Granulate Ambrosia Beetle

*Xylosandrus crassiusculus*

**Description**

Granulate ambrosia beetle, previously referred to as ‘Asian’ ambrosia beetle, was introduced to the U.S. in South Carolina in the early 1970’s and has spread to many states in the eastern U.S., the Midwest, and to the West Coast. These beetles are rusty brown in color and are very tiny, around the size of the date on a penny. Females measure around 3 mm and males are smaller, measuring around 1.5 mm.

**Life Cycle**

The life cycle begins when females bore into small branches and trunks of young trees. Females excavate tunnels and produce a brood. During this process the females also introduce a fungus, which the adults and larvae feed on. Eggs, larvae and pupae are found together rather than individual tunnels or chambers. Larvae are white, legless and “C” shaped. Females stay with their brood until maturity. It takes about 55 days to complete one generation in middle Tennessee. There are two generations in the South. The first generation begins with the flight of adult beetles from surrounding woods into the nursery. Flight usually begins in February and peaks in April and June. The offspring of the first generation emerge in June to August.

**Monitoring**

The easiest way to spot granulate ambrosia beetle infestation is the toothpick-like strands of boring dust protruding from small holes in the tree bark. Another visible symptom is wilted foliage. Trees are most susceptible to these pests right before they come out of winter dormancy, usually sometime in March. Ethanol-bait traps are a good way to monitor when beetles become active.
A tell-tale sign of granulate ambrosia beetle infestation is toothpick-like frass tubes sticking out of the trunk. The Ambrosia fungus clogs the xylem vessels in the tree’s vascular system. Symptoms include wilting, branch dieback, and reduced growth. Young trees often die, but established trees can sometimes survive when treated.

**CULTURAL CONTROL**

The granulate ambrosia beetle attacks healthy trees as well as stressed and damaged trees. There is some evidence that stressed trees are preferred. Growers are often advised to retain infested trees in the nursery for 3–4 weeks to act as a magnet for flying beetles. Afterward, all attacked trees should be destroyed. Traps with ultra high release ethanol lures can be used to detect flight of granulate ambrosia beetle in the spring. Insecticide sprays timed to first flight are effective at preventing infestations.

**CHEMICAL CONTROL**

Please refer to [http://eppserver.ag.utk.edu/redbook/sections/trees_flowers.htm](http://eppserver.ag.utk.edu/redbook/sections/trees_flowers.htm) for the most up to date recommendations.

**Resources**


