

Meet the Beetle



- The MPB is a small insect, approximately the size of a grain of rice.
- The beetle is a native pest to the Lodgepole Pine tree and under normal conditions it contributes to a healthy forest by attacking old or weak trees and by facilitating new growth.
- Under certain conditions, mass beetle outbreaks can occur. These conditions include: large areas of pine stands that are 80 years or older; fire suppression; a streak of warm weather; drought.
- The beetle lives almost its entire life under the bark of a host tree. Larvae spend the winter and spring under the bark, transforming into pupae in June and July. In the summer, the adult MPBs take flight to find a new host.
- The beetle bores through a tree's bark into the soft layers (the phloem) underneath where they mate and lay eggs. When the larvae hatch, they eat through the phloem, creating tunnels under the bark.
- The MPB also carries a 'blue-stain fungus' which infects the host. This fungus has two functions:
 - 1) it prevents the absorption of water and nutrient flow in the tree
 - 2) it prevents the tree from protecting itself with resin (forcing the beetle out), and allows the beetle to continue its attack

Together, the beetle and the fungus can kill a tree within a matter of weeks.

- The fungus also discolours the pinewood. While this may devalue the commercial worth of the wood, it has no effect on the integrity of the wood itself.
- It takes 700 beetles to kill one tree. A hectare is considered infested if it contains more than 10 beetle-attacked trees.

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- Extreme cold temperatures can kill the beetle, however the MPB can withstand cold temperatures for extended periods of time; they develop an anti-freeze which protects them from sub-zero weather. In order to kill off large numbers of beetle, the cold weather must either come in early winter or early spring (before anti-freeze develops or when larvae are most vulnerable) and must last for a number of days.
- Additionally, with the insulation of bark and snow, it can be a long time before under-bark temperatures decline to lethal levels. The current outbreak is likely to continue until an early cold winter occurs.



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