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LAB



Low Subarctic Forest

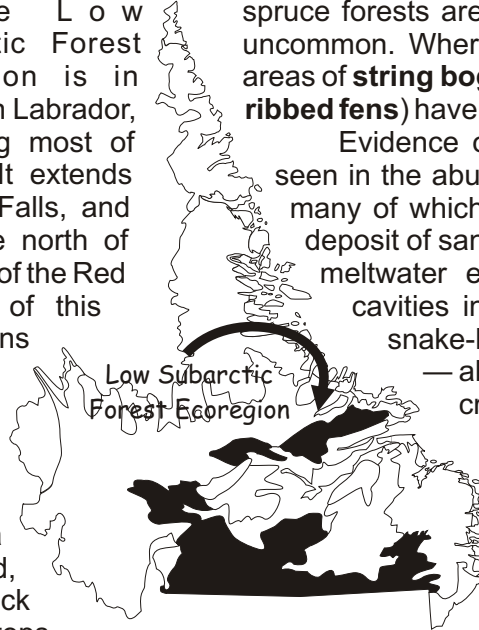
The main portion of the Low Subarctic Forest ecoregion is in southern Labrador, spanning most of the Quebec-Labrador border. It extends northward as far as Churchill Falls, and also includes two outliers: one north of Lake Melville, and another north of the Red Wine Mountains. No portion of this ecoregion is coastal. Elevations range from 500 metres to 670 metres above sea level.

The Low Subarctic Forest is characterized by rolling hills covered by shallow till — sediment deposited by a glacier — and dissected by broad, flat river valleys. Although bedrock outcrops are common along hilltops,

much of the ecoregion is forested. Open black spruce forests are typical, with deciduous trees uncommon. Where drainage is poor, extensive areas of **string bogs** and **string fens** (also called **ribbed fens**) have developed.

Evidence of past glacial activity can be seen in the abundance of kames and eskers, many of which occupy valleys. A kame is a deposit of sand and gravel formed by glacial meltwater either beside a glacier or in cavities in the ice. An esker is a long, snake-like ridge or series of mounds — also made of sand and gravel — created by a glacial stream.

Drumlins are another common geographic feature in this ecoregion. A typical drumlin is an oval or egg-shaped hill that formed at the base of a moving glacier.



Soil Profile: Like most of Labrador, the formation of soil in this ecoregion is limited by two factors: cold weather, which keeps the land frozen for much of the year, and glaciation, which scoured the land as recently as 10,000 years ago. Soils are mostly stony fibrisols, with rocky outcrops throughout.

Ecoregion: An area that has distinctive and repeating patterns of vegetation and soil development, which are determined and controlled by regional climate. Ecoregions can be distinguished from each other by their plant communities, landscapes, geology, and other features. These characteristics, in turn, influence the kinds of wildlife that can find suitable habitat within each ecoregion.

Bogs and fens: Two types of peatlands, which are wetlands characterized by poor drainage and a thick layer of peat — soil consisting of the remains of partly decomposed plants.

