

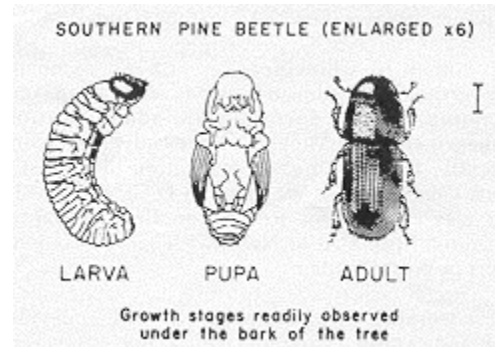
[From Winter 1994-95]

Chomp! Chomp! Chomp!

Busy little beetles on Chincoteague Refuge have been hard at work this summer doing what they do best, eating the inner bark of pine trees. These little beetles have an insatiable drive in life to reproduce and eat more trees! They are approximately the size of the exclamation point at the end of the previous sentence and can kill a mature loblolly pine in a matter of days. This little beetle has reared its ugly little head once again at Chincoteague NWR and is up to no good.

The southern pine beetle (SPB) is the most destructive insect pest of pine forests in the southeastern United States. This little pest destroyed an estimated 3 billion board feet of timber in a 12-state area from 1960 to 1978 and is presently considered at epidemic proportions in the pine forests of eastern Virginia. This little beetle has had a devastating economic impact on the timber industry but leaves behind a trail of standing dead pines which can benefit wildlife.

The dead trees attract other insects which provide food for woodpeckers and other insectivorous birds. Woodpeckers create cavities in the trees which provide homes for many other species. The SPB change the habitat by opening the canopy allowing more sunlight to penetrate to the forest floor. This increases the understory by allowing other plants to thrive.



The SPB attack pine trees weakened by flood, drought, disease or lightning. They attack about mid-tree and release a pheromone attracting other SBP. As more and more beetles congregate, the pheromone becomes stronger which causes a frenzied attack. The SPB mate before boring into the inner bark of the tree and begin creating S-shaped channels (egg galleries) under the bark in which to deposit their eggs. So many SPB attack the tree at once that the Galleries run together, girdling the tree. The tree tries to fend off the attack by exuding pitch at the points of entry, creating what are called pitch tubes. They are the first signs of SPB attack and, once hardened, they resemble whitish yellow straws or popcorn emanating from the tree. The complete life cycle of the SPB is very short in favorable conditions, which results in several attacks on the same tree. The tree becomes completely infested and dies. The tree dies so quickly the needles are still green and begin to fall out. Lastly, the upper canopy turns brown and the bark falls off. Once a tree is fully occupied, the SPB attack other nearby healthy trees, sometimes killing them in vast numbers.

This year the Wildlife Loop and the Woodland Trail areas of the refuge have been attacked by the SPB. Valiant efforts by refuge maintenance staff to contain the SPB by felling and burning infected trees were unsuccessful. The beetles spread faster than the maintenance crew could keep up with. So an outside contractor with a hydro-ax was hired. This large piece of heavy equipment efficiently cuts and drops trees. The hydro-ax was used to

remove infected trees in three separate areas in the Woodland Trail region, totaling approximately 10 acres. The contractor removed over 100 trees in one day, accomplishing what would take several men weeks to accomplish.

Most recent aerial and ground surveys revealed that the SPB hasn't been totally contained and has escaped some of the cut areas. It remains active at temperatures above 50 degrees F, so on seasonably warm fall and winter days the SPB march onward. This is alarming to refuge management because the Woodland Trail is the refuge's most productive Delmarva fox squirrel area. All efforts will be directed to this area until the outbreak can be contained. Trees which have been cut and piled will be burned this winter. The Wildlife Loop has been so significantly infected that the infestation will be allowed to run its natural course.

Once the SPB has been contained on the refuge, the areas will be rehabilitated by planting hardwoods such as water oak and southern red oak. Loblolly pine will be allowed to regenerate naturally within the SPB cut areas. This mixture of hardwood and pine species is less susceptible to SPB and is more favorable for Delmarva Fox squirrels. A positive aspect of this situation is that the SPB has thinned the overstocked monotypic stands of pine on the refuge which will create openings in the wooded areas. These openings will create more diversity which will increase wildlife use in them. So when you're out there visiting these areas, don't let the clear cuts get you down. Envision how they will positively affect the future of CNWR's woodlands!

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