



# TREES & SHRUBS

## Zimmerman Pine Moth

no. 5.591

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### Quick Facts...

Larvae of the Zimmerman pine moth damage trees by tunneling under the bark, making gouging wounds. Most injuries occur at branch crotches.

Pale yellow, popcorn-like masses of sap occur at wounds.

Preventive insecticide sprays, applied to the trunk before the caterpillars begin tunneling, are best applied in April or early May.

In recent years, the Zimmerman pine moth, *Dioryctria zimmermani*, has become established along the Front Range. Austrian pines have been most commonly infested. Scotch and ponderosa pines are also reported as hosts.

Branches typically break at the crotch area where they join the trunk (Figure 1). Dead and dying branches, most often in the upper half of the tree, commonly indicate infestations. The first external symptoms of injury are popcorn-like pitch masses at wound sites. The pitch masses may reach golf-ball size and ultimately resemble clusters of small, pale grapes (Figure 2).

The adults, rarely observed, are mid-sized moths, with gray wings blended with red-brown and marked with zigzag lines. Adults are difficult to distinguish from other members of this genus. Larvae are generally dirty white caterpillars, occasionally with some pink or green. They are found within the characteristic popcorn-like masses of sap on the trunks and branches.

### Life History and Habits

The Zimmerman pine moth has a one-year life cycle. It overwinters as a young caterpillar inside a small cocoon underneath bark scales. In mid- to late April and May, they again become active and tunnel into the tree. Tunneling may first occur around the branch tips, sometimes causing tip dieback. In late spring, they migrate to the base of branches, tunneling into the whorl area. There, masses of pitch form at the wound site. The larvae continue to feed into July. Once full-grown, they pupate within a chamber in the pitch mass.

Adult moths are active primarily in late July and August. After mating, female moths lay eggs, often near wounds or previous masses of pitch. Eggs hatch in about a week and the larvae feed for only a brief time before preparing to overwinter.



Figure 1: Broken branches caused by Zimmerman pine moth.

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Figure 2: Popcorn-like pitch masses from Zimmerman pine moth.

## Control

Zimmerman pine moth is most vulnerable to controls when larvae are active and exposed on the bark in spring and late summer. Drenching trunk sprays penetrate the bark scales. Apply them around mid-April or in August to kill active, exposed larvae before they enter tree trunks. Permethrin or bifenthrin applied during early April to early May is currently recommended for trunk sprays.