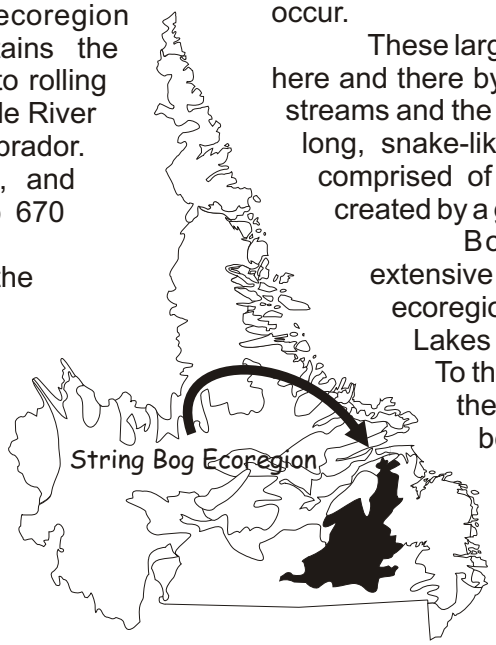
L9

String Bog

The String Bog ecoregion contains the flat to rolling Eagle River Plateau in southeastern Labrador. There are no coastal areas, and elevations range from 500 to 670 metres above sea level.

As its name implies, the landscape is dominated by extensive areas of string bogs. These are narrow ridges — or strings — of hummocky vegetation that alternate with numerous pools. As well, blanket bogs, which form extensively over hills and valleys with peat depths of one to three metres, occur.



These large areas of wetlands are broken here and there by shallow, fast-flowing rivers or streams and the occasional esker. An esker is a long, snake-like ridge or series of mounds comprised of sand and gravel, which was created by a glacial stream.

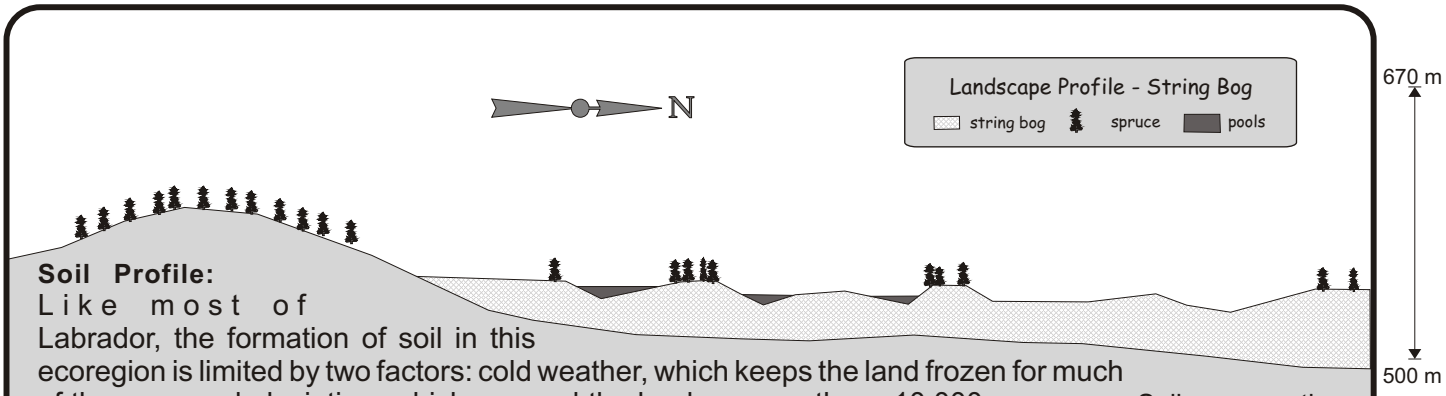
Bog development is most extensive in the southern portion of the ecoregion, where drainage is poorest. Lakes are also common in the south. To the north, on slopes approaching the Mealy Mountains, drainage is better and some forested areas occur.

Labrador Duck: Much is unknown about the extinct Labrador duck, including its habitat, general biology, and reasons for extinction. It was already rare by the time European settlers arrived in Labrador, with breeding grounds possibly restricted to southern Labrador and Quebec. In winter it probably occurred as far south as Chesapeake Bay. The last record of a living bird was from New York state in 1878.

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.

