Forest Insect & Disease Leaflet

Pitch Mass Borer

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Pitch Mass Borer
Dioryctria spp. [Lepidoptera: Pyralidae]
Pine pitch moth—*D. ponderosae* Dyar
Sequoia pitch moth (*Synanthedon sequoia*)

Hosts: Pinyon pine, Ponderosa pine, Lodgepole pine, Scots pine, Austrian pine, rarely, Douglas-fir and true firs.

Figure 1. Pitch mass borer (Photo Eric R. Day, Bugwood.org).

This insect is generally not a significant pest in forest environments, but can be problematic in urban areas.
Pitch mass borer attacks appear as large, oozing masses of soft, light-pink sap that forms in response to larval feeding beneath the bark. Repeated attacks can weaken trees and kill branches. Heavily damaged branches and trunks are more susceptible to breakage. Serious damage is usually confined to trees less than 20 feet tall. Though pitch mass borer has been known to attack larger trees.

Pitch mass borer may be attracted to trees that are under stress due to; drought, over-irrigation, soil compaction, root injury, pruning, mechanical damage or other injuries. Infested trees may also be more susceptible to attack by other insects such as black pineleaf scale or pine engraver beetles (*Ips*).

Life Cycle: Pitch moth life cycles vary with species and can require 1 to 3 years to complete a generation. Adult moths are rarely observed and are difficult to differentiate from other members of the genus. They are either about ¾" long, grey with dark and light zigzagging lines or they may be clear winged moths that look somewhat like yellow and black wasps. Eggs are laid in July through August and hatch in late summer. Emerging larvae seek overwintering sites under bark scales. Larvae generally become active from mid- to late-April and begin tunneling under the bark. Full-grown larvae are between ¾" and 1" long, off white or pinkish in color and can be found under the mass of pitch (Figure 2).

Figure 2: Pitch mass removed exposing larvae. Photo: Brytten Steed, USDA, FS.

Control: The best way to prevent or reduce pitch mass borer attacks on susceptible trees, is to keep them healthy and vigorous. The principle stress factor is usually water related. Trees, should receive a deep

watering (2 - 4 inches of water) once every 3 - 6 weeks, depending upon soil composition and its ability to retain water. Most of the water should be applied at the trees drip line, near the edge of the branches, with watering extending a few feet past the drip line. The top 18 inches of soil should remain moist, but not soaked. Over-watering trees can be just as damaging as under-watering. If water continually accumulates around the tree or the area is always muddy, then the tree has been overwatered. Trees under stress often require 2 to 3 years to recover from stress-induced events.

Avoid pruning or mechanical injury to the bark prior to adult flight, during July or August. Trees should be pruned (if wanted) following adult flight, preferabley later than mid-September. Individual larvae can be removed from the pitch mass or from under the bark with a knife or similar tool. Insecticide treatments are usually not recommended as they have not been shown to work well. However, if you decide to try insecticide treatments then they should be applied before larvae bore under the bark. Insecticides such as; permethrin, bifenthrin or carbaryl, should be applied before April. The insecticide should be a flowable formulation covering all surfaces of the trunk, especially around branch collars, to where the solution is dripping from all treated surfaces. This will help to make sure that all bark crevices are thoroughly treated. Please confirm that the insecticide is registered for use in Utah and always follow recommended label rates for pitch mass borers.

Always use EXTREME CAUTION when applying pesticides/insecticides. Always follow label instructions and safety recommendations.

For further information please contact:

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