

YELLOW-HEADED SPRUCE SAWFLY

(PIKONEMA ALASKENSIS)



What is SPRUCE SAWFLY?

Yellow-Headed Spruce Sawfly is a small (about 10 mm long) yellow to reddish-brown wasp-like insect native to Alberta. This adult sawfly emerges in Late-May to Mid-June (about when fresh buds are growing on spruce trees) At the branch tips (where the newest needles are located) the female cuts a slit into each needle base and lays a single egg in each.

These eggs will hatch within 2 weeks. The larvae are tiny to begin with, often only 3-4 mm long. Mature larvae are 16-20 mm long and have yellowish-brown heads and shiny olive green bodies with paired greyish-green lines the length of the body.

The emerging larvae eat the soft newest needles first (at the branch tips and at the top of the tree) then as the larvae get bigger, they move in on the needles from previous years (further up the branch, and the lower branches). If the larvae end up eating all the needles, they will begin eating the cortical tissue found on the branch tips.

After the larvae complete their development in mid to late summer they will drop to the ground and dig into the soil surface. There they spin a cocoon to wait out the winter. If conditions are unfavorable the larvae will remain cocooned for years before pupating into an adult. The sawfly completes one generation per year.

Signs & symptoms of SPRUCE SAWFLY:

Unfortunately, damage to spruce trees is generally not noticed by homeowners until later when the larvae are quite large and have already started eating entire needles. These insects can be difficult to spot among the needles so careful, timely inspections are required

The yellow-headed spruce sawfly prefers young, open grown trees, resulting in extensive damage to spruce used in plantations and shelterbelts on the Prairies.

Larvae of the yellow-headed spruce sawfly look like hairless green caterpillars with a series of darker stripes running along the body. They have a distinctive dark yellowish head.

They initially feed on the new needles, leaving only short brown stubs. Once the new growth is devoured, the larvae move back on the branch and feed on the older needles.

First damage to be noticed is usually at the top of the tree where the needles are all newer. The most severe damage is found at the bottom of the tree. By July, infested trees appear ragged and yellowish-brown especially near the tops. A heavy infestation can strip a young spruce tree in as little as 2 weeks. This stripping of the needles can seriously weaken a tree.

Three to four consecutive years of moderate to heavy attacks can kill the tree.

Control of SPRUCE SAWFLY:

Inspect trees annually for signs of damage or larvae.

First and foremost, maintaining healthy trees is the most important in helping your spruce trees withstand sawfly. A healthy tree can survive being defoliated for longer and will be able to heal the damage faster. Ensure your spruce trees get enough water, nutrients and sunlight.

If the spruce trees attacked are small and few in number, this pest can be controlled by hand picking and destroying the larvae when they first appear mid to late June. Young larvae may also be controlled by hosing them off with a strong jet of water (soapy if possible).

Chemical treatment (pyrethrum or malathion), is most effective when sawfly larvae are just starting to feed. This tends to be about 10 days after the brown bud caps have fallen off the tree (approximately mid to late June) A professional pesticide applicator can apply the high-pressure water or a mild pesticide on large scale infestations or when the scope is beyond your means.

***NOTE:** We often confuse Yellow-Headed Spruce Sawfly with **Spruce budworm**, but while they both attack new spring growth, they have more differences than similarities. Budworms are moths that over-winter enmeshed in webbing in the trees, while budworm will strike every tree in a group, sawfly will strike a few but rarely all. Treatment for Spruce Budworm Larvae is the same as Spruce Sawfly Larvae.

SUNSTAR NURSERIES LTD INFO SHEET:
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(*PIKONEMA ALASKENSIS*)

Referances:

<https://www.county.wetaskiwin.ab.ca/236/Yellowheaded-Spruce-Sawfly>

https://www.edmonton.ca/programs_services/pests/yellowheaded-spruce-sawfly.aspx

<https://www.agr.gc.ca/eng/agriculture-and-the-environment/agricultural-practices/agroforestry/diseases-and-pests/yellow-headed-spruce-sawfly/?id=1200353199211>

<https://www.reddeer.ca/city-services/environment-and-conservation/your-yard/trees/tree-insects-and-diseases/yellow-headed-spruce-sawfly/>

<https://adairtreecare.com/resources/insects-diseases/yellow-headed-spruce-fly>

<https://kentuckylandscape.ca/sad-spruce-sawfly/>



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