

## Thousand Canker Disease – how to identify it and what to do if you have a suspect tree

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Thousand Canker Disease (TCD) was found for the first time within the native range of black walnut in late summer of 2010 in Knox County, TN. Surveys revealed that the disease was also present in Anderson, Blount and Union Counties. The Tennessee Department of Agriculture quarantined these counties to prevent the movement of infested/infected materials from these counties. Counties adjacent to the four counties were designated as buffer counties and are also regulated.

**Symptoms:** Early symptoms associated with this disease include flagging and wilting of foliage.



Later, multiple limbs will die which results in shrinkage of the canopy. Epicormic shoots (water spouts) may become prevalent. Tree death often follows. Trees may have been infested for years before showing symptoms.



**Causes of TCD:** The disease/insect complex begins with the walnut twig beetle. These beetles are very tiny (about the size of a flea). In addition to size,

other characteristic used for identification are 4-6 rows of grooves on the forehead, stiff yellow hairs on the front of the head and a steep slant to the back of the insect's abdomen.



After beetles infest branches, the tree becomes infected with the fungus *Geosmithia morbida*. The fungus is carried on the beetle and colonizes beetle galleries and spreads into the surrounding bark and wood causing small brown/black cankers.



**What to do if you suspect TCD in black walnut:** There are many other things (plant stresses such as drought, native insect pests and pathogens) that cause symptoms similar to TCD. An accurate diagnosis is critical. Contact your county agent, your state division of forestry or your state department of agriculture. If you live outside a quarantined area, your state's regulatory agency (usually the department of agriculture) will have to be involved and can be contacted by you or your county agent.

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