FOREST PEST FACT SHEET

IDAHO DEPARTMENT OF LANDS

Bark Beetles

Bark beetles are a large group of forest insects that are very common in Idaho forests. There are over 400 species in North America, but the important tree-killing species that occur in Idaho are summarized on the reverse side.

Life Cycle

Bark beetles spend almost their entire life cycle beneath or within the bark of the tree. Beetles are only exposed for a short time during the summer when adults emerge to locate another host. Most attacks by the adult beetles are confined to the bole (trunk) of the tree. The adult and larval feeding within the phloem (inner bark) girdles the tree, and the associated fungi (blue stain fungi) infect the sapwood. The combined effect of the phloem feeding and blue stain fungi effectively kills the tree.

Management

Dendroctonus species (mountain pine beetle, western pine beetle and Douglas-fir beetle) can be managed through silviculture (controlling the growth, species composition, and vigor of trees according to specific management objectives). Because these species usually attack dense stands and often large diameter trees, thinning is useful for reducing damage from these bark beetles. Pine engraver problems usually arise from green pine slash generated through management activities. Properly treating slash and avoiding management activities during the cooler months greatly decreases problems with this species. Fir engraver can attack grand fir of all sizes, but tends to prefer stressed trees. Thinning is not used to prevent fir engraver attacks, but can increase the vigor of residual trees. Thinning must be used carefully in areas where root disease is present, because it may increase the severity of root disease.

For more information:

IDL website: http://www.idl.idaho.gov/forestry/forester-forums/index.html
U.S. Forest Service Management Guide: *https://fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5186684.pdf*

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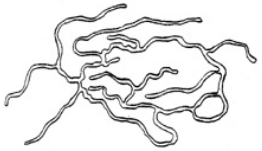
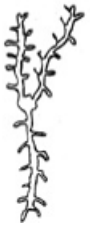
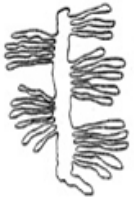
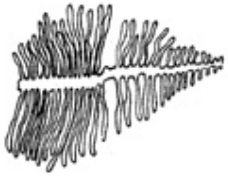
Beetle Species	Primary Hosts	Life Cycle	Gallery Pattern	Signs & Symptoms	Key Management Strategy
Mountain pine beetle	All pines, especially lodgepole, ponderosa and whitebark pines	1 generation/year		Pitch tubes, boring dust, fading crown	Manage dense stands and older stands through thinning
Western pine beetle	Ponderosa pine only	2+ generations/ year		Pitch tubes, boring dust, distinctive gallery, wood pecker damage, fading crown	Manage dense stands and older stands through thinning
Pine engraver	Ponderosa pine, lodgepole pine, western white pine	2+ generations/ year		No pitch tubes, boring dust, distinctive gallery, fading crown	Do *not* create slash through management activities between December and June
Douglas-fir beetle	Douglas-fir	1 generation/year		No pitch tubes, boring dust, fading crown	Remove green blowdown, thin dense stands
Fir engraver	Grand fir	1 generation/year		No pitch tubes, boring dust, distinctive gallery, fading crown	Minimize grand fir component of stands, minimize stress on residual trees