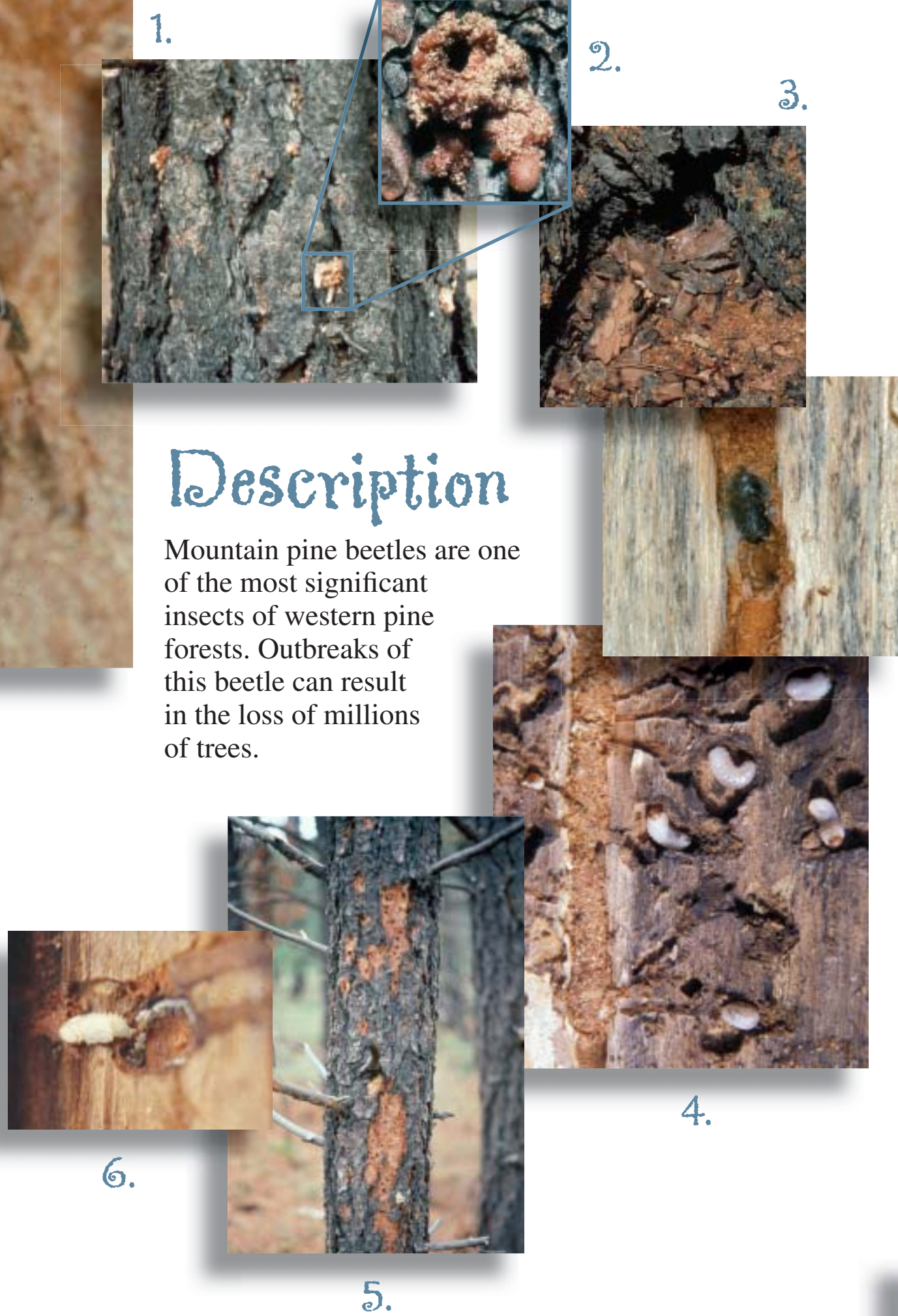


# Mountain Pine Beetle



## Description

Mountain pine beetles are one of the most significant insects of western pine forests. Outbreaks of this beetle can result in the loss of millions of trees.



## Life Cycle

The mountain pine beetle completes one cycle of development from egg to adult per year. The most common homes the beetles seek are large ponderosa, lodgepole, and limber pines.

1. Every August, mountain pine beetles leave dead trees in which they developed to seek new homes for the next generation in living green pines.
2. Once the female beetle has found a suitable tree as a new home, she releases pheromones that attract both males and other females to the same tree. The beetles enter the tree by boring into the bark, creating pitch tubes.
3. Boring dust will appear in bark crevices and on the ground. Coordinated attacks of several hundred beetles are common.
4. Mating will occur under the bark, and each beetle couple will produce about 75 eggs. It takes seven to ten days for these eggs to hatch into larvae. The larvae tunnel away from the egg gallery, producing a characteristic pattern.
5. The beetles spend the winter under the bark. This is when you are likely to see evidence of woodpeckers feeding on the trunk.
6. The larvae continue to feed into spring and transform into pupae in June and July.

## Damage

Adult beetles introduce bluestain fungi, which disables the tree's defenses and interrupts the flow of water. The combination of fungi and beetle feeding rapidly kills the tree.

Ten to twelve months after a successful attack, infested tree foliage turns yellowish to reddish. Soon after, the beetles are ready to exit and search for a new home.

Large numbers of dead trees create safety and fire hazards.



## Management

Timing means everything! Infested trees must be treated by an approved method before the beetles exit to attack new trees.

Natural: Except when woodpeckers and extreme cold eliminate the beetles, trees must be cut, then logs should be hauled to 'safe sites' a mile or more from susceptible tree hosts.

Chemical: Preventive spraying before mid-July is one method of keeping uninfested but susceptible pines protected.

Solar: Solar treatments that raise the underbark temperature to lethal levels also will reduce beetle populations. This can be done with or without plastic and requires six to eight weeks of warm weather.

A thinned, healthy forest will help prevent outbreaks of the mountain pine beetle, improve mountain views, and reduce fire hazard.



For more information about the management of mountain pine beetle, contact your nearest office of the Colorado State Forest Service or USDA Forest Service.

