

# PINE BARK BEETLES—*Ips grandicollis*, *I. calligraphus*, *I. pini*, *Ips* spp., *Dendroctonus ponderosae*, *D. valens*, and *Dendroctonus* spp.

**HOSTS:** Ponderosa, Scotch, eastern white, jack, and other pines

**IDENTIFICATION, LIFE CYCLE, AND DAMAGE:** Several species of bark beetles breed in pines in the Great Plains. Larvae are usually “c”-shaped, legless, and white with brown heads. Adults range from 3 to 10 mm long and are brown or black.

If winters are not severe, most bark beetle species can overwinter as adults, larvae, or eggs. Eggs are laid in galleries constructed between the bark and wood, and larval feeding galleries radiate from these egg galleries. The number of generations per year can vary from one to three or more depending upon the species involved and the severity of winter.

Gallery patterns, vigor of trees attacked, and site of attack vary with the species. Small holes in the bark, pitch masses on the bark, and boring dust in crevices and at the base of the tree are the first signs of attack. Infested trees have a characteristic blue-gray sapwood, caused by blue stain fungi, which the beetles introduce. Feeding by larvae and the accompanying spread of blue stain fungi eventually girdle infested trees. Needles on girdled trees turn a characteristic reddish-brown color. Group-killing of trees is characteristic of all species.

**CONTROL:** Avoid mechanical injuries to healthy trees. Prune only during dormant seasons. Cut and burn or debark infested materials. Thin overcrowded stands and remove weakened trees. Kill beetles in logging residue by burning slash or scatter-

ing slash so the sun can dry it quickly. High value trees can be protected from attack by late spring or early summer applications of carbaryl.



*Ips* sp. bark beetle galleries



*Dendroctonus ponderosae* adult and eggs in gallery