



Yellowheaded spruce sawfly

Pikonema alaskensis

Order Hymenoptera, Family Tenthredinidae;
common sawflies
Native pest

Host plants: White, black, and blue spruce

Description: Adult sawflies are wasp-like, small, (8–10 mm) and reddish brown. Mature larvae are approximately 18 mm long and have a yellow to reddish-brown head with an olive green body. There are six gray-green stripes running down the back and sides.

Life history: Adult females deposit eggs in the current year's needles. Larvae hatch and begin feeding in late May to mid June. They feed from four to six weeks and complete development by late July. They generally feed in large groups. There are two or more generations a year.

Overwintering: Prepupae in soil.

Damage symptoms: Sawflies are defoliators and consume host needles. Larvae prefer new needles, but older larvae will eat previous season's needles when new foliage is scarce. Complete defoliation can kill a tree. Three or four years of consecutive partial defoliation can kill a tree.

Monitoring: Look for damage and groups of larvae from late May through mid July.

Physical control: Remove small populations that are accessible

Chemical control: Insecticidal soap is most effective against young larvae. Use a residual insecticide against large numbers of older larvae. If larvae are nearly full-grown, treatment should not be undertaken. Chemicals will not be as effective, and most of the damage that plants sustain will already have been inflicted.

Biological control: There are 32 recorded hymenopteran parasitoids and 9 dipteran parasitoids. The most common is a tachinid fly *Bessa harveyi* (Valovage and Kulman 1983). In Minnesota, egg parasitism is minimal. Larvae suffer only 2–10% mortality from parasitism, while pupae suffer 67% predation by insects and small mammals (Houseweart and Kulman 1976).

Plant mortality risk: Low

Biorational pesticides: azadirachtin, horticultural oil, insecticidal soap, pyrethrins, spinosad

Conventional pesticides: acephate, bifenthrin, carbaryl, chlorpyrifos (nursery only), cyfluthrin, deltamethrin, fluralinate, imidacloprid, lambda-cyhalothrin, malathion, permethrin



Defoliation damage on white spruce caused by yellowheaded spruce sawfly. (276)
Photo: Steve Katovich, USDA Forest Service



Yellowheaded spruce sawfly larva. (277)
Photo: Steve Katovich, USDA Forest Service