

# The Boreal Forest

By Christine Dalton

Imagine you are on a ridge in the middle of a forest. You might recognize some of the **coniferous** (cone-bearing) trees: pine, balsam fir, western red cedar, and black spruce. There are also a few birches and aspens. It's summertime, and the day will be long—as long as 19 hours. But it isn't hot. As you look around, you can see lakes and rivers and bogs.

On the ground are many decomposing tree needles. The fallen needles take a long time to break down here because the winters are long and cold. You also notice swarms of flies and mosquitoes. Watch and wait, and you will see insect-eating birds such as warblers feeding on them. If you are lucky, you may also see mammals—bears, moose, lynx, caribou, and wolves.



subalpine fir



wolf



cape may warbler

## Where in Canada are you?

You are in the **boreal forest**.

Boreal forests occur just south of the arctic tundra across Canada and Alaska. The northern third of British Columbia is boreal forest. If you could hop across the

ocean from continent to continent, you would find boreal forests in Europe and Asia as well. Boreal forests also occur at high elevations in mountain ranges like the Rockies. In terms of climate and growing conditions, moving up in elevation can be like moving up in latitude (that is, from the equator towards the poles). In B.C., many plants and animals of the boreal forest can also be found in the high alpine.

The boreal forest is a **biome**—a large land area characterized by a certain climate and types of plants. Some other biomes that you might be familiar with are deserts, prairies, and tropical rain forests.



Black Bear

## Photo credits:

- Wolf: Clive Bryson, B.C.
- Black Bear: Rosemary Taylor, B.C.
- Subalpine fir: Andrea Paetow, B.C.
- Lynx: David Shackleton, B.C.
- remainder: istock



moose



lynx





**The Boreal forest covers more of the Earth than any other Biome.**

Plants and animals of the boreal forest have special **adaptations**. (An **adaptation** is a feature that allows a plant or animal to survive.) Conifers are well adapted to the cold, dry conditions of the boreal winter. If you rub a needle from a pine or fir tree, you can feel that it has a waxy coating. This waxy coating, plus the narrow shape of the needles, helps the tree hold on to moisture even in strong winter winds.

The animals of the boreal forest have special adaptations too. Bears and wolves have thick fur that keeps them warm. Lynxes have large padded paws so they can run on the snow. The wood frog (*Lithobates sylvaticus*) can freeze its body tissues when cold weather comes, but a fluid that acts like antifreeze protects its vital organs!

Watch how the wood frog turns itself into a “frogsicle”:

<https://www.youtube.com/watch?v=pLPeehsXAr4>

Now you know how some plants and animals survive in the boreal forest. What would you do to survive in a very cold climate?

Plants that grow in other parts of B.C. also grow in the boreal forest. In damp places near bogs, you can find Labrador tea. Twinflower and bunchberry grow on the forest floor. And there is a lot of moss. A delicious food from the boreal forest is the crowberry or arctic blackberry (*Empetrum nigrum*). It has seeds but is juicy and tasty! The berries last through the winter. When the snow starts to melt in early spring, people can still harvest the crowberries.

**crowBerry**



**Twinflower**



**LaBrador Tea**



**Magnolia warbler**



The boreal forest is the breeding ground for hundreds of bird species. Many **neotropical** migrants—that is, birds that migrate to the tropics for winter—come back north to breed. In the summer, birds that are rare elsewhere in B.C., such as the Magnolia, Cape May, and Tennessee Warblers, show up in the boreal forest.

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