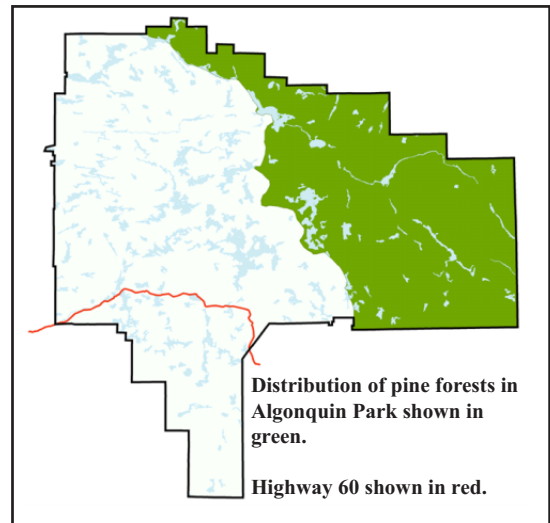


## Algonquin Pine Forests

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Coniferous forests of White Pine, Red Pine, and Jack Pine dominate the east side of Algonquin Park. Here the conditions are drier than in the west, making it unsuitable for moisture-loving Sugar Maple, but ideal for pine.

So why does the soil of the east differ from that of the hardwood forests of the west? The reason is elevation. The east side of Algonquin is at a lower elevation, 225 metres above sea level, whereas the west is approximately 450 metres above sea level. As the last glacier melted back 11,000 years ago, the meltwater drained from Algonquin's west side to the east. This large amount of meltwater washed away a lot of the smaller particles, or silt. In sections where the meltwater rivers moved slower, great quantities of sand were deposited over large areas. Thus, much of the soil on the east side did not contain the fine silt particles that are indicative of soil in the west. Without this silt, the soil is unable to act like a sponge and any water quickly drains through it.

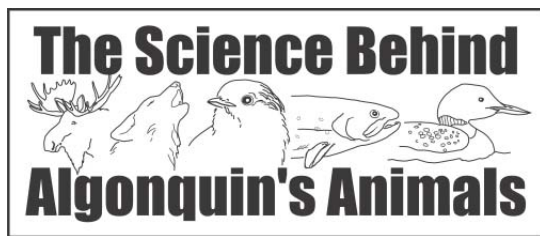


The difference in elevation also means that Algonquin's east side receives less precipitation than the west. The weather systems tend to move from west to east. As they move up over the western uplands of Algonquin they cool and lose their moisture in the form of either rain or snow. By the time a weather system reaches the east side of Algonquin it has lost much of its moisture. For this reason, the east side receives 10% less precipitation than the west side of Algonquin. This may not seem like a lot but, combined with soil that drains quickly, it is not favourable to species that depend on high moisture conditions, such as the Sugar Maple. Other trees that are drought-resistant though, such as pine and oak, can get established in these conditions.

Because of these conditions Algonquin's east side has a distinctive ecosystem with birds, plants, and animals that are less common on Algonquin's west side.

The dominant tree in Algonquin's pine forests is the White Pine. This is Algonquin's tallest tree and is characterized by its tall straight trunk, ruttled bark, and soft needles. The needles are the easiest way to





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differentiate a White Pine from other pines. The needles grow in a cluster of five, neatly spelling out 'white'. The needles of Algonquin's other pines all grow in clusters of two.

The other two main coniferous trees found in Algonquin's east side are the Red Pine and the Jack Pine. Red Pine has flaky, pinkish bark, the needles are clustered together in two's and they are longer than that of White Pine. Red Pines are very resistant to fungal and insect attacks thanks to the resin they produce. This resin, which most Park visitors refer to as 'pine gum', deters insect attacks and can seal off any wounds the tree may have.

