through improved stand management, and through the introduction of a parasitic nematode into dead and dying trees. These trees then act as trap trees for the wasps.

Symptoms of EWW infestation include discoloration of the crown, resin emanating from oviposition holes, dark fungal stains in the cambium layer, larval galleries packed with fine frass, and 1/4 inch emergence holes. To see photos of the wasp and damage, look at the State of Maine's web site at <http://www.state.me.us/agriculture/pi/currentissues/Sirexnoctilio.htm>.

LOOKING FOR SIGNS OF ROOT AND BUTT ROT

The root crowns, butts, and buttress roots of trees are where we find signs of root and butt rots that are serious defects. In midsummer, the *Ganoderma* fungus puts out its fruiting bodies. These mushroom-like growths are typically mostly white with shades of honey-brown and dark brown. There is not a cap and a stem like a true mushroom, but there is often a stem attached to one side of a rounded, flattened portion. This basidiocarp (fruiting structure, or conk) is often found growing from or near the butt of an infected tree, and may indicate extensive root and butt rot. Trees that have suffered some sort of root damage during the last couple of decades are especially good candidates for rot, and should be checked regularly.

Armillaria tabescens (formerly *Clitocybe*) is another root pathogen that fruits in summer and early fall. It produces clusters of mushrooms, growing from the roots or butt of infected trees (especially oaks). The ringless mushrooms are a tawny brown in color, and are connected at the base. Like *Ganoderma*, this is a potentially serious rot of the root plate of trees.

Finally, in late summer and fall, the fruiting structures of *Inonotus dryadeus* begin to appear at the base of infected trees. The conk looks like a glob of biscuit dough when it first appears, and it can get fairly large. By spring, it has turned a dark brown and often goes unnoticed. The appearance of these conks indicates that extensive butt rot has probably already occurred.

Root and butt rots can cause the catastrophic failure of large trees in a wind or ice event, or even in perfectly calm weather. Property damage and injury are likely when a huge tree falls in a residential area. If a suspicious fungal fruiting body appears near the base of a tree, it is wise to get a professional opinion. A clear photograph is often sufficient for a diagnosis, but an evaluation of the extent of the decay will require a visit to the tree and the use of drills or other instruments by a trained arborist.



This small *Ganoderma* conk was the only sign of problems at the base of a huge oak with extensive butt rot.

The clusters of light brown mushrooms at the base of this young oak indicate infection by *Armillaria* (formerly *Clitocybe*) *tabescens*.



Cream-colored conks appear in the fall at the base of trees infected with *Inonotus dryadeus*. This indicates a serious loss of support due to decay in the root plate.

THE WORMS OF SUMMER

Besides the computer worm that's showing up everywhere, there are other "worms" causing concern lately. By this time of year, populations of certain hardwood defoliators have increased dramatically. The orange-striped, pink-striped, and spiny oakworms, the green-striped mapleworm, the yellow-necked caterpillar, walnut caterpillar, and fall webworm are showing up everywhere. In most cases, no control is needed. On small, newly planted trees, however, these larvae can completely defoliate and control may be warranted. An insecticide can be used, or the infested leaves can be handpicked while the caterpillars are small and still feeding together in broods.

URBAN FORESTRY GRANTS AWARDED

The Urban and Community Forestry Financial Assistance and Partnership Program has awarded 30 grants to communities and organizations in South Carolina. Ten of these grants were awarded in the Piedmont Region. Here is a summary of the projects that were funded:

Spartanburg Technical College received a grant to sponsor a tree pest seminar for the green industry and the general public, and to provide tree care workshops for STC and high school students in the area

Trees Greenville was awarded a grant to establish a non-profit tree advocacy organization in the greater Greenville area, develop a web site, and complete a 5-year strategic plan.

The City of Simpsonville got a grant to hire a consultant to inventory its public trees and prepare an urban tree management plan.

The Ann Springs Close Greenway was funded for an educational project on the Nation Ford Tree Trail, including a permanent audio exhibit, tree labels, and brochures.

The City of Clover received a grant to update an existing tree inventory and management plan, and to train a City Arborist.

The Clemson Extension Service received funding for radio and television programming on tree care.

The Town of South Congaree was awarded a grant for educational tree planting and continuing education in urban forestry.

The Town of Pacolet was funded for a tree inventory and management plan.

The City of Columbia received a grant for continuing education in urban forestry for city employees and tree board members.

The City of Chester got a grant to develop a pocket park on a brownfield area and to develop a tree ordinance