

## Pine Beetle Management in Canada

The mountain pine beetle (MPB) is the most destructive native insect pest of mature pine forests in North America. British Columbia has experienced a mountain pine beetle epidemic throughout the province. Spreading at an alarming rate, forecasters believe that by 2013, 80 percent of the mature pine in B.C. will be dead.

Alberta is also experiencing an unprecedented expansion of MPB populations. Survey results of the 2009 MPB flight on Alberta's pine forests indicate that the dispersal was more severe than the flight experienced in 2006. Beetles are now being detected farther east, north and south than ever before, with outbreaks into Saskatchewan and in several U.S. states. Should the beetle take hold in the jack pine of the boreal forest, the infestation would go national. The boreal forest is a mixture of deciduous and coniferous trees that covers northern Saskatchewan and extends to Canada's east coast.

The MPB is native to the lodgepole pine forests of western North America, but breed in any species of pine. 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 invaders' preferred host, and the beetle's mortality rate is low. The result: the largest infestation ever recorded in North America.

The boreal, or "northern" forest is Canada's largest biome or environmental community. It occupies 35 percent of the total Canadian land area and 77 percent 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 MPB infestation. Early detection and treatment of infested trees is a vital method for mitigating the spread of the beetle. If an infestation is not controlled early, the result could be widespread and as disastrous as has occurred in B.C.

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 over three years in the Canada - British Columbia Mountain Pine Beetle Program to reduce the consequences of the beetle infestation and assist in efforts to slow the infestation's eastward spread. The program focused on controlling the spread, recovering the economic value, and protecting forest resources and communities.

Since that time, however, federal government funding and initiatives to address MPB spread have experienced significant reductions. Only \$18 million in federal funds targeted for surveys and MPB spread control have been invested in Alberta.

Canada is the world's largest exporter of forest products and has 10 percent of the world's forests, including 30 percent of the world's boreal forests. The impact of MPB on Canada's forest industry and, in turn, the contributions of the industry to our communities and our country, is of significant concern.

In British Columbia, this eco-system altering epidemic is causing widespread mortality of the lodgepole pine forests, the province's most abundant commercial tree species. In Alberta, of 25 major forest companies (Annual Allowable Cut of 10,000 m<sup>3</sup> or greater) in operation, more than half of them rely on pine to continue operations. Another two medium and 21 small operators would be severely impacted by declines in their AAC, caused by MPB.

Forests play an integral role in our country: they provide jobs and economic benefits for communities from east to west 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 MPB 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.
6. Work with provinces to develop strategies to rehabilitate areas affected by MPB.