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Management Guide for **Sequoia Pitch Moth**

Synanthedon (Vespa) sequoiae (Hy. Edwards)

This moth is distributed throughout its host range from British Columbia to California and in Montana and Idaho.

Hosts:

- Lodgepole pine
- Ponderosa pine
- Jeffrey pine
- Pinyon pine

Occasional host:

- Douglas-fir

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Damage

Larvae bore under bark in phloem and outer layers of wood causing large masses of pitch to form around their entrance holes. Repeated attacks can girdle and kill young, small-diameter pines or cause the tops or branches of larger trees to break. Attack sites are often at the base of trees, at the junction of bole and limbs, or in wounds. It can be a significant pest of ornamentals. Pitch masses can contribute to fire hazard.



Pitch mass associated with a hip canker on lodgepole pine

Key Points

- Attack sites are often at the base of trees, at the junction of bole and limbs, or in wounds.
- It can be a significant pest of ornamentals.
- Damage is usually heavier on dry, sunny slopes and where pines are planted off site.

Life History

Larvae spend two winters in their galleries. They pupate around late June the second year within the pitch mass. Pupae push their way partially out of the mass so emerging moths won't come in contact with the pitch. Moths appear from late June through July and lay eggs in bark crevices, junctions of limbs and bole, and in wounds caused by pruning or other mechanical means. New larvae bore into the phloem to feed until freezing temperatures, spend the winter in the phloem and resume

feeding in the spring. They will spend another year in the galleries before pupating.



Pitch masses often occur at the base of trees.

Identification



Pupal case sticking out of pitch mass.



Pitch masses containing larvae are soft, whitish, and have some reddish boring dust mixed in. Old masses turn hard and yellowish. Brown pupal skins might be sticking out of masses in late June through July. Mature larvae are yellowish-white and about 25-30 mm long. Adults are clearwing



Photo above: Adult sequoia pitch moth resembles a yellow jacket moth but cannot sting. Photo left: Larva inside pitch mass.

Pheromone traps are available to help determine when adults are active (DeAngelis).

Management

- Damage is usually heavier on dry, sunny slopes and where pines are planted off site.
- Avoid damage to residual trees during thinning and logging operations, especially around bases.
- Pruning ornamental trees should be avoided when moths are active in the spring and summer.
- The best time to prune to avoid attacks on pines is between October and February (Overhulser 2002).
- Larvae or pupae in pitch masses can be individually killed by spearing them with pointed wires or opening the masses and destroying them.

Other Reading

Brunner, J. 1914. The sequoia pitch moth: A menace to pine in western Montana.. USDA Bull. III, 11 pp. illus.

DeAngelis, J. Sequoia Pitch Moth in Pines. Oregon State University Extension entomologist. <http://www.ipm.ucdavis.edu/PDF/PESTNOTES/pnsequoiapitchmoth.pdf>

Furniss and Carolin. 1980. Western Forest Insects. USDA Forest Service Misc. Publ. No. 1339. 139-140 p.

Overhulser, D. 2002. Sequoia pitch moth (*Synanthedon sequoiae*). Oregon Department of Forestry Forest Health Note, 3 pp. <http://www.oregon.gov/ODF/privateforests/docs/fh/SequoiaPitchMoth.pdf>

Forest Health Protection and State Forestry Organizations

Assistance on State And Private Lands

Montana: (406) 542-4300

Idaho: (208) 769-1525

Utah: (801) 538-5211

Nevada: (775) 684-2513

Wyoming: (307) 777-5659

N. Dakota: (701) 228-5422

Assistance on Federal Lands

US Forest Service
Region One

Missoula: (406) 329-3605
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US Forest Service
Region Four

Ogden: (801) 476-9720
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