



Introduced pine sawfly

Diprion similis

Order Hymenoptera, Family Diprionidae; conifer sawflies
Introduced pest

Host plants: White pine is preferred, but Scotch, jack, and red pine are also susceptible.

Description: Adult sawflies are stout, 4–7 mm long. Mature larvae have a black head, a yellow-green body with a black double stripe down the back, and many yellow and black spots. They are 23–25 mm long with three pairs of thoracic legs and eight pairs of abdominal prolegs.

Life history: First generation larvae begin feeding from late May/early June to early July. Second generation larvae feed from late July through early September. There are two generations a year. Larvae regurgitate a resinous material when disturbed.

Overwintering: Prepupae in the soil.

Damage symptoms: First generation larvae eat the previous year's needles. Second generation larvae feed on both new and old needles. Young larvae feed in groups and eat only the outer, tender parts of the needle, while older larvae feed singly and eat entire needles and bark, if foliage is absent. Defoliation is usually most severe in the upper half of trees, but entire trees can be defoliated. Complete defoliation can cause branch dieback.

Monitoring: Look for young larvae feeding in groups from late May and again in late July.

Physical control: In light infestations larvae can be removed by pruning branches with larvae.

Chemical control: Spray foliage when larvae are small, less than 1/2 full grown size, and before damage is extensive. Limit treatments to areas of plants where sawflies are feeding, unless sawflies are widespread throughout the plant.

Biological control: A parasitoid from native diprionid sawflies can attack this introduced species and other species have been introduced. Common species are *Exenterus amictorius*, *Monodontomerus dentipes*, and *Delomerista japonica*. In some populations, *E. amictorius* accounted for 44% mortality of larvae (Van Driesche et al. 1996).

Plant mortality risk: Medium

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

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



Defoliation damage on white pine caused by introduced pine sawfly. (154)

Photo: John H. Ghent, USDA Forest Service, The Bugwood Network, University of Georgia



Introduced pine sawfly adult male (251)

Photo: John H. Ghent, USDA Forest Service, The Bugwood Network, University of Georgia



Introduced pine sawfly adult female. (154)

Photo: John H. Ghent, USDA Forest Service, The Bugwood Network, University of Georgia



Introduced Pine Sawfly (continued)



Introduced pine sawfly female (left) and male (right); note differences in antennae. (154)
Photo: John H. Ghent, USDA Forest Service, The Bugwood Network, University of Georgia



Introduced pine sawfly eggs are deposited in needle slits. (155)
Photo: John H. Ghent, USDA Forest Service, The Bugwood Network, University of Georgia



Introduced pine sawfly larva. (154)
Photo: Steve Katovich, USDA Forest Service



Introduced pine sawfly cocoon. (155)
Photo: Steve Katovich, USDA Forest Service