

Pest Profile



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Common Name: Pine Needle-Sheath Miner

Scientific Name: *Zelleria haimbachi* - Busck

Order and Family: Lepidoptera; Yponomeutidae

Size and Appearance:

	Length (mm)	Appearance
Egg	.3 -.6 mm	<ul style="list-style-type: none">- Laid singly on needle tips- Oblong shaped with a slightly flattened top- Whitish colored but somewhat transparent
Larva/Nymph	1.5 - 14mm	<ul style="list-style-type: none">- Orange body that becomes tan with 2 orange stripes- Will turn bright green when ready to pupate- Head capsule starts out black but turns tan
Adult	Wingspan: 12 mm	<ul style="list-style-type: none">- Silvery white body with a yellow edge- Hindwings are silvery-white- Forewings are golden yellow with a broad white band that runs down the center
Pupa (if applicable)	~ 7 mm	<ul style="list-style-type: none">- Pupation occurs inside a webbing on the needle base- Bright green but will turn brown within 48 hours

Type of feeder (Chewing, sucking, etc.): Larvae have chewing mouthparts; adults have siphoning mouthparts

Host plant/s: Jack, Ponderosa, Jeffery, and Lodgepole Pines

Description of Damage: Larvae feed throughout the needle's elongation period and are often difficult to detect. Larvae chew mines within needles as they feed and then overwinter in them. As temperatures increase, feeding will resume and mines will extend into the new needle sheaths. This feeding will cause

the shorter needles to stop growing and begin to fade in color. Longer needles will be cut off within their sheaths and will either fall to the ground or blow away in the wind, leaving a thinned out needle tip for the rest of the year.

Infestations are hard to detect the majority of the growing period but upon closer inspection, a threadlike mine can be seen running along the needle's edge. The exception is during the last instar when larvae feed on the outside of the needle sheaths, boring holes into the sheath. During this feeding, larvae leave webbing around needle bases and in some cases will completely encase the needle sheaths.

References:

Bulaon, B. (2004, April). *Management Guide for Pine Needle-Sheath Miner* [PDF]. Washington D.C.: U.S. Department of Agriculture: Forest Service.

Stevens, R. E. (1971, August). *Pine Needle-sheath Miner* [PDF]. Washington, D.C.: U.S. Department of Agriculture: Forest Service.