

Georgia News

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Pine Bark Beetle

All pine bark beetles common in Georgia can attack and kill living trees. Bark beetle populations and their subsequent damage varies greatly between years and by location within any given year. In addition to phloem damage caused by larval and adult feeding, some bark beetle species carry and introduce a blue stain fungus into a tree that colonizes sapwood and disrupts water flow to the tree crown, hastening tree death.



Blue Stain Fungi on Cross-Section of Infected Pine Trunk

Beetle infestations often begin on damaged or severely stressed trees. Odors emitted by trees struck by lightning, damaged by storms, mechanically injured by construction or harvesting equipment, or severely stressed by heavy pruning attract bark beetles from other places. Pines under any kind of stress are susceptible to a attack by bark beetles, particularly under beetle outbreak conditions.

Colonizing bark beetles attack living trees and (depending on species) may emit specialized chemicals called pheromones. These pheromones combine with volatiles released from the host tree to "call" in large numbers of beetles that "mass attack" a tree. Once on the tree, beetles bore through the bark to the cambium, mate and begin to construct galleries.

Healthy trees respond to beetle attacks by exuding copious amounts of pitch or sap. This defensive response can sometimes "pitch-out" the attacking beetles as shown on the right



Life Cycle of Pine Bark Beetles; the Southern Pine Beetle Life Cycle Shown

What can you do?

1. **Encourage** vigorous tree growth. Susceptibility to beetle attack increases with stand age and slow diameter growth
2. **Determine and begin** appropriate management action(s) immediately
3. A **Preventive Chemical** treatment can be used when the cost of the treatment is more than offset by the potential losses that could occur should beetles attack and kill the tree(s). Preventive chemical applications protect trees from beetle attack for periods of several months up to a year if properly applied