

Problem: Tree Cavities



Hosts: Trees

Description: Tree cavities are often the result of an injury followed by decay. Decay can begin by injury to the trunk, the loss of a large limb, topping or improper pruning. The inner dead wood begins to decay but living wood is protected by a barrier zone that compartmentalizes damage. Trees may become hollow over time.

Recommendations: Hollow trees may not be at significant risk of falling as growth on either side of the hollow can help compensate for the loss of inner wood. It is estimated that a tree trunk can lose up to 70% of its wood cross-sectional area and still maintain 2/3 of its strength assuming no opening in the trunk. Openings in the trunk will reduce the strength. Trees that are from a weak-wooded species or those near structures or areas where people congregate should be considered more hazardous. A competent arborist should be hired to determine the safety of the tree.

Hollow trees can be left open or the cavity may be filled. If the hollow is left open, do not drill a hole to allow water to drain as this is an additional wound to the tree.

Do not use concrete as a fill material as it will not move with the trunk resulting in more injury.

Spray insulation foam has been used to prevent water from pooling in the cavity and to keep children and animals out. Though excess water can be removed from the hollow before filling, do not remove punky wood as the barrier zone may be damaged allowing the decay to spread. Other considerations are:

- Wire mesh is often used over the face of the opening to prevent squirrels from tunneling through the foam.
- Use closed cell foam rather than open cell so the foam doesn't absorb water
- If open cell foam is used, paint the foam to prevent water absorption
- Use a template to cover the hole and then fill the cavity through a hole drilled in the template. Remove the template after the foam has hardened. A machete or saw can be used to remove the template and shape the foam.

References:

1. [Tree Hollows and Cavities](#), University of Florida, Landscape Plants
2. [To Foam or Not to Foam](#), Tree Services Magazine, December, 2007

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