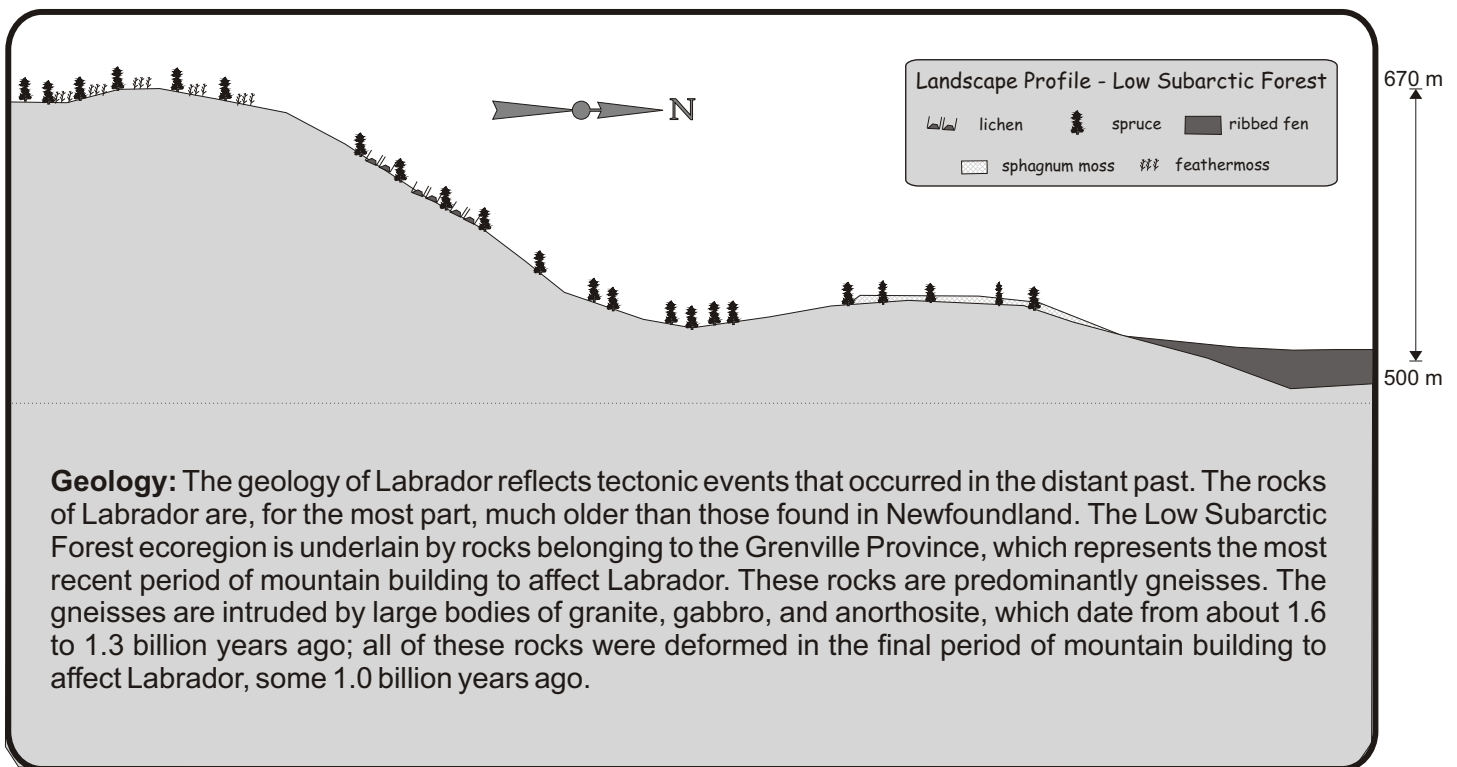
Shrubs and mosses are the common plants in peatlands, particularly sphagnum moss, which acts like a giant sponge as it soaks up large quantities of water, then slowly releases it. Not only does sphagnum moss prevent flooding and erosion, but it provides a platform on which other plants can take root and grow.

Fens generally have more grasses and sedges than bogs, and so look more meadow-like. Because bogs receive most of their nutrients from rainfall, they are generally nutrient-poor. Water entering fens, on the other hand, seeps in from nearby soils and results in a more nutrient-rich habitat.

Several types of fens and bogs occur in Newfoundland.

String bogs and string fens: Narrow ridges or "strings" of hummocky vegetation alternating with numerous pools. The basic difference between string bogs and string fens is in the plant cover: string fens contain more sedges and grasses, while string bogs contain more sphagnum moss. Both are common in Labrador.

Closed-crown forests: Forests in which the main branches of trees meet or overlap, allowing only a small amount of light to reach the forest floor.



