

## Second String (Secondary) Bark Beetles

There are over 100 different species of bark beetles in Idaho. Of these, less than 10 species typically cause economic damage to trees. The rest are on the sidelines, functioning as recyclers by colonizing all parts of dying trees that are killed by something else. They can be found in twigs, branches, main stems, and roots. They are unique wood carvers, identifying themselves with distinct galleries that etch the inner bark or wood surface of their host trees (fig. 1). These “secondary” bark beetles occasionally take on a primary tree-killing role during hot, dry conditions or when trees are partially damaged by fire but might otherwise survive.



Figure 1. *Scolytus unispinosus* in Douglas-fir (left); *Scolytus subscaber* in grand fir (center); *Pityophthorus tuberculatus* in lodgepole pine (right). Photos by Sandy Kegley, USFS (left & right) and Mal Furniss, retired Research Entomologist (center).

Secondary bark beetles have been active in northern Idaho during the past few years due to droughty conditions. Those that have recently caused tree mortality include the Douglas-fir pole beetle, *Pseudohylesinus nebulosus*; the Douglas-fir engraver, *Scolytus unispinosus*; and *S. monticolae* in Douglas-fir; and the hemlock engraver, *S. tsugae* in mountain hemlock. Tree mortality due to secondary bark beetles is typically short-lived—occurring only one or two years before subsiding when moisture conditions are better for trees and beetles return to their secondary role. If our climate becomes warmer and especially drier, tree mortality due to secondary bark beetles will likely become more common.

### Reference:

Furniss, M.M. and Johnson, J.B. 2002. Field Guide to the Bark Beetles of Idaho and Adjacent Regions. University of Idaho, Station Bulletin 74, ISBN 1-58803-000-8. 125 p.

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