

Q & A

Pine Beetles

Introduction: Pine trees growing in urban areas are valued for their beauty and for the environmental services they provide. Unfortunately, pines growing in urban conditions are often at increased risk of attack by pine bark beetles. These attacks are normally a result of harsh environmental conditions such as long-term drought, overcrowding, construction damage, and lightning strikes. Under the right conditions, these insects can attack and kill your pines within weeks during the summer months. The following information can help protect urban pines from these devastating insects.

Identification: People often don't realize they have a beetle problem until the needles of their trees turn red. Determining the type of pine beetle involved is crucial in minimizing tree loss. The three kinds of pine bark beetles found in Georgia are the southern pine beetle, the Ips beetle and the black turpentine beetle. **The following description is for the southern pine beetle.**

SOUTHERN PINE BEETLE (SPB) - The most destructive pine beetle, these insects destroy countless urban pine trees during epidemic outbreaks. Loblolly, Virginia and shortleaf pine species are the preferred hosts.

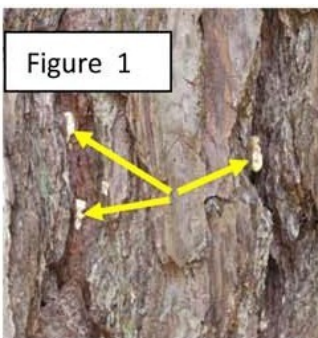


Figure 1

Pitch Tubes - Formed as resin runs out the entrance holes, SPB pitch tubes are normally about the size of a number 2 pencil eraser and are white in color. They are usually found

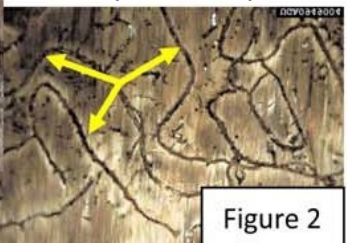


Figure 2

in the crevices of the bark at any height on the bole of the tree (Figure 1).



Figure 3

Galleries - These paths are made by the beetles as they feed and lay

eggs between the bark and the wood. The galleries are actually grooved into the inner bark. Bark removal is difficult on freshly attacked trees but will aid with identification, since galleries created by SPB have a winding "S" pattern

(Figure 2) and are packed with frass (excrement and feeding debris.)

The Beetle - Southern pine beetles spend most of their time between the wood and the bark of the tree, making them difficult to find. Peeling or shaving the bark off to look for



galleries may also reveal a beetle. They are very small, approximately 1/8-inch long, and are reddish-brown to black in color (Figure 3). With a magnifying lens, look at the rear of the beetle to see if spines are present. As shown in Figure 3, SPB has no spines.



Pine Beetle Prevention:

- Keep pines in a vigorous, healthy condition by mulching, watering, and removing over-crowded trees.
- Avoid damaging the bole of the tree or the roots. Damaging the tree causes stress and can produce the smell of resin, which is highly attractive to pine beetles in the area.

- Avoid pruning pines during the spring or summer. Do not allow tree crews to use spikes to climb pines for pruning since the resulting wounds produce the smell of resin and could attract pine beetles to your trees.
- Remove lightning-struck or severely damaged pine trees from your landscape promptly.
- Spray trees with an insecticide as directed below when beetles are active in your area.

Pine Beetle Control:

Trees infested with SPB cannot be saved. In addition to the damage caused while feeding, these insects also introduce blue stain fungus into the tree, which clogs water conductive tissue and greatly contributes to mortality. If you have trees infested with SPB, immediately remove these trees and spray the remaining non-infested trees. If the infested trees cannot be removed immediately, spray them either standing or cut with a recommended insecticide to kill any emerging adults.

Insecticide Recommendations: The insecticides Onyx™ and Bifen XTS™ can be used to prevent tree infestations and to control beetles emerging from infested trees. Preventative treatments should be made when pine bark beetles are on or near your property, with the initial application made when the dogwoods in the area begin to bloom. For prevention of SPB beetles, the insecticide should be applied directly to the main trunk of the non-infested tree from its base to at least halfway into the live crown. University trials showed one application of Onyx™, when properly mixed at the highest labeled rate, prevented pine beetle attacks for six months. If you are using the spray to control emerging beetles from infested trees, the entire tree should be sprayed. A licensed, insured professional should be hired to make applications high into the tree due to the specialized equipment needed (high pressure sprayer) and the risk associated with chemical drift. Care should be exercised when applying these chemicals near swimming pools, bird baths and other areas. Spraying downed trees or spraying to prevent/control black turpentine beetles does not pose as much risk to the applicator and can be done with a simple garden sprayer. Onyx™ and Bifen XTS™ contain the

same active ingredient (bifenthrin) at almost identical concentrations, and are labeled for application on ornamental trees but are not registered for use in rural forestry settings. These products should be mixed at a rate of 1 to 2 pints per 100 gallons or 1/3 ounce per gallon of water. Normally 1 to 4 gallons of spray is used per tree. Consumers should carefully read and follow label instructions for mixing application and disposal of this chemical as well as all safety requirements. Onyx™ information can be found at <http://www.fmcprosolutions.com/ToolKit/LabelsMSDS/tabid/1193/Default.aspx>. Bifen XTS™ information can be found at <http://www.controlsolutionsinc.com/product.asp?id=136>. These insecticides range in price from \$110-\$160 per quart for Onyx™ and from \$40-\$60 per quart for Bifen XTS™ (December 2008 prices).

Source: [Georgia Forestry Commission](#)

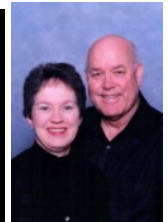
Quote Of The Month

"It's your attitude and not your aptitude that determines your altitude."

Zig Ziglar

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