Vegetation Profile

Black spruce forests characterize the Low Subarctic Forest ecoregion. Compared to the adjacent High Boreal Forest and Mid Boreal Forest ecoregions, in which **closed-crown forests** dominate,

forest cover here tends to be more open. Balsam fir and white spruce are also present, but less common, occurring usually on moist, well-drained slopes.

Lichen woodlands, which are open wooded areas containing widely spaced black spruce with an understory of light-coloured lichens (*Cladonia* species) and some shrubs such as Labrador

tea, dwarf birch, and blueberry, are common on dry, sandy sites such as kame terraces.

In the lower, wetter areas, black spruce forests with an understory of sphagnum moss occur. Larch can be found growing along streams and lakes. Hilltops are commonly without tree cover and characterized by bedrock outcrops. **17**

Species in Focus: Black spruce (*Picea mariana*) is the most abundant tree in Labrador, accounting for about 70 percent of forest cover. In particular, it is the dominant species in lichen woodlands, which occur on nutrient-poor, sandy soils and occupy about half of the total land area of Labrador. Here trees are widely spaced with a carpet of lichens between.

Black spruce has reddish-brown bark, is often straight, and lacks lower branches in dense forests. The needles are dark bluish-green. The stubby cones, which are two to three cm long, hang from branches — a field mark that helps distinguish it from the common balsam fir, which has cones that sit upright on branches, and from white spruce, which has cones that are longer and tapered.



Photo: Parks and Natural Areas Division

Wildlife Profile

Caribou belonging to several herds — including the George River, Mealy Mountain, Red Wine, and Dominion Lake herds — occur in the barrens and forest/shrub habitats of this ecoregion. A number of other mammals inhabit the same kind of habitats, including porcupine, moose, lynx, American marten (known locally as pine marten), mink, snowshoe hare, rock vole, masked shrew, woodchuck, red squirrel, red-backed vole, star-nosed mole, woodland jumping mouse, flying squirrel, heather vole, and pygmy shrew.

On the barrens, northern bog lemming are found, while meadow vole and meadow jumping mouse occupy wetland habitats. Beaver, water shrew, muskrat, and river otter are at home in aquatic habitats. Species known to occur in a variety of habitats include black bear, least weasel, red fox, short-tailed weasel, and wolf.

Spruce grouse, northern flicker, yellow-rumped warbler, gray jay, fox sparrow, and black-backed woodpecker are a few of the many bird species common in the forests of this ecoregion. Boreal owl, great horned owl, and northern hawk owl nest in low numbers in the forests here.

In shrub/thicket habitats, yellow-bellied flycatcher, Wilson's warbler, and white-throated sparrow are common nesters, while in wetland habitats, greater yellowlegs, rusty blackbird, common snipe, and Lincoln's sparrow occur. Black duck, common loon, common goldeneye, common merganser, belted kingfisher, and spotted sandpiper nest near freshwater.



Photo: Pierre Ryan

Species in Focus: The woodchuck, or groundhog, belongs to a large family of rodents that includes the squirrels and chipmunks. Woodchucks have thickset bodies, broad flat heads, and powerful legs. They feed primarily on green vegetation, though when they first emerge from their burrows in spring they are limited to bark and twigs. During the summer woodchucks can be seen sitting at the entrance to their burrows watching visitors with curiosity, though as soon as a visitor gets too close they dive down their burrow with a shrill whistle.

Fish occurring in the lakes, rivers, and streams of the Low Subarctic Forest are lake whitefish, three-spine stickleback, nine-spine stickleback, brook trout, lake trout,

northern pike, rainbow smelt, longnose sucker, and white sucker. Arctic char occurs occasionally. No amphibians or reptiles have been reported for this ecoregion. 17



Photo: Paul Linegar

Numerous rivers wind their way throughout this ecoregion, making it a popular destination for anglers.

Climate

The Low Subarctic Forest ecoregion experiences cool to warm summers and cold winters. Its growing season is 120 to 140 days.



