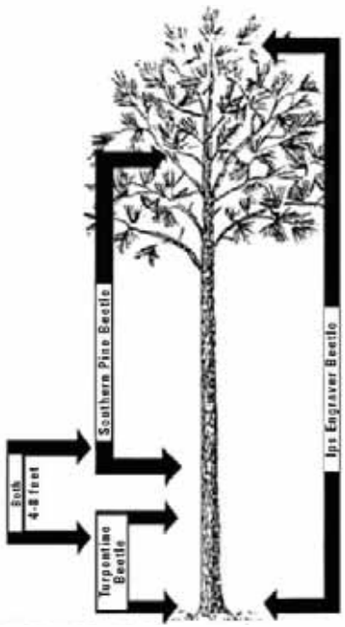
Prevention and Control

Generally, bark beetles do not attack small or vigorously growing pines. Attacks occur when trees have been damaged or are weakened by overcrowding, drought, saturated soils, or disease.

It is important that pine species best suited to the area are planted and that recommended spacing intervals are followed. Thin stands to maintain vigorous and healthy growing conditions. Promptly salvage or destroy potential breeding material, such as pines that are severely damaged by wind, lightning, fire, disease, or insects. Chemical control of Ips and SPB infestations under forest conditions is seldom warranted. Newly attacked trees can often be saved from black turpentine beetles by spraying the base to the highest pitch tube on the trunk with an approved insecticide, such as Onyx™ or Bifen XTS™, according to label directions.

Forest managers or landowners faced with southern pine beetle infestations can choose from four direct control options: (1) removal and utilization or sale of infested trees (salvage), (2) cut-and-leave (3) fell and spray with insecticides, and (4) fell, pile and burn infested trees.



Zones of attack by pine beetles.

A Southern Pine Beetle Prevention and Restoration Cost-share Program is available to landowners seeking to reduce their risk of southern pine beetles or to restore stands killed by southern pine beetles. For further assistance or information about pine beetles or the Southern Pine Beetle Cost-share Program, contact your local Georgia Forestry Commission Forester or call 1-800-GA TREES.

GEORGIA FORESTRY COMMISSION

P. O. Box 819
Macon, GA 31202
1-800-GA-TREES
GaTrees.org

References

ANR-0422 Management of Pine Bark Beetles Attacking Landscape Pines by Barry Freeman.

Insects and Diseases of Trees in the South. 1989. USDA Forest Service - Forest Health Protection.

forestryimages.org

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GEORGIA FORESTRY COMMISSION

Pine Bark Beetles

Introduction

Pine bark beetles found in Georgia include the southern pine beetle (SPB), the black turpentine beetle (BTB), and three species of ips engraver beetles (IPS). The southern pine beetle is the most destructive and can kill large numbers of trees over many acres in a short period. Black turpentine beetles and ips beetles are probably seen by landowners most often year in and year out. To avoid or minimize bark beetle damage, it is important to have a basic knowledge of the insect and to be capable of identifying the problem.

Identification

Although there is a size difference between beetles, the three ips beetles are similar in appearance, and are easily distinguished from other bark beetles. The rear end of their abdomens are scooped out and spined (four to six spines on each side). The southern pine beetle and black turpentine beetle have a more rounded abdomen. The black turpentine beetle is the larger of the two, at about 1/4 inch long. The southern pine beetle is about 1/8 inch long. All of the pine bark beetles are roughly cylindrical and are dark brown to black in color.

Location of Attack and Pitch Tubes

One of the quickest methods of detecting and identifying bark beetle attacks is to note the point of entry and the type of pitch tubes created. Pitch tubes are streams of resin that ooze out of the tree around the entrance hole of a bark beetle.

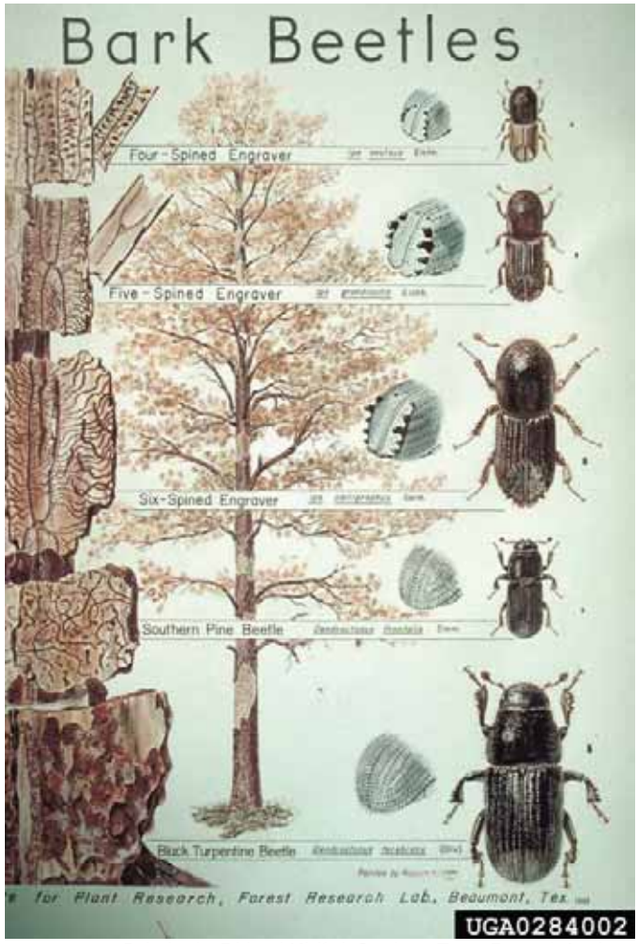
The black turpentine beetle usually attacks the lower part of a tree from ground level up to eight or ten feet. The pitch tubes are an inch or more in diameter and often appear purplish.

Galleries

Southern pine beetle and ips beetle attacks usually start well up the tree and then spread up and down the main bole. The pitch tubes of both are dime-sized and white to yellow in color. Though generally a little smaller, these pitch tubes look like popped popcorn in color and shape. Binoculars may be needed in detecting ips and southern pine beetle pitch tubes, especially for early attacks well up the tree. Severely stressed trees may not produce pitch tubes, in which case, the only signs of early attack will be the entrance holes and brown boring dust found on the bark and around the base of the tree.

Southern pine beetle galleries are curved or S-shaped and are normally packed with a brown frass and boring dust produced by the beetles. Black turpentine beetle galleries are D- or fan-shaped galleries. Ips egg galleries are roughly Y- or H-shaped and radiate out from a central camber.

Cover photos - Top photo: high risk stand with too many trees; bottom photo: low risk stand with proper tree spacing. Photos from barkbeetles.org.



Painting by Richard Kleifoth Southern Forest Research Institute

Ips pitch tube

Southern Pine pitch tube. Photo by Erich G. Vallery

Black Turpentine pitch tube. Photo by North Carolina State University Archives.

SPB galleries. Photo by Mark Raines, Georgia Forestry Commission.

BTB galleries. Photo by Ronald F. Billings, Texas Forest Service.

Ips galleries. Photo by Jerald E. Dewey, USDA Forest Service.

Ips galleries. Photo by USDA Forest Service Archives.