

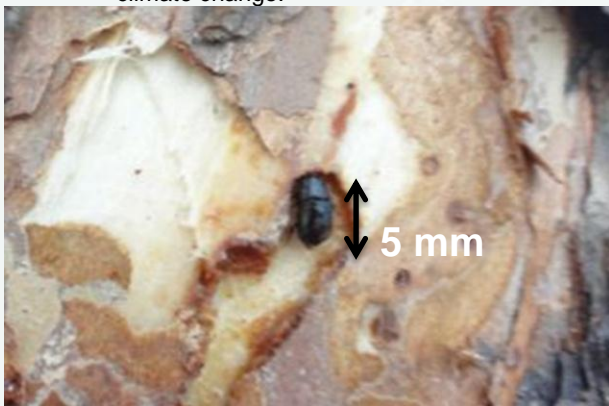
Mountain Pine Beetle Vulnerability

Determine the risk and management options for invasive Mountain Pine Beetle in Northwest Territories pine forests.

CONTEXT

Mountain Pine Beetle (MPB) has historically been found in the pine forests of British Columbia (BC), but not Alberta or the Northwest Territories (NWT). After a recent MPB epidemic in BC, the insect crossed the Rocky Mountains into Alberta in 2006.

In the fall of 2012, MPB was detected at sites along the NWT/Alberta border. A survey in March 2013, found beetles had survived the winter in the NWT for the first time. The movement of MPB further north is being aided by warmer winter temperatures, the result of climate change.



MPBs spread blue stain fungus that, combined with larval feeding, can kill pine trees by blocking their conductive tissue. The blocking of tissue makes it impossible for trees to access nutrients and water and often resulting in the death of infested trees. MPB attacks both pine species found in the NWT, jack pine and lodgepole pine. While the potential impact of MPB in the NWT is unknown, it has impacted the wood supply for forest harvesting, wildlife habitat and hydrology in BC.

OBJECTIVE

To determine the risk of MPB to NWT forests and investigate management options.

APPROACH

Working with the Alberta Government, monitoring is in place along the NWT/Alberta border using pheromone traps. During winter and spring of 2013, an overwinter survival survey was completed and MPB management strategies from other jurisdictions, including BC, Alberta, Saskatchewan and the Yukon were reviewed.

For this project, the GNWT plans to work with consultants to complete a pest risk analysis for MPB which will include a risk assessment and the determination of potential risk response options for a management strategy. The project will also refine the inventory of pine in the NWT that may be vulnerable to the MPB.

EXPECTED RESULTS

This project will produce maps of pine forests in the NWT vulnerable to MPB and assist in sustainable forest management decision-making. It will also provide a risk assessment, including the determination of future information needs, and identify management strategies and tactics at a management unit level. Management units will be defined by values at risk (e.g. property, boreal caribou) and the proportion of pine trees within a stand, known as pine hazard. Management options will also be identified.

Significance

Climatic conditions now allow Mountain Pine Beetle to survive in the NWT. Pine forests and values depending on them may be at risk.

Partners

- GNWT Environment and Natural Resources, Forest Management Branch
- Aboriginal and Northern Affairs Canada
- Natural Resources Canada
- University of British Columbia
- Alberta Environment and Sustainable Resource Development
- JCH Forest Management

FOR MORE INFO

Forest Management Division
Department of Environment and Natural Resources
Government of the Northwest Territories
Box 7, Fort Smith, NT,
X0E 0P0
(867) 872-7700

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