

IPS ENGRAVER BEETLES

Ips spp.

- Natural range** - A large group of bark beetles found throughout conifer forests of the northern hemisphere - Asia, Europe, the Indian subcontinent and North America. Several species are found in Colorado.
- Species affected** - Pines and spruce. In Colorado, ponderosa, Austrian and piñon pines and Colorado blue and Engelmann spruce can be attacked.
- Type of damage** - Tree killing caused by a combination of beetles attacking and breeding in the inner bark and introduction of staining fungi that plug the tree's vascular system. Some species of *Ips* attack only the upper, thin barked portion of the mainstem and cause top-kill.
- Symptoms** - Groups of dead and dying pines or spruces, red colored pitch tubes and boring dust on bark surface, galleries and insects in inner bark, blue stain in wood. Sometimes top-killed trees are present. This group of insects is polygamous and several females will join a single male after it has attacked a tree. Resultant galleries are Y, X, or I shaped.
- Importance** - These insects usually confine their attacks to fresh windthrow, logs, logging residues or firewood. During periods of extended drought, they can attack and kill living trees under stress.
- Remarks** - Blue spruce in urban settings can be killed by *Ips hunteri* during droughts.



Boring dust and pitch tubes indicative of Ips beetle attack in blue spruce.

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Left: Galleries of *Ips calligraphus* in ponderosa pine.
Right: Galleries of *Ips hunteri* in blue spruce.



Left: Blue spruce killed by *Ips hunteri*.
Right: Ponderosa pine with top kill caused by *Ips pini*.