



Wildfire, Drought and Douglas fir beetles

Extremely active wildfire seasons in British Columbia in recent years have resulted in some fire-damaged forests that are more susceptible to damage from insect pests. In addition to forested areas burned by wildfires, many areas of B.C. experienced extreme drought conditions, unusual heatwave events, and continuous hot and dry weather.

Several wildfires have burned in stands of trees dominated by Interior Douglas fir, and where there are active infestations of Douglas fir beetles (DFBs). Prompt and proactive management actions must be initiated to mitigate how fire damage affects these insect populations.

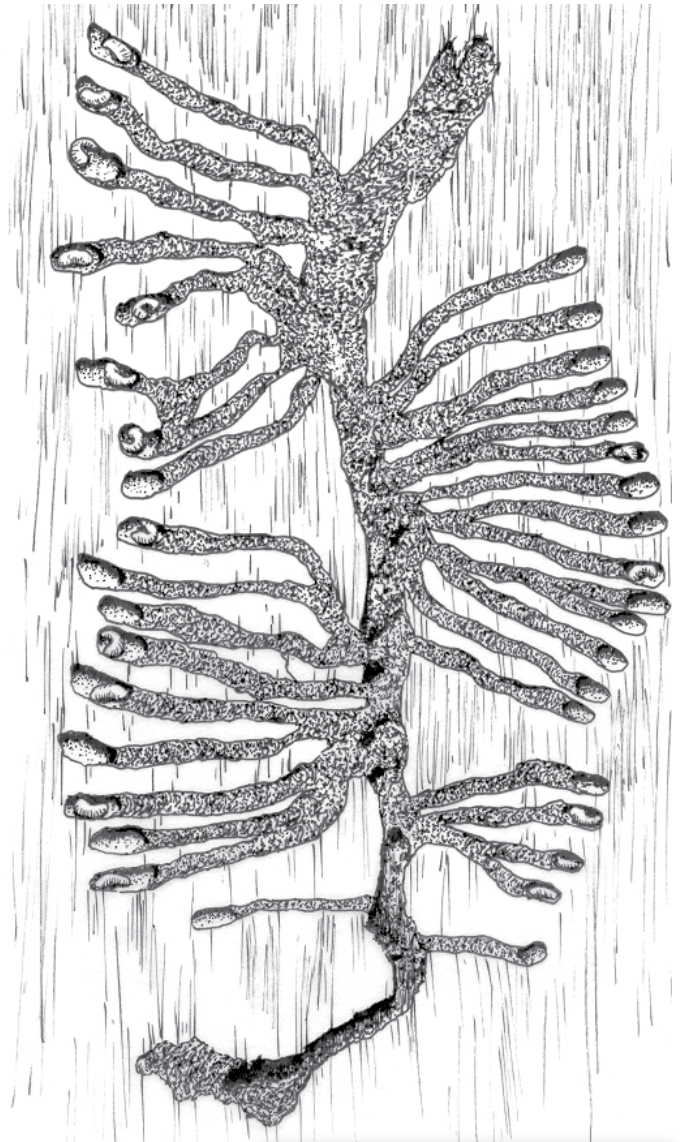
These beetles often infest Douglas fir trees that have been:

- killed by fire
- scarred by fire
- damaged by mechanical means
(*e.g., by heavy equipment*)
- blown down in windstorms
- stressed by drought conditions

After Douglas fir beetle populations build up in areas containing susceptible, fire-weakened host trees, they will spread beyond wildfire perimeters and attack healthy, live trees.

A BUILD-UP OF DOUGLAS FIR BEETLE POPULATIONS MAY BE RELATED TO:

- pre-existing populations of beetles close to the wildfire site
- increased numbers of host trees stressed by drought conditions
- an abundance of susceptible host trees
(*i.e., large and old Douglas firs*)
- burn severity
(*i.e., how badly trees in an area were damaged by fire*)
- the number of trees damaged within the wildfire's perimeter and the extent of that damage



BY IMPLEMENTING PROMPT AND PROACTIVE MEASURES, YOU CAN HELP MINIMIZE TREE MORTALITY DUE TO DOUGLAS FIR BEETLE ATTACKS:

- Monitor infestations and obtain current information about Douglas fir beetle mapping, hazard data, and burn severity. Use this information to prioritize the harvesting of tree stands (*subject to an approved cutting permit*) that face a high risk of beetle attack within and outside a wildfire's perimeter (*up to five kilometres outside the perimeter*).
- Maximize the harvesting of beetle-damaged wood and burned wood (*subject to an approved cutting permit*) in the years immediately after the wildfire occurred.
- Salvage harvesting of blackened wood should be done before the beetles' flight period in early spring. Baiting and/or trapping beetles in high-priority areas should also be done prior to their spring flight.
- Monitor tree stands outside wildfire perimeters for Douglas fir beetles and secondary bark beetle attacks. This is most critical in the two to three years after the wildfire.
- Through the use of trap trees, funnel traps and pheromone baiting, concentrate beetles in stands that can be harvested relatively quickly after an infestation has been detected. This will help slow the spread of beetles to susceptible tree stands near by.
- Share information with your partners (*e.g., First Nations, licensees, BC Timber Sales, woodlot operators and others*) to help plan mitigation tactics.



Figure 1: Adult Douglas-fir beetles are dark brown and black, and are 4.5 mm to 7 mm long.



Figure 2: Douglas-fir beetle larvae



Ministry of
Forests, Lands, Natural
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