



Eastern pine shoot borer

Eucosma gloriola

Order Lepidoptera, Family Tortricidae; leaf rollers
Native pest

Host plants: Austrian, jack, red, Scotch, Swiss mountain and white pines

Description: Adults have a wingspan of 14–15 mm. They are coppery red with two shining gray bands on the forewings. Larvae can reach 13 mm in length and are off-white with dark heads.

Life history: Adult moths begin to fly in May and lay eggs that hatch later in the month. Larvae bore into the shoot where they remain until mid July when they leave to pupate in the soil. There is one generation a year.

Overwintering: Pupae in the soil.

Damage symptoms: While larvae are feeding, tree shoots start to flag. Smaller infested shoots look reddish. Old damaged shoots are filled with frass and bend 20 cm from the tip. An oval exit hole is diagnostic. Trees that are repeatedly infested become bushy.

Monitoring: Look for damage from old infestations in the fall and winter (bent, brown shoots with an oval exit hole). Look for exit holes during June and July, when larvae bore out of the shoot and fall to the ground to pupate. Break open damaged shoots to be sure a shoot borer is causing the damage.

Physical control: Prune borer-infested shoots.

Chemical control: Spray with bifenthrin in May to control larvae before they bore into shoots.

Biological control: This borer is parasitized by 5 species of parasitic wasps, the most effective being *Glypta* sp. (Ichneumonidae), which parasitized 56–61% of larvae in one population (Van Driesche et al. 1996).

Plant mortality risk: Low

Biorational pesticides: None

Conventional pesticides: chlorpyrifos (nursery only), imidacloprid, permethrin



Tree shoot damage on Scotch pine in midsummer caused by the Eastern pine shoot borer. (81)

Photo: Steve Katovich, USDA Forest Service



Broken shoots on jack pine in late summer caused by the Eastern pine shoot borer. (82)

Photo: Steve Katovich, USDA Forest Service