

The Boreal Forest

The boreal forest is a worldwide band of conifer-dominated forest that stretches across Scandinavia, Russia, Alaska and northern Canada covering an estimated 1.7 billion hectares. These boreal regions store more freshwater in wetlands and lakes and more carbon in trees, soil and peat than any other terrestrial ecosystem. Within Canada, the boreal forest region covers more than 290 million hectares. Ontario's portion of the boreal forest extends from the northern limits of the Great Lakes-St. Lawrence Forest to the Hudson Bay Lowlands. With an area of 50 million hectares, this forest region contains two-thirds of Ontario's forest.

Forest management in Ontario only takes place on 24.8 million hectares of the boreal forest. Nine per cent of this area has been designated as parks and protected areas.

Tree Species

Boreal tree species are associated with particular soil types and terrain conditions. For example, black spruce and larch (tamarack) are often found in poorly drained areas, while trembling aspen (poplar), white spruce, white birch and jack pine grow on well-drained upland or rocky sites.

Boreal softwoods (jack pine, black spruce, white spruce, larch, and balsam fir) and intolerant hardwoods (trembling aspen, white birch, and balsam poplar) are generally found in stands where trees are all of a similar age and size.

black spruce forest



forest fire



Natural Disturbances

Boreal forests have been influenced and shaped by natural disturbances such as wild fires, extreme weather and insect infestations.

Weather events also affect forest conditions by blowing down large swaths of trees, or causing snow and ice damage. Forest insects such as the spruce budworm or forest tent caterpillar can defoliate vast areas of forest.

woodland caribou



Wildlife

The boreal forest supports a wide variety of wildlife. There are predators such as wolves and lynx, large ungulates such as moose and caribou, 300 species of migratory birds ranging from the great gray owl to the tiny winter wren, and many small mammals such as the marten, varying hare, red fox and porcupine.

| Boreal Forest Area by Land Class | Area in thousands of hectares |
|-------------------------------------|----------------------------------|
| Non-forested Land | |
| Water | 6,336.6 |
| Wetland | 1,655.8 |
| Rock | 170.8 |
| Field/Agriculture | 65.4 |
| Other (Misc./Unknown) | 446.0 |
| Subtotal: | 8,674.6 |
| Forested Land | |
| Treed Bog, Fen & Swamp | 4,088.7 |
| Deciduous (Hardwood) | 2,274.4 |
| Conifer (Softwood) | 11,839.3 |
| Mixed Forest | 9,687.7 |
| Sparse Forest | 8,674.3 |
| Disturbance - Harvest | 1,960.2 |
| Disturbance - Fire | 1,656.6 |
| Regenerating Forest | 990.0 |
| Subtotal: | 41,171.2 |
| Grand Total: | 49,845.8 |

Natural. Valued. Protected.

Defining the Boreal Forest

The Ontario Ministry of Natural Resources uses the Rowe's Forest Regions definition for the boreal forest in Ontario. This definition does not include the taiga, which is the transition zone between boreal forest and tundra.

Some other organizations define the boreal forest differently, and may include the taiga and portions of the Great Lakes-St. Lawrence forest in their definition. These differences in definition may result in the presentation of widely differing data and statistics related to Ontario's boreal forest.

Forest Management in the Boreal

Forest management only occurs on 49 percent of Ontario's Crown boreal forest. Management decisions on this area are guided by the latest science under a strict regulatory regime. Independent forest audits and public input into the planning process are critical components of Ontario's forest management system.

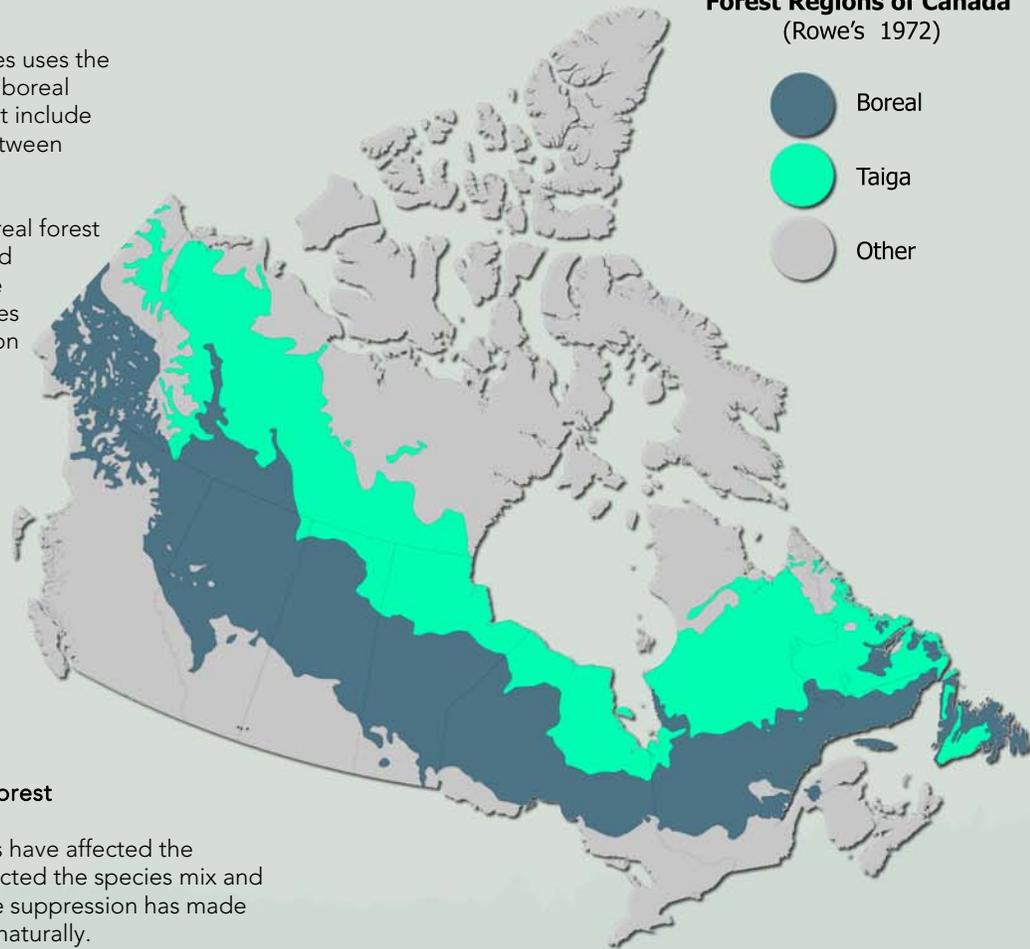
Age Class Distribution of the Boreal Forest

During the last 80 years, human activities have affected the boreal forest. Timber harvesting has affected the species mix and arrangement of the forest, and forest fire suppression has made the forest much older than would occur naturally.

Age Class Distribution of Ontario's Boreal Forest



Forest Regions of Canada (Rowe's 1972)



| Boreal Statistics | Area in thousands of hectares |
|---|-------------------------------|
| Canada's boreal forest area | 290,775.8 |
| Ontario's boreal forest: | |
| Total area (all land and water) | 49,845.8 |
| Forest area | 41,171.2 |
| Percent of Canadian boreal | 17.1% |
| Percent of Ontario's area | 50.7% |
| Boreal forest within parks and protected areas | 4,496.6 |
| Percent of Ontario's boreal forest within parks and protected areas | 9.0% |
| Managed Crown boreal forest - area | 20,159.9 |
| Percent of Ontario's boreal forest that is managed Crown | 49.0% |