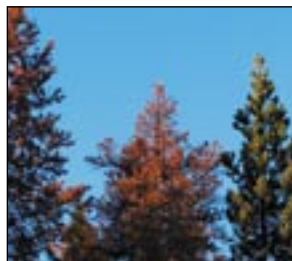




Mountain Pine Beetle and Forest Management in the Lakes

The Morice & Lakes Innovative Forest Practices Agreement is a partnership between six regional forest licensees and BC Timber Sales in both the Morice and Lakes Timber Supply Areas. It is developing sustainable forest management plans using innovative approaches in public involvement, forest productivity and ecosystem-based management.



A Large Scale Crisis

Some seven million hectares of British Columbia was affected by the mountain pine beetle in 2004. Of this total, over four million hectares involved the Northern Interior Forest Region. The epidemic is a forest health crisis that affects most of British Columbia and has a huge influence on forest management decisions in the province

According to the Canadian Forestry Service, historic mountain pine beetle infestations never went beyond attacking 65% of the provincial lodgepole pine forests. The new forecast models developed recently by the Ministry of Forests suggest 80% and possibly even 100% of the lodgepole pine could be hit in certain areas of the province. In the meantime, forest managers in interior communities are looking at ways to deal with this crisis.

The Beetle and Local Forests

It is not possible to manage the forests of the Lakes without taking into account the scale of destruction being caused by the beetle in the area. Lodgepole pine stands, both pure and mixed, comprise about 76% of the timber harvesting landbase in the Lakes. The Nadina Forest District, which comprises both the Morice and Lakes Timber Supply Areas, is the fourth hardest hit district in the province (behind the Quesnel, Chilcotin and Vanderhoof Forest Districts) with total area affected at 793,600 hectares.

SFM Planning and the Mountain Pine Beetle

The implications for planning in the M&L IFPA are significant: beetle forecast data has been factored into the planning process and, as a result, timber supply models have been adjusted to reflect lodgepole pine mortality. IFPA committee members, management and consultants are all working with government ministries and local forest companies to ensure that up-to-date beetle information forms an integral part of IFPA forest planning efforts now and into the future.

The Lakes SFM Plan

The major challenge during the term of Version 2 of the Lakes SFM Plan (March 2006) is to ease the expected mid-term timber supply fall-down as a result of the MPB epidemic. A beetle mitigation strategy is a key component of the scenario planning process in the Lakes. One of the approaches within this strategy is a harvest priority protocol, which can best be described as "the best of the worst first." That is, stands with the largest projected beetle related volume losses are high priority and, within these stands, the more productive forests are a higher priority still. The intention is to salvage as much of

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the beetle killed wood as possible before the assumed five-year shelf life has expired, and to get the best growing sites back into production first.

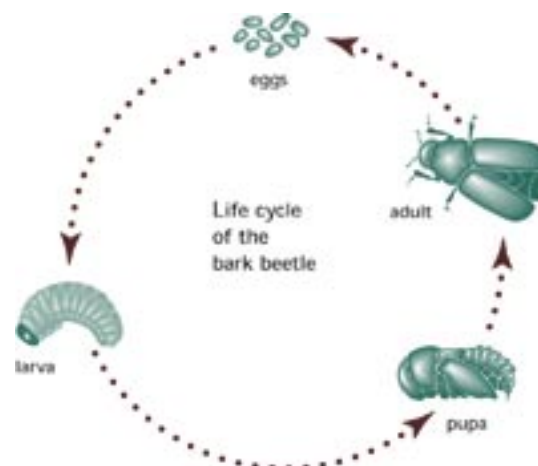
The most recent information and knowledge related to the current status and dynamics of the MPB epidemic have been incorporated into analysis work and management strategies. The hope is that by staying on top of beetle forecasts, forest managers will be prepared to respond in a manner consistent with SFM values and indicator targets. In addition to MPB pine kill projections through to 2013, the Lakes SFM plan is also utilizing forest inventory information that factors in beetle kill losses prior to harvest, and updated operating area coverage from the Nadina Forest District.



Of course, harvesting strategies need to fall within a sustainable framework, ensuring that all forest values, including biodiversity, wildlife and ecological integrity are an integral part of the planning process. Analysis work that has been completed to date helps forest managers understand how much non-timber values will be compromised—and how long they will take to recover—as a result of the harvesting of beetle-destroyed timber. This will point the way to future reforestation and silviculture efforts.

How Does the Beetle Kill the Tree?

Mountain pine beetles destroy living trees by laying eggs under the bark. When the eggs become larvae they “mine” the phloem—the layer between the bark and wood of a tree—cutting off the tree’s supply of water and nutrients. In addition to the girdling of the tree by larvae mines, adult beetles also carry spores of a “blue-stain” fungus (see photo on cover) that also shuts down the tree’s pitch production and ability to overcome beetle damage.



Graphic courtesy BC Ministry of Forests

Sources:

Beetle Information Bulletin, March 2005, BC Ministry of Forests and Range

A Guide to Mountain Pine Beetle, The Mountain Pine Beetle Initiative, Natural Resources Canada, December 2004

Lakes Timber Supply Area, Rationale for AAC Determination, October 1, 2004



March 2006

