Cone and Seed Insects

Cone Beetles

*Conophthorus* spp.

**Hosts:** Pines

**Symptoms/signs:**
External evidence consists of pitch tubes at the point of entry on the cone stalk or the base of the cone. Following attack, cones turn brown and wither. If beetles have emerged, small round exit holes may be found on the outside of affected cones. Inside, beetles leave cones riddled with tunnels and frass. Adult beetles are reddish brown to black, shiny bark beetles. Larvae are small white, legless grubs.

**Biology:** One generation is produced per year. Adult beetles bore into the base or stem of immature second-year cones in the spring. A gallery is created along the cone axis, with eggs deposited along its sides. The creation of the gallery severs the conductive tissues of the cone, killing it. Larvae hatch and feed on the scales, seeds, and tissues of the cone. The brood complete development during the summer within the cone and usually overwinter there. Some new adults emerge and may bore into shoots or conelets and overwinter.

**Effects:** These beetles cause the death of second-year cones. The amount of mortality is highly variable but in some years a large proportion of cones may be attacked.
Similar Insects and Diseases: This insect is best distinguished from other insects that attack developing cones by the presence of the pitch tube on the cone base or stem.

References: 24, 37

Figure 153. Life cycle of cone beetles.