



TREE NEWS

MAY 2024

YOU CAN USE

CONTRIBUTING AUTHORS

EVALUATING TREE HEALTH, STRUCTURE, & CONDITION

Trees are an important part of human environments, providing many benefits both aesthetic and practical. And, just like any other installation, trees require regular evaluation and maintenance to provide maximum benefit.



Dr. Sharon Jean-Philippe
Professor
Urban Forestry



Dr. Natalie Bumgarner
Associate Professor
Residential & Consumer Horticulture



Sam Adams
ISA Certified Arborist
UT Knoxville Facilities Services



Lee Rumble
Extension Agent & ISA Certified Arborist
UT Extension, Knox County



Neal Vercler
Senior Arborist Tech, BCMA #SO-7529B
UT Knoxville Facilities Services



Walker Fowler
UT School of Natural Resources
Content Expert



Callus tissue closing a wound.

Ideally, the tree trunk should be free of wounds or decay. Urban trees are frequently subjected to wounding from vehicles, lawn equipment, or other miscellaneous mechanical damage. Should trunk damage occur, tree response should be monitored. An otherwise healthy tree can recover if the total amount of bark damaged is 25% or less of



Fungal fruiting body on tree trunk.

the bark around the trunk. Older wounds should display healthy callus wood which will develop to seal the injury. If trunk wounds do not exhibit growth of callus wood, show active decay/cavitation, or develop fungal fruiting bodies, tree health and structure may be compromised.

Another way to evaluate general tree health is by examining the canopy. In general, tree canopies should be dense, and leaves should appear dark green. If you can see through the canopy of a large tree or leaves are small or yellow colored, there may be health concerns. Similarly, if your tree is showing fall coloration earlier than others of the same species, there may be stressors. Be sure to look at the branches too! While most trees will have dead and declining branches, a healthy tree will have relatively few. A high number of dead/dying branches or an increase in branches with tip dieback may be indicative of a larger issue!



Girdled root on cherry tree.

Finally, it's good practice to look at trunk flares and visible roots. The portion of the trunk rising above the soil should be visibly tapered. Root origins may be visible. If there is no visible trunk taper, the tree may be planted too deeply. Deeply planted trees may be subject to decay and pests. While you're looking at the roots, take note of any girdling (circling) roots and presence of any fungi. These may point to serious health issues!

Broadly speaking, favorable tree structure refers to a singular dominant leader and strong branch attachment. Ideally, scaffold branches will grow from the trunk at a wide angle. This will allow them to develop a strong branch collar with no included bark.

Remember different species have different forms, and structure assessment is highly species dependent! If you're concerned about overall structure and condition, it's always a good idea to consult an arborist or extension specialist.



Tree planted too deeply with basket materials still attached.

SPONSORED BY:

