



BARK BEETLES, SLASH, AND FOREST FERTILITY

Landowners with property populated with evergreen trees may not be familiar with the benefits of leaving slash, fallen limbs and downed trees on the ground to permit decomposition. Large and small debris left distributed across the woodland floor acts much like mulch in the garden by providing nutrients, shading root zones, and adding to the soil structure. It also provides food and habitat for insects and other organisms that further benefit soil structure. However, the landowner needs to recognize and avoid creating environmental conditions that favor the breeding of bark beetles.

Trees dead longer than one year are not a bark beetle hazard. You will often find insects in them that are superficially similar to bark beetles, but they are not usually insects that kill trees. The same goes for the large wood-boring insects (commonly found in dead trees or firewood) that are often mistaken for bark beetle. These insects rarely kill trees. They are, in fact, beneficial to the extent that they start tearing down dead trees, making them less of a fire hazard and releasing their nutrients back into the soil.

To provide a good breeding environment, bark beetles will search out trees that are already under some type of cultural stress such as drought or heavy pruning. Older trees are also more susceptible. Some bark beetles will breed in freshly cut slash or downed trees. But to be an appropriate beetle-breeding host, the slash and downed trees must be of a specific species and size as well as available at a specific time of year.

A healthy, vigorous tree is able to withstand a light population of bark beetle. However, once a susceptible tree is infested with bark beetle, there is nothing that can be done to prevent eventual death. It therefore important to remove certain slash and downed tree conditions to minimize a tree's susceptibility. The chart on the next page may help you sort out the differences and identify what is generally safe to leave on the ground and when in regard to the most commonly damaging bark beetles.

Also refer to fact sheet C097 Pine Bark Beetle for more information.

**TREE SPECIES AND HOW SLASH OR DOWNED TREES
MUST BE TREATED TO PREVENT BARK BEETLE INFESTATION**

Tree Species	Bark Beetle	Material needing treatment and method	Material can be left for forest nutrition and wildlife
Ponderosa pine (<i>Pinus ponderosa</i>) and Lodgepole pine (<i>Pinus contorta</i>)	Pine engraver (<i>Ips spp.</i>)	Do not leave green pine slash larger than three inches in diameter December to June. Otherwise burn, chip, or dozer trample slash.	Pine stems smaller than three inches in diameter or those created July to November.
Douglas fir (<i>Pseudotsugae menziesii</i>)	Douglas fir beetle (<i>Dedroctonus pseudotsugae</i>)	Remove or burn green Douglas fir slash or downed trees larger than eight inches in diameter within one year of creation (those downed in May-July should be taken out before the following April).	Douglas fir stems less than eight inches in diameter or more than one year old.
Grand fir (<i>Abies grandis</i>)	Fir engraver (<i>Scolytus ventralis</i>)	Remove or burn green Grand fir slash or downed trees larger than three inches in diameter December to July.	Grand fir stems less than three inches in diameter created in August to November.

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