



TEXAS A&M FOREST SERVICE

Forest Health: Pine Sawfly

The redheaded pine sawfly, (*Neodiprion lecontei*) and blackheaded pine sawfly, (*Neodiprion excitans*) are the most common sawflies in Texas. They are primarily found defoliating loblolly and shortleaf pine, but can affect longleaf and Virginia pine. Usually they attack single or small groups of trees; however, if conditions are favorable, they may infest and defoliate thousands of acres. Repeated attacks for two or more years may cause mortality, but the main loss is tree growth.



Identification:

Adults are small heavy-bodied four-winged “flies” (actually a wasp) that are seldom seen. Larvae resemble caterpillars. Mature redheaded pine sawfly larvae are about 1” long, yellowish-green in color, have six rows of conspicuous black spots, a red head, and prefer seedlings less than 5 years old. Mature blackheaded pine sawfly larvae are also about 1” long, light greenish in color, but usually have four distinct stripes along the top (this is variable), a shiny black head, and prefer pulpwood and sawtimber-sized trees.



Signs of Attack:

Sawfly attacks usually go unnoticed until needles are mostly consumed, or until larvae are almost fully developed and large numbers are clustered in groups. Reddish straw-like

remains of partially consumed needles indicate feeding by young larvae. Also, large amounts of fecal pellets beneath the tree (sounds like a soft rain when blackheaded pine sawfly larvae are feeding), and cocoons in the humus, soil or on the needles are signs of a sawfly infestation.

Life Cycle:

In spring, females lay eggs in needles of host pines. Individual slits are cut for each egg with a saw-like ovipositor (thus the name sawfly) and from 10 to 30 eggs are laid in each needle. Larvae feed gregariously on the needles and mature in 3 to 6 weeks. They drop or crawl to the ground and spin distinctly-shaped brown or tan silken cocoons in the humus or soil. Cocoons may also occur on needles, limbs, and trunk of the tree, particularly if the ground is flooded. Usually not all of the larvae pupate immediately, but may remain in the cocoon (prepupa) for one to three years. As many as three or four generations may develop each year, with large population buildups and severe defoliation usually occurring from late summer into fall.

Control:

Chemical controls are not recommended or necessary in forests since heavy defoliation and large outbreaks occur only sporadically. Even though hundreds of acres of pines may be defoliated one year, very few larvae or defoliated trees are observed the next because of natural controls, e.g., weather, predators, parasites, and disease organisms. If populations are not reduced by the second year, insecticides may be necessary. For ornamental pines, hand-picking or spraying may easily control the insects. Large trees or areas may require special spray equipment.