Focus on Porcupine: The porcupine is Canada's second largest rodent (the first is the beaver), and the only North American member of a more typically South American family. During the Pleistocene era it crossed the isthmus of Panama and invaded North America. In Labrador, porcupine inhabit forested areas, preferring sheltered wooded valleys. It is a sluggish, slow-moving animal that generally spends its day draped over a tree-branch. At night it becomes more active, feeding on the leaves of trees, shrubs, and small plants. In winter, it eats tree bark and twigs. Each summer, females usually give birth to a single young, which is covered with black hair and quills about an inch long. The quills are flat and limp at first, but the air soon hardens them.

The porcupine's unique quill covering — about 30,000 in the adult — is used in self-defense. When alarmed, the quills become erect. The animal turns its back on its attacker and begins whipping its club-like tail from side to side. Contrary to popular belief, the quills are not thrown, but once an attacker is struck, the quills easily dislodge from the porcupine's body, though not so easily from the attacker's.



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.

Geology: The rocks found in the String Bog ecoregion belong to the Grenville Province, which represents the most recent mountain building period in Labrador. Some of these rocks were formed as recently as 1.0 billion years ago! Anorthosites, gabbros, and granites form much of the bedrock in the northern part of the ecoregion; these rocks formed some 1.6 billion years ago and were later affected by tectonic activity associated with the Grenvillian orogeny (period of mountain building). In the southern part of the ecoregion the rocks are mostly granites, formed during the Grenvillian, with dates from 1 billion to 900 million years ago.

Vegetation Profile

Widespread string bogs with an abundance of open water dominate this ecoregion.

Typically, the vegetation covering the hummocky portions of the string bogs includes scrubby black spruce and larch with an understory of Labrador tea and Schreber's moss — a branching, light green to golden moss that forms extensive mats.

Most of the plants surrounding the open pools are sphagnum mosses, feathermosses, and sedges. Alder thickets are common along stream and river banks.

Balsam fir and white spruce grow in the few moist, well-drained sites. Lichen woodlands — open, park-like areas with an understory of light-coloured lichens (*Cladonia* species) and shrubs such as Labrador tea and dwarf birch — are common over the sandy eskers and other areas of coarse till (sediment deposited by a glacier). In general, lichen woodlands occur on nutrient-poor, sandy soils and cover about half of the total land area of Labrador. Black spruce, which is the most abundant tree in Labrador, is the dominant species in lichen woodlands.

Upland areas in the ecoregion tend to be well drained and prone to fire. White birch, which is considered a pioneer species, forms stands in burned areas. Pioneer species are so called because they successfully invade disturbed sites where soil is newly exposed. Such species, like white birch and larch, are also light-demanding, which means they require a lot of light for seed germination and seedling growth.

Although they are first to colonize a disturbed area, pioneer tree species quickly give way to more shade-tolerant species, as the forest grows up around them. Where this occurs in the String Bog ecoregion, white birch is replaced by the more shade-tolerant black spruce.

Species in Focus: Reindeer, or caribou, mosses (*Cladonia)* are actually lichens. They grow in stiff, pale yellow-green clumps and provide a major source of food for caribou, hence their name. A lichen is made up of two plants — a fungus and an alga — living together; it often occurs on solid surfaces such as rocks and trees in harsh climates. Lichens range in colour from white to black through various shades of red, orange, yellow, and green — sometimes strikingly vivid. Mosses, on the other hand, are primarily green plants belonging to the division Bryophyta, which also includes the liverworts and hornworts.

Photo: Parks and Natural Areas Division

Wildlife Profile

Mammals occurring in the forest/shrub habitats of the String Bog ecoregion include moose, porcupine, mink, American marten (locally called pine marten), snowshoe hare, star-nosed mole, little brown bat, woodchuck, red squirrel, heather vole, masked shrew, woodland jumping mouse, lynx, flying squirrel, and red-backed vole. Caribou belonging to the Mealy Mountain herd are found in both the forest/shrub and barrens areas.

Mammals living in the barrens are northern bog lemming and arctic fox, although the latter is found primarily in those areas closest to the coast.

The meadow jumping mouse occurs in wetland areas, while in aquatic habitats beaver, water shrew, muskrat, and river otter are found. Black bear, least weasel, red fox, short-tailed weasel, and wolf inhabit a variety of habitats within the ecoregion.

A number of different birds nest in the northern forests of this ecoregion. Characteristic species include the bald eagle, merlin, northern flicker, yellow-rumped warbler, hermit thrush, and spruce grouse. Bird species typical of shrub/thicket habitats are yellow warbler, Wilson's warbler, and tree sparrow. Rusty blackbird, short-eared owl, and Lincoln's sparrow breed in wetlands.

This ecoregion also provides important habitat for shorebirds and