

2015 Drought Producing Bark Beetle Issues with Panhandle Conifers

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University of Idaho Extension, Idaho Department of Lands and U.S. Forest Service offices in our region are currently getting inundated by calls about dead and dying conifers. Most of these trees are being killed by bark beetles, but the real culprit is stress from last summer's drought and overstocking. If dry conditions continue this summer and fall, the number of trees killed by bark beetles could increase.

Bark beetles are a natural part of Idaho forests, and we have many bark beetle species. A University of Idaho publication titled "Field Guide to the Bark Beetles of Idaho and Adjacent Regions" catalogs over 100 species in Idaho. Different bark beetles attack different species and even different parts of conifers. For example, many of the browning Douglas-fir this year was attacked by beetles that specialize in small Douglas fir and Douglas fir tops. These are different species from the Douglas-fir beetle, which normally kills larger trees, as it did after the 1996 ice storms.

Other bark beetles are also on the upswing. Lodgepole pine and ponderosa pine are being attacked by pine engraver beetles (commonly referred to as by their genus name, *Ips*). We are also seeing an uptick in grand fir attacks by fir engraver beetles (*Scolytus*).

Why are they so active now?

All of these bark beetles are native insects which continually reside in Idaho forests. The primary reason they are more active now is the drought we had last summer. Drought stressed trees are more vulnerable to attack by bark beetles. The moisture stress trees experience as a result of drought is compounded when trees are overstocked (too many stems per acre) - the case in many Idaho forests.

What to do about it

Many of the trees dying now were attacked by bark beetles last year, but it typically takes several months after an attack for trees' crowns to turn red. Generally, if you see brown trees in the summer, the bark beetles that caused that damage have already left that tree - cutting them will not affect bark beetle issues. Dead trees can be a safety hazard, so remove them from areas where that is a concern. Otherwise, standing dead trees (called snags) create habitat for a wide variety of birds, small mammals, and other wildlife species.

The exception would be Douglas-fir stems 12" or larger, or recently fallen Douglas-fir 8" or larger, which can harbor Douglas-fir beetles for up to a year after being killed. These trees should be removed from the site or debarked to prevent additional broods of beetles from attacking standing green Douglas-fir.

Prevention is the key

Insecticides or other direct controls are rarely used to manage bark beetles. The primary strategy with most forest insect and disease issues is to manage forests so they are naturally resilient to insects and diseases. Our soils are still relatively dry from last year's drought. If we do not get additional rain this summer, current beetle populations could grow larger. It is almost never practical to irrigate forests. The main strategy in managing bark beetles is to reduce the number of trees competing for the same amount of moisture by thinning. Thinning can also be used to favor the most drought tolerant species for the site (usually pines and larch), which further aids forest resilience. For sapling trees, that means creating at least 12-15 foot spacing between tree stems (6 feet initially for lodgepole pine to avoid making them too bushy). For larger trees, spacing should be increased proportionally, up to 40 feet for trees with trunks 24 inches in diameter.

To avoid creating habitat for pine engraver beetles (the most common bark beetle to cause problems from downed green trees), avoid thinning lodgepole and ponderosa pines from November thru June, or remove, burn, or debark stemwood larger than 3" in diameter. For more information on treating slash from thinning while minimizing bark beetle risks, see "Managing Organic Debris for Forest Health" (PNW 609, available at <http://www.cals.uidaho.edu/edComm/pdf/PNW/PNW0609.pdf>).

Learn about Idaho forest Insects and Diseases Directly

To learn more about bark beetles and other forest insect and disease issues, consider attending the annual Idaho Panhandle *Forest Insect and Disease Field Day*, to be held in Bonners Ferry on Friday, July 15. The program meets at 8:00 a.m. at the Boundary County Fairgrounds and will end by 5:00 p.m. Those wishing to participate should pre-register at the University of Idaho Extension Office in Boundary County by Friday, July 8. A \$15.00 registration fee covers resource materials and refreshments. For registration questions, contact the University of Idaho Extension Office in Boundary County at (208) - 267-3235. Registration forms can also be downloaded at <http://www.uidaho.edu/extension/forestry>. The program is co-sponsored by University of Idaho Extension and the Idaho Department of Lands.

Conclusion

Bark beetles and other forest Insects are a natural part of Idaho forests. The key to keeping them from killing more trees than you want them to is managing for the best species for the site, and keeping stand density low enough to avoid moisture stress on the trees.