



National Forest Week

September 20 to 26, 2015

Mountain Pine Beetle Fire Facts

Mountain Pine Beetle is a bark beetle that historically uses lodgepole pine as a host tree. The beetle bores into the tree where the larvae feed on the phloem (which transports nutrients to the tree); if there are enough beetles to overwhelm the tree's ability to pitch out the beetles, then the tree will begin to die. As the tree is starved of water from the beetle attack, the needles will begin to turn a bright orange and eventually drop off, killing the tree and leaving stands of dead trees.

Mountain Pine Beetle and wildfires share a complicated relationship, and one that will be continued to be studied. Here are a few Mountain Pine Beetle wildfire facts:

- At one time, wildfires controlled Mountain Pine Beetle naturally, but modern fire suppression efforts have increased Mountain Pine Beetle spread.
- Fire suppression has allowed lodgepole pine forests to reach an over-mature age class, making the older trees more susceptible to Mountain Pine Beetle attack.
- Managers are currently using proscribed burns at the leading edge of Mountain Pine Beetle invasions to stop their spread. Watch <https://www.youtube.com/watch?v=O4xuBRzqGw8>.
- Forests may show a decrease in fire intensity after a Mountain Pine Beetle invasion, however wind, precipitation, and humidity play a larger role in determining fire behaviour. ([Simard et al., 2011](#)).
- As with fire monitoring, the best detection method for Mountain Pine Beetle is through aerial surveys.
- Climate change will increase the frequency of both forest fires and invasive species.
- The primary host of Mountain Pine Beetle is the lodgepole pine. Jack pines are now under attack and have reduced natural defenses because they have not yet evolved to react sufficiently to this new threat.
- Jack pines require wildfires for seed dispersal, because without the high fire temperature the cones won't open and their seeds won't spread.
- When building a responsible camp fire only use local wood, because moving firewood can spread forest invasives.
- Approximately 577 beetles are needed to successfully attack a tree to induce mortality ([Jackson et al., 2008](#)).
- Learn how invasive forest species spread at forestinvasives.ca and use the tips provided to reduce their harmful impacts - you can make a difference!

Information is the key to preventing and managing invasive species. Help the Invasive Species Centre continue to share expert knowledge.

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