

## **Bark Beetle in White Pines**

-Submitted by: Mike Kay  
Forester, Maryland Forest Service

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Pine bark beetles are attacking a number of pines around Frederick County this summer (2007). Pines under attack typically display yellowing of needles, followed by browning, then the needles fall off. On close inspection one will observe small holes in the main stem or under major branch whorls, surrounded by a whitish or red material know as a “pitch pocket.” If the attack is severe enough the tree will be killed by the beetles.

Bark beetle is a generic term for a number of insects that feed on the inner bark of pine trees. In most cases the adult will lay eggs under the bark of the host tree in the fall or early spring. The eggs will hatch and the young “larvae” will feed on the inner bark of the tree oftentimes creating elaborate “galleries” underneath the bark. Intense feeding activity will girdle all or parts of the tree which will cause sections of the tree to wilt and die. It is more difficult to control bark beetles once they are inside a pine tree. Oftentimes your only option is to cut the infested tree down and remove it from the area. In most cases bark beetles are attracted to pine trees in a weakened state.

The best way to prevent bark beetle attack is to keep your pine trees healthy. This can be accomplished by limiting disturbances around the trees that would injure roots or compact the soil, watering landscaped trees during times of severe drought, tree care practices performed by a qualified professional, and judicious thinning of surplus pine trees in dense pine groves. If you have infected trees or trees at risk you can contact an arborist, forester, entomologist, extension specialist or other expert to obtain advice. Prevention is your best strategy for bark beetles so take a look at your trees and see if they look healthy or not. If they are not healthy you will need to take the steps necessary to coax them back to a vigorous condition.

It is relatively easy to determine how healthy a pine tree is by observing the “live crown ratio” of the tree which is a measure of the total height of green growth along the tree to the total height of the tree. These pine trees (above) have living green needles along 20% of the tree so the live crown ratio is 20%. Most healthy pine trees have a live crown ratio of 40% or larger. So these trees are unhealthy. Selectively thinning out a few trees will allow the remaining trees to expand their crown, regain their vigor, and continue their growth. If you have valuable pines in a landscaped situation you should contact a trained arborist who can prescribe and conduct methods to keep your trees healthy or control an infestation. A healthy pine tree emits chemicals that act as a repellent to bark beetles whereas a weak individual sends out signals that attract bark beetles to the tree.

Alan Lowe a resident of Emmitsburg has been thinning out his 8.0 acre pine stand by cutting various trees and either letting them stand as a snag or felling them if they are near the trail. The tree marked in blue is scheduled for cutting.

