



# TEXAS A&M FOREST SERVICE

## *Forest Health:* Nantucket Pine Tip Moth

The Nantucket pine tip moth (*Rhyacionia frustrana*) can cause severe damage to buds and shoots of pine seedlings and small saplings. Vigorous seedlings may grow fast enough to overcome effects of this insect, but severe and repeated setbacks may result in stunted, deformed trees of little value, especially on poor sites. Tree mortality is rare and tip moth attacks are seldom a concern once trees reach a height of 10-12 feet. Tip moths create a significant problem for Christmas tree growers in eastern Texas. They are known to damage loblolly, shortleaf and Virginia pine.

### **Identification:**

The ¼" long adult moths are mixed gray and shiny copper colored and have a wingspan of ½". They are active from February until late fall, but not often seen unless disturbed. White to orange eggs are laid on needles and shoots. Larvae are a yellow-orange color, worm-like, up to 3/8" long, and have a dark-colored head. They feed inside buds and new shoots, later changing into brown pupae (no cocoon) about ¼" long.

### **Signs of Attack:**

The most noticeable and usually the first sign of attack is browning and dying of infested shoots. Close examination of these shoots will reveal an accumulation of resin and fine webbing. When shoots or buds are broken open, they are hollow; and larvae, pupae or empty pupal cases may be observed, depending on time of year.

### **Life Cycle:**

Tip moths overwinter as pupae and emerge as adults between January and March (depending on temperature). Adult moths mate and lay eggs, with eggs hatching in 1-2

weeks, but cool temperatures will prolong this process. Young larvae feed on individual needles for a short time before boring into a new bud. Larvae continue to feed in the developing shoots until mature and then pupate within the hollow terminal or shoot. Four or five generations are completed each year. Most shoot damage occurs during August and September in Texas. Shoots in the upper whorls of the tree are preferred for attack.

### **Control:**

Control is usually impractical for forest trees; however, severe and repeated infestations for two or more years may require chemical controls. Protect high value trees in seed orchards, genetic studies, and Christmas tree plantations. Homeowners can readily prevent and control infestations with recommended insecticide applications. If chemical controls are used (acephate, permethrin, tebufenozide, and others), the most important consideration is timing of the application. Insecticide should be applied about a week after eggs hatch to be most effective. Control of the first generation will usually permit trees to make good initial growth and lessen damage from attack the rest of the year. Optimal spray timing for many areas of East Texas can be determined by accessing the following link [http://www.srs.fs.usda.gov/pubs/rp/rp\\_srs032.pdf](http://www.srs.fs.usda.gov/pubs/rp/rp_srs032.pdf)

