

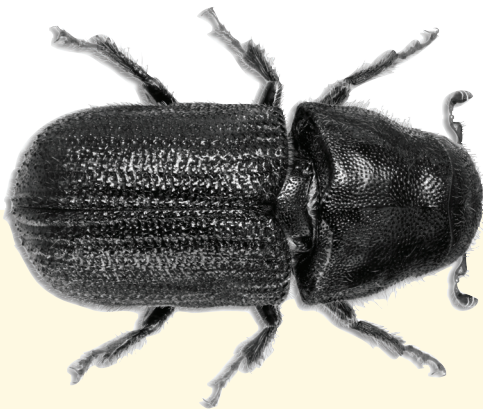



SEA TO SKY STORY: MOUNTAIN PINE BEETLE

Smaller than a grain of rice, the mountain pine beetle has spread across an estimated 14.5 million hectares of forest in British Columbia – an area larger than the size of England. The unusual red rust colour of the lodgepole pine trees along parts of the Sea to Sky Highway north of Squamish is evidence of the mountain pine beetle infestation.

The beetle also poses a real threat to Alberta's lodgepole pine forests, the jack pine stands of Canada's northern boreal forest and the pines in Eastern Canada. The long term economic and social impacts of the beetle are significant, particularly in forestry-dependent communities.

The mountain pine beetle is native to western pine ecosystems in North America. Similar bark beetles are present in other forest ecosystems around the world and are part of the natural life cycle of a forest.



Close up of a mountain pine beetle. The adults range from 3.7mm to 7.5mm in length. 

Clusters of red trees are often evidence of beetle damage. First, the trees turn from a lush to pale green, and then to a dull yellow. By the time the tree turns red (also known as red attack) usually in the summer following the initial attack, most beetles have moved on to another tree.

Below: Under the bark.

Normally, small numbers of mountain pine beetle help the forest regenerate by burrowing under the bark of older trees, cutting off supplies of water and nutrients and killing them. The trees rot and provide the foundation for a new forest.

However, a decade of hot summers and moderate winters in British Columbia has contributed to a huge increase in the number of beetles. Hot, dry summers stress the trees, reducing their ability to defend against beetle attack and moderate winters contribute to lower beetle mortality rates. The mountain pine beetle usually attacks older pine, but when an outbreak happens, there are so many beetles they attack trees of all ages.



Mountain Pine Beetle along the Sea to Sky Highway

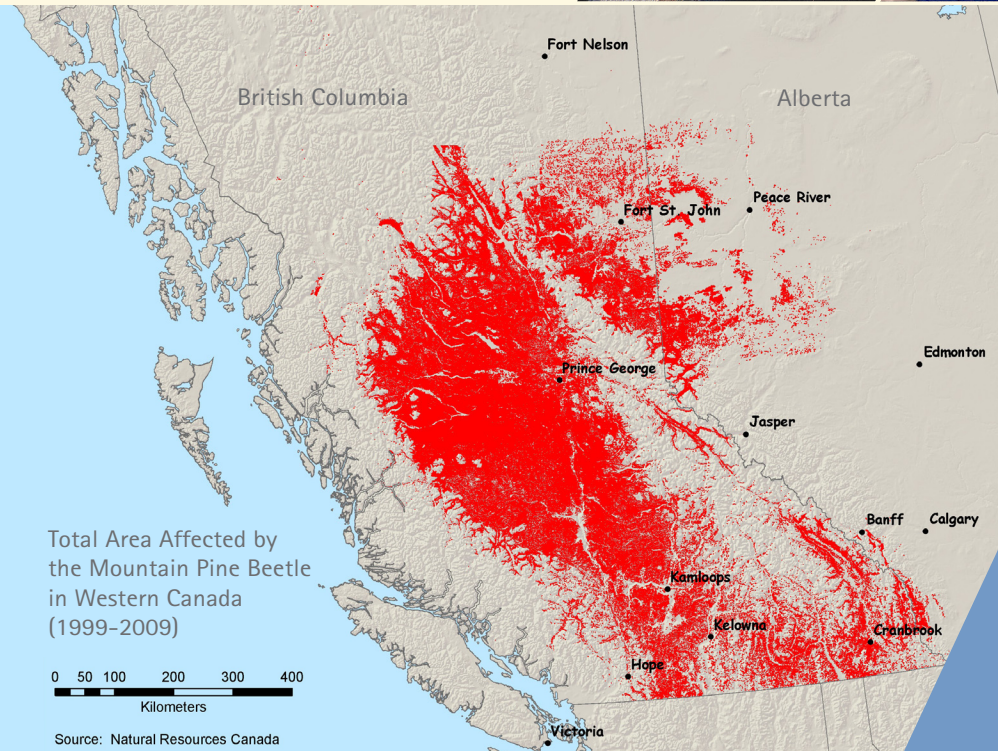
Scientists believe the mountain pine beetle migrated northward with the spread of the pine forests after the last Ice Age. The beetle has been active in the Squamish Forest District for thousands of years.

Extreme concentrations of the mountain pine beetle are mainly found in British Columbia's interior, but the beetle is also present on the northern stretch of the Sea to Sky Highway.

Visible along the highway north of Squamish, the red and grey dead trees indicate a recent mountain pine beetle attack. Travelling north, these trees become increasingly visible along the Whistler and Cheakamus Canyon area and in the Soo and Rutherford River area, just south of Pemberton.

Usable Wood

Canadian scientists have carefully studied and tested the properties and uses of beetle-killed wood. The wood is structurally sound and often has a slight blue colour – a by-product of the blue stain fungi carried by the beetle from tree to tree. This blue wood is as strong as non-beetle killed wood and is used in everything from framing in residential construction, to furniture making, to the roof of the Richmond Olympic Oval.



Tracking the Beetle

Natural Resources Canada scientists use satellite images to map and predict the presence of mountain pine beetle on the forest landscape. They conduct ground surveys to help forest managers locate prime beetle 'hot spots' for direct control and provide information on the severity and potential spread of the beetle.

Does forest science research interest you? Become part of the team that finds the solution to the problem of the mountain pine beetle outbreak. Natural Resources Canada forest research scientists specialize in entomology (the study of insects), ecosystems, modeling and forest regeneration. Consider a career in science and help plan for the future of Canada's forests.

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