Sequoia Pitch Moth

One of our common pine pests is the sequoia pitch moth (*Synanthedon sequoiae*). Although not usually harmful to a healthy tree, pitch moths can cause visible signs that cause owners distress and concern. After reading this publication, you should be able to recognize this insects' damage and understand when and if management is necessary. While pesticides are not recommended for sequoia pitch moth management, some cultural practices can reduce its impact on your pine trees.

As with many Lepidopteran (moth and butterfly) pests, the caterpillar or larva is the life stage that causes plant damage. They rarely kill the trees they attack. However, the large quantity of milky pitch gets the attention of homeowners. It appears as a raised mound of sap and sawdust on the side of the trunk often near a branch. The pitch masses can be gray, pink, reddish, or yellowish and protrude from infested trunks and limbs. Old pitch masses can remain on bark for several years and these abandoned pitch masses are often reinfested because egg-laying females are attracted to injury sites. Mondell (also called Quetta, Goldwater, or Afghanistan), Aleppo, Japanese black, pinyon, and ponderosa pines are all susceptible to sequoia pitch moth colonization in north central Arizona.

The adult sequoia pitch moth flies during daylight hours and somewhat resembles a wasp. Its wings are mostly transparent with bluish black edges. It has yellow stripes on its abdomen causing it to resemble a wasp or yellow jacket. Peak moth flights occur during June and July but can occur anywhere between May and September.

Adult sequoia pith moth (*Synanthedon sequoiae*) (Christine Buhl, Oregon Department of Forestry, Bugwood.org).

Females lay eggs individually on and in tree bark of pine species. They prefer laying eggs near wounds or fresh pruning cuts. Eggs hatch within two weeks. Once inside, the larva feeds on the cambium layer just beneath the bark. The pinkish-gray larva feeds for several months and is about ¾ inch long when mature. The larva pupates for about one month. As the pupa matures, it often pushes itself through the pitch mass until it is half exposed. Some moths may emerge from the pupa case within a year, but most will require 2 years from egg to mature moth spending the bulk of the life cycle in the larval stage. The adult moths emerge in mid- to late April and can continue through August. Mating and egg-laying occur within a few days of the adult's emergence, after which the adults die.

People unfamiliar with the damage may confuse pitch moth masses with bark beetle pitch tubes. Bark beetle pitch tubes are usually less than 1/2 inch in diameter and typically have a distinct round hole in the center made by an adult beetle. Sequoia pitch moth masses are much larger and vary in shape from roundish to an elongated oval. In addition, the globs of sap often have visible granules of wood or bark material and are a whitish or pale yellow rather that a translucent golden color.

As stated above, pesticides are not recommended or effective in managing the sequoia pitch moth. Cultural controls can be effective in decreasing pitch moth damage. Prune pines only when necessary, and then, only between October and February. This will minimize attraction and damaged areas that promote easy entry by newly hatched larvae. The best management strategy is to keep pine trees healthy. Irrigate them during dry periods and watch for new pitch masses.

If curiosity gets the best of you, you can dig the larva out with a pocketknife and examine the damage. The larva is usually just below the pitch mass. There is generally one larva per pitch mass and after doing this messy task once, you are not likely to repeat it. It's okay, healthy pine trees can tolerate multiple pitch moth larvae without any trouble if trees are irrigated properly.

Sequoia pith moth (*Synanthedon sequoiae*) pitch mass with empty pupal case visible (Scott Tunnock, USDA Forest Service, Bugwood.org).

Multiple sequoia pith moth (*Synanthedon sequoiae*) pitch masses (Christine Buhl, Oregon Department of Forestry, Bugwood.org).

June 20, 2022

Adapted from original Backyard Gardener publications by Jeff Schalau, Agent, Agriculture & Natural Resources, University of Arizona Cooperative Extension, Yavapai County