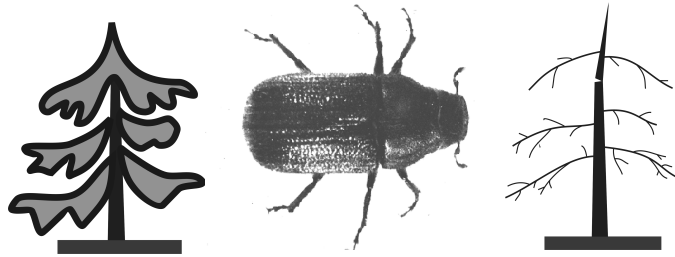


The Spruce Bark Beetle in the Boreal Forest of SW Yukon - Perceptions and Reality

Prepared by concerned residents of the Haines Junction area, March 2007



For more than a decade, the spruce bark beetle has been spreading through the forests of the SW Yukon. Most of us have probably formed an opinion on the effects the spruce bark beetle has on the environment, the economy, and on our community, and how we might best deal with this phenomenon. Public opinions encompass a broad range of, often conflicting, views, adding to confusion regarding perceptions and reality of the beetle outbreak in our forests.

Concerned residents of the Haines Junction area thought it would be helpful to bring some clarity to this issue by consulting knowledgeable people in governments, non-government organizations and universities.

Overall, we learned that significantly more research is required in the SW Yukon before reliable predictions about the effects of the beetle outbreak on the environment and communities can be made. Human intervention to mitigate perceived effects should not be implemented before adequate research is completed. However, comprehensive studies of beetle outbreaks have been conducted elsewhere in North America, providing a basis for understanding our local experience. Lessons from these studies are reflected in this information sheet.

If you are interested in learning more about this issue, or if you have any questions, please contact: Dieter Gade, P.O. Box 5488, Haines Junction, YT, Y0B 1L0 or gade@northwestel.net

First, some encouraging news!

In August 2006, Rod Garbutt of the Canadian Forest Service reported that the spread of the spruce bark beetle has slowed down in the SW Yukon, and the outbreak should collapse within 2 years. Mr. Garbutt indicated that, over time, parasites, disease and predators put pressure on the insects. In addition, recent cold and wet weather, as well as the natural chemical resistance of the trees may be contributing to the beetle population's decline.

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Perception: The spruce bark beetle outbreak is a disaster of major environmental significance. Human intervention is required to restore forest health.

Reality: Dead and dying trees do not necessarily represent poor "forest health". They may instead reflect a natural process of forest renewal. Standing dead trees and fallen logs play important roles in soil development, nutrient cycling, and the creation of wildlife habitat. For example, the forests east of Kluane National Park were subject to a significant beetle outbreak in the 1930s and 1940s. All indications to date are that the forest is recovering well without human intervention. No major forest fires have occurred in the outbreak area. Logging of naturally disturbed forests generally has few ecological benefits but may result in significant ecological costs.

Perception: The spruce bark beetle outbreak significantly increases risk of wildfires to our communities. This risk can be remedied by large-scale logging.

Reality: Communities such as Haines Junction that are nestled in the boreal forest face inherent risks from forest fires. This is true whether the forest contains a large number of dead trees or not. Under severe dry conditions, live spruce trees can be just as flammable as dead spruce trees. An effective way to reduce long-term forest fire hazard to communities is through FireSmart practices. FireSmart involves low impact methods of selective removal of forest fuels in and near communities, thereby targeting the areas of greatest concern.

Perception: A beetle attack is inevitably fatal for the spruce tree.

Reality: Generally, whether or not a spruce tree dies from a beetle attack depends on many factors. However, now that the beetle population is collapsing in the SW Yukon, trees affected but not yet killed by the spruce bark beetle, and those as yet unaffected, have a very good chance of survival.

Perception: The spread of the spruce bark beetle can be stopped by logging.

Reality: The spread of the spruce bark beetle cannot be effectively controlled or stopped by logging. By the time a stand of spruce is identified as being affected, the beetle has moved on. In British Columbia, for example, the spread of the mountain pine beetle could not be stopped. The beetle has now moved east into Alberta.

Perception: Dead spruce should be harvested to reduce greenhouse gas emissions (CO₂).

Reality: In the Kluane area, depending on the size of the tree, decaying mature spruce slowly release CO₂ over a decomposition period of up to 300 years. After a tree is logged, however, most of its CO₂ is released to the atmosphere through burning of debris, sawmill waste, conversion to firewood, etc. Only a small percentage of the tree's CO₂ is stored in the final wood product. At the end of the lifetime of this wood product, perhaps 50 years, it too releases its CO₂ content into the atmosphere. The issue of CO₂ budgets is very complex and depends on a number of variables. However, it is better to combat climate change by not logging dead trees, and instead, allowing the CO₂ stored in dead trees to be released over a long period of decay.