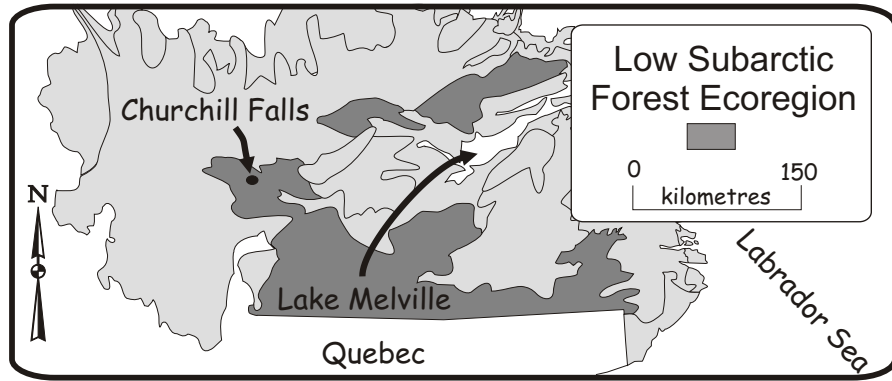
Annual rainfall
1000 to 1300 mm



Annual snowfall
3.5 to 5m



Mean daily temperatures
February -13°C to -21°C
July +13°C



Protected Areas Profile

There are no protected areas currently located in this ecoregion. However, a small portion could be protected under the proposed Lac Joseph-Atikonak Wilderness Reserve. Further protection could be established if the park boundaries of the proposed Mealy Mountains National Park were extended westward.

Focus on Forests

Both the island of Newfoundland, and Labrador south of the Nain area, lie within the Boreal Forest Region — a continuous belt of largely coniferous forest from

Newfoundland westward to the Rocky Mountains and then north-westward to Alaska.

White and black spruce are characteristic species throughout the Boreal Forest Region. In Labrador and on the Island, balsam fir, and to a lesser extent larch, are common. Some broad-leaved trees such as white birch also occur.


In Labrador, black spruce is the most common tree, increasing towards the north as the forests give way to the more open lichen woodlands, and eventually to the treeless tundra.

Because it is tolerant of poor soil conditions, black spruce is often the major tree species in both very wet and very dry sites. In forests, it may form dense stands, with most of the branches occurring at the crown due to insufficient light lower on the trunk. In wet or windy areas, black spruce may be dwarfed to a shrub. It is a relatively long-lived species, with

individuals 150 to 200 years old not uncommon.

Although black spruce also does well on better sites, it usually cannot compete with species that are faster-growing early in life, such as balsam fir, which is the major tree species in moist, well-drained sites and the second most abundant tree in Labrador, where it is found primarily in sheltered, inland river valleys. On the island of Newfoundland, balsam fir is the most abundant tree, constituting almost 50 percent of the forests.

Because black spruce cones can withstand forest fire, the species frequently colonizes areas in which other tree seed stock has been eliminated by fire, both on the Island and in Labrador.

Black spruce is highly prized by the pulp and paper companies, and as a result has been heavily cut on the Island. 



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Department of Environment and Conservation
Parks & Natural Areas Division
33 Reid's Lane, Deer Lake, NL A8A 2A3
PH (709) 635-4520
FAX (709) 635-4541
Email: parksinfo@gov.nl.ca
<http://www.gov.nl.ca/parks/>

Terra Nova National Park of Canada
General Delivery
Glovertown, NL A0G 2L0
PH (709) 533-2801/3154
FAX (709) 533-2706
Email: info.tnnp@pc.gc.ca
<http://www.pc.gc.ca/pn-np/nl/terranoval>

Gros Morne National Park of Canada
P.O. Box 130
Rocky Harbour, NL A0K 4N0
PH (709) 458-2417
FAX (709) 458-2059
Email: grosmorne.info@pc.gc.ca
<http://www.pc.gc.ca/pn-np/nl/grosmorne/>

For comments on this series, contact PAA: (709)726-2603 paa@nf.aibn.com <http://www.paanl.org/>