

# Pine Beetle Management in Canada

2007

The Mountain Pine Beetle (MPB) is the most destructive native insect pest of mature lodgepole pine forests in Canada. British Columbia is currently experiencing a mountain pine beetle epidemic throughout the range of lodgepole pine forests in the Province. Alberta is also experiencing an unprecedented expansion of MPB populations into the pine forests along the eastern slopes of the Rocky Mountains that could expand east to the boreal forest.

The MPB is native to the lodgepole pine forests of western North America and is a periodic source of disturbance in these stands. Normally, forest fires and cold temperatures combine to keep the population low. But in this case, nearly a century of wildfire suppression and recent milder winters have combined to create ideal conditions for the pest. Western forests are full of mature pine, the invader's preferred host, and the beetle's mortality rate is low. The result: the largest infestation ever recorded in North America.

Spreading at an alarming rate, by 2005, the epidemic had extended to 8.7 million hectares of British Columbia forest. Some 450 million cubic metres of pine have been killed—that is six years' worth of harvest at pre-infestation levels. Forecasters believe that, by 2013, some 80 percent of the province's mature pine may be affected.

What's more, research shows that the beetle's suitable range is extending to the east and north and to higher altitudes. There are outbreaks in western and southern Alberta, over the border into Saskatchewan, and in several U.S. states. The epidemic is now threatening different pine species, including the jack pine of the northern boreal forest. Should the beetle take hold there, the infestation would go national.

The boreal or "northern" forest is Canada's largest biome or environmental community. It occupies 35% of the total Canadian land area and 77% of Canada's total forest land, stretching between northern tundra and southern grassland and mixed hardwood trees. The boreal forest's animals, plants and products affect each Canadian every day, from paper products, to the jack pine railway ties, through to the air we breathe.

Timing is critical to effectively control a MPB infestation. Early detection is key as treatment of the infested trees at the outset of an infestation is the only proven control method. If an infestation is not controlled early the result could be widespread and disastrous such as the one in BC.

Funding for research, planning and long term ecosystem management is of high priority. Issues such as hazard tree management, post epidemic pine deadfall, fuel hazard reduction and wildfire management, maintenance of recreation values and management of adjacent access will require continuing efforts from protected area managers.

Prevention of MPB outbreaks requires a long-term and comprehensive forest management plan to reduce tree and stand susceptibility to MPB. In 2006 the Government of Canada invested \$200 million in British Columbia to deliver a comprehensive, integrated strategy to combat the beetle infestation.

The BC / Federal Mountain Pine Beetle Program measures focus on the following:

- Slowing the spread of the beetle.
- Recovering economic value from trees killed by the beetles.
- Protecting communities and forest resources in areas affected by the infestation.

Project activities include measures to control the eastward spread of the beetle in British Columbia and along the British Columbia–Alberta border. The program will also assist affected communities in identifying new forest products, markets, industries and services to help ensure their long-term economic well-being.

Canada is the world's largest exporter of forest products, with about one third of Canada's potential harvest coming from British Columbia. Canada has 10 percent of the world's forests, including 30 percent of the world's boreal forests. Forests provide jobs and economic benefits for many communities and contribute to the well-being and health of Canadians and our environment.

### **Recommendations**

That the federal government:

1. In consultation with the affected industries, establish a nationwide Mountain Pine Beetle strategy with adequate funding required for focusing on early detection and removal of infested trees.
2. Form an alliance with the provinces and territories in a strategic attack to mitigate the impact of mountain pine beetle will have on our country and its economy by using tactical approaches that will help stop the beetle from making its way across the boreal forest.
3. Work with non-governmental fish and game, and environmental associations in addressing this epidemic and its impact on natural resources and its environment.
4. Be proactive in aggressive management of forests in Parks Canada
5. Assess the impact of the MPB epidemic and its impact on communities in forested areas and assist those communities in the development of strategies that promote economic diversification.