



Redheaded Pine Sawfly (*Neodiprion lecontei* (Fitch))

Several species of pine sawflies occur in the southern United States. One of the most important species affecting young pine trees is the redheaded pine sawfly (Fig. 1).



Figure 1: Redheaded Pine Sawfly

The insect's common name is derived from the color of the larval head capsule. The body is yellowish with black spots. This insect rarely attacks trees greater than 12 feet tall. The southern yellow pines loblolly, shortleaf, longleaf along with others can serve as hosts. Damage (Figures 2 and 3), loss of growth and possible mortality, is caused by the larvae, which feed in colonies of up to a 100 or more insects on a single tree.

It is important to know that mortality is rare. Southern



Figure 2: Close-up of damage to a southern pine seedling

yellow pines have the capacity to with stand single and repeated defoliations because of their growth characteristics and vigor. A pine tree without needles is not necessarily a dead tree. Time of year and frequency of complete defoliation are key issues. For example trees completely defoliated in the spring will have had several subsequent flushes by the fall and one may not detect the trees had ever been defoliated earlier in the year.

Older foliage is consumed first, with new needles being fed upon as they are formed. Feeding usually occurs from the tips of the needles and top down (Fig. 2). If the tree is completely defoliated (Fig. 3) the larvae will crawl down the tree and up the nearest host

to the top and begin feeding again.

The cycle continues until feeding is complete. More than one larva can be seen feeding on a single needle but as the larvae get bigger then a single larva can be seen feeding on a single needle. In severe outbreaks, larvae may also feed on the succulent bark of young shoots. When feeding is complete the larvae move to the duff and soil where they pupate in small cocoons. It is in these cocoons that they overwinter to emerge in the spring where the adults lay their eggs in the needles of their hosts. It is from this egg laying behavior that the insect gets its name sawfly. They deposit each egg in a small pocket sawed into the edge of the needle by the adult female.



Figure 3: A completely defoliated seedling



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There are two to three generations per year with most infestations being detected in the fall of the year. Outbreaks are infrequent, but may persist for more than a year when they do occur. Numerous parasites and predators feed on this species and, in combination with adverse weather and viral infections, cause populations to collapse within a year or two. In addition to the natural regulating mechanisms a polyhedrosis virus may be used to control outbreaks of the redheaded pine sawfly as well as chemical insecticides but are rarely used.

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