



Lodgepole Pine

Tree ID: Lodgepole Pine

The Lodgepole Pine (*Pinus contorta*) gets its name from the traditional Native American use of these strong, slender trees as the structural support for their lodges or tepees. The Latin name suggests a contorted form, which may be true of coastal varieties, but this tree grows tall (about 20 metres) and straight. They make tall, dense stands (sometimes descriptively called “dog-hair stands”), with branches restricted to the upper area of the trunk because the shade these stands create allows no growth lower down. These trees favour the lower elevations of the subalpine.

Lodgepole have hard cones with tight, flat scales. In order to release their seeds, these cones require the intense heat of a fire to open the resin that seals them closed. Thus, the practice of fire suppression in the park has resulted in stands of over-mature trees that can be vulnerable to disease and pests. Like all pines, Lodgepoles have both male and female cones on the same tree. The male cones are small and less noticeable, and generally fall off after the pollen has been released in late June or early July. You can see clouds of this thick, yellow pollen on the wind at times, and floating on the surface of bodies of water. The long needles grow in pairs about five to six centimetres in length.

The Lodgepole Pine is the provincial tree of Alberta.



Pine Beetle Problems

Since 2001, the Mountain Pine Beetle (*Dendroctonus ponderosae Hopkins*) has been invading the forests in British Columbia and Alberta. An insect about the size of a grain of rice, it can wipe out whole stands of mature pine forest within a month of infestation. Needless to say, the park, the forestry industry, and conservationists have responded with alarm. A number of management systems have been put in place, with limited success, to hold back the destruction.

The beetle kills trees by damaging their conductive tissue. Its presence infests the tree with a blue-stain fungi, and then the larvae of the beetle feed on the phloem (the innermost bark layer) of the tree. This impairs the transfer of nutrients.

The potential of a park, forested predominantly in pine, becoming a vista of dead stands of trees is a horrifying prospect to park management. What to do? Management policies specify that natural systems, such as disease or parasites, should be permitted to work their normal cycles. So should the beetle simply be left to do its dirty work?

At the same time, though, park management also has an obligation to consider the impact of its policy on adjacent land – and Alberta’s Sustainable Resource Development ministry elected several years ago to make an active attempt to control the spread of the pine beetle. Pine beetles prefer mature and over-mature stands of pine – which is precisely what exists in the parks after more than 80 years of fire suppression. Thus, one of the options to control the beetle’s spread was to meld it with the ongoing policy of burning as a part of the restoration of a normal ecosystem. Interestingly, there may also be a link with climate change, as prolonged cold spells were considered to have been a factor in preventing the beetle’s eruption. A cold snap of -40° C for 10 days is required to kill beetle populations. So park management may be hoping for long, cold winters to assist in their beetle battle.

Active management of the Mountain Pine Beetle started in 2003, and the situation is currently described as “static.”



Mountain Pine Beetle infestation, Dion Manastyrski

Facing page: Storm approaching Castle Mountain

