Mountain Pine Beetle Ecology Program

Prevent the spread north and south and eastward into the boreal forest.

The Foothills Research Institute's Mountain Pine Beetle Ecology Program was born out of the Wildland Fire Research Program proposal, submitted for funding in March of 2007. The concept of the proposal was to carry out focused research and investigations in regards to forest ecology as related to mountain pine beetle infestations. The work of this program is initially funded for a three year period (2007 to 2009), with an expectation of growth as more agencies join the effort. Established under the Landscape Dynamics Program Theme, the research conducted by this Program will examine current and emerging aspects of the effects of mountain pine beetle on the ecology and wildland fire management in the foothills and mountainous areas of Alberta.

The projects to be funded and their deliverables will be determined on a priority basis as reviewed and recommended by the program's activity team. As this is the inception year the program activity team is currently putting together the list of priorities, direction for projects and a funding strategy.

A major concern lending urgency to this research imperative is the emerging infestation of mountain pine beetle. Much uncertainty surrounds the potential impacts of mountain pine beetle on forest ecology and the related implications. Some areas of concern are; fire intensity and frequency, vegetation change in unsalvaged infested stands, effects on the growth and yield of lodgepole pine, and effects on ground water hydrology.

Mountain Pine Beetle & Climate Change

Mountain pine beetle and climate change together will have implications for forest ecology and silviculture strategies. For instance, will stands from such unprecedented fires replace themselves naturally as they have in the past or would intervention be required? How will the ecology of forest stands in these new circumstances affect decisions for silviculture strategies including the choice of species for reforestation? These questions are being asked today, and the information and data is required to populate forest management planning models. Unfortunately, little is known at this time, except that business as usual will not be the norm.

Through research, collaboration, communication and extension, and partnership development tasks the MPBEP lead by a partner driven Activity Team will strive to:

1) Maximize the ecological integrity of the affected forest landscape
2) Adjust practices to minimize disturbance factors affecting the landscape
3) Understand and mitigate related disturbance factors such as: wildfire occurrence and intensity, hydrology changes
4) Plan for resource management knowing the changes to the forest ecology and landscape.

Foothills Research Institute is a leader in developing innovative science and knowledge for integrated resource management on the forest landscape through diverse and actively engaged partnerships.

The Foothills Research Partnership Ltd. landbase is located in west-central Alberta, and is based in the resource community of Hinton, some three hours west of Edmonton. It covers roughly 2.75 million hectare (27,500 square kilometres), and embodies Jasper National Park of Canada, the Willmore Wilderness Park, and the Forest Management Area of Hinton Wood Products, a Division of West Fraser Mills Ltd. It also includes some provincial "crown forest management units" and the Hinton Training Centre's Cache Percotte Training Forest. Within its boundaries are three forest areas—boreal, montane, and sub-alpine—and many forest uses including timber, petroleum, and coal extraction, tourism, and recreation.

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