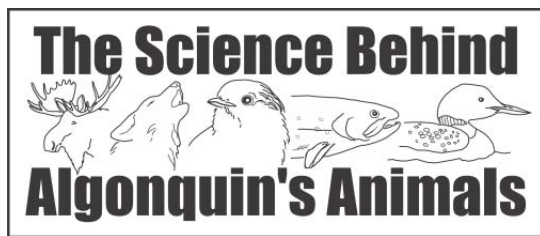
The White and Red pine are the two pines that most people associate with Algonquin's pine forests. There is a third pine that dominates areas of the east side, the Jack Pine. It is not as tall and majestic as the first two, rarely getting taller than 15 metres. It has a gangly, unkempt appearance, the bark is dark and flaky, and the needles are short and grow in clusters of two. This is a tree that is virtually absent from Algonquin's west side. It is very common on the east side, even dominating some areas, thanks to the sandy, drier conditions.

Algonquin's east side is not solely dominated by pines. One deciduous tree is adapted to survive in the dry, sandy, conditions of the east, the Red Oak. The Red Oak is virtually absent from the hardwood forests of Algonquin's west side but is quite common in the pine-dominated forests of the east. By closing the pores on its leaves and shutting down its metabolic system the Red Oak is able to survive in the drier conditions until the next rainfall.

Most people would associate wildflowers with a hardwood forest. The pine forest, though, offers a wide variety of wildflowers such as Starflower, Fringed Polygala, Bluebead Lily, and Pink Ladyslipper. One of the common wildflowers to be found in Algonquin's pine forests is the Bunchberry. By June this low-lying plant is readily found covering the forest floor. It is easily identified in spring by its white floral heads and later in the summer by its cluster of red berries.

The dry, sandy conditions are ideal for another, very common plant that most visitors to Algonquin Park are familiar with and have enjoyed eating, the blueberry. There are several types of blueberry in





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Algonquin Park but the one most common in the pine forests is the Low Blueberry. While Park visitors enjoy eating blueberries one animal in particular relies on this important food source during the summer, the Black Bear. Although Black Bears are found throughout Algonquin Park, the conditions in Algonquin's east side forests are especially favourable. As mentioned, blueberries are an important food source during the summer for Black Bears. As summer gives way to fall, the acorns of the Red Oak become another important food source for bears as they try to fatten up for the winter. This stored fat is an important source of food energy while the bears hibernate from late October to early April. It is especially important to female bears, as the amount of stored fat will determine how many young they will give birth to in January.

The Black Bear also relies on the White Pine for survival. Not as a food source, but as a place of refuge. The rough, soft bark of the White Pine makes it easy for bears to climb, especially small cubs. Mother bears will often rest or nurse their young beneath White Pines in case a quick getaway is needed.

While White Pines offer refuge for one of Algonquin's largest animals, it is also a food source for some of Algonquin's smaller inhabitants. As the soil and tree species differ in the east so does the bird life. The Red Crossbill only feeds on the seeds of White Pine and is more prevalent in the pine forests of the east. It has a specialized bill which is crossed, as the name implies, for extracting seeds from pine cones. This allows the bird to pry open the scales of pine cones, and using its tongue, extract the seed inside. The populations of Red Crossbills can vary from almost non-existent one year, to tens of thousands the next. This fluctuation in numbers is based on the size of the seed crop produced by the pines. In years with no or very few cones, the crossbill population will be low. In years where pines produce a bumper crop of cones the crossbill population will be quite high.

Some of Algonquin's warblers, such as the Yellow-rumped, Magnolia, Black-and-white, and Pine, make their home in coniferous forests. The Black-and-white Warbler utilizes only the trunk of pine trees in its search for insects. It often can be seen working its way up or down the trunks of pines. The Pine Warbler hunts for insects exclusively in pine trees, ignoring other equally insect rich-trees in its territory. Its broad head and slightly larger bill helps it push aside pine needles in search of its prey, and its larger legs and feet help it hold on to the trunk while searching for insects.

~~It is interesting to think that the slightly lower elevation of Algonquin's east side is responsible for the dominant pine forests and the plants and animals that utilize this different ecosystem.~~

