

# Duval County Urban Forestry Fact Sheet

## Why the Dead Branches

by Larry Figart, Urban Forestry Extension Agent



Squirrel Damage on Oak

Folks are calling about dead branches and wondering if their tree is dying. While we have southern pine beetles, lightning, and mushroom root, the dead branches do not mean that our trees are dying.

The first question to ask is whether or not the damage is on a small branch, or a twig. If it is on a small branch look up in the tree and observe the branch very closely. If you see a place on the branch where the bark has been stripped off of the branch (girdling), the damage is probably from squirrels. If you prune out the branch and look at it up close you may even be able to see the teeth marks that the squirrel made. Girdling the branch inhibits its ability to transport water and nutrients from the roots out to the leaves, and results in the death of the branch.

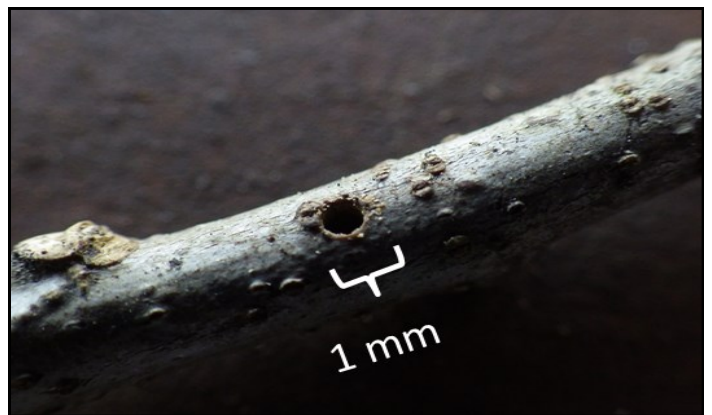
There are several thoughts as to why the squirrel would do this to the tree. Ideas include

everything from utilizing the sugar rich phloem to pregnant squirrels chewing to ease their pain. Recently a research paper in the Journal of Forest Ecology and Management stated that the squirrels use the calcium in the phloem to offset a calcium deficiency. Further research will be needed to see if and how we can add calcium to their diet so they will stop damaging trees. If the damage you are noticing consists of several leaves on a twig dying off (also known as flagging) then the culprit is more than likely the Black Twig Borer. The female black twig borer drills into the small twig in order to create a gallery where her eggs are deposited. She also cultivates a fungus in the gallery that the young larvae will use as food.

If you carefully inspect a flagging branch you can usually find the hole that the black twig borer created in the twig. It is very tiny (less than a millimeter). If you



Squirrel teeth marks on branch



Black Twig Borer entry hole



Black Twig Borer twig "flagging"

snap the twig at the hole you will see the gallery in the center of the twig. Sometimes you even see a beetle in the gallery. There is no treatment for this insect other than pruning and destroying infected twigs. The good news is that this pest is not going to kill your tree. Trees can easily rebound from the minor damage this insect causes.

For more information on the black twig girdler, go to <https://edis.ifas.ufl.edu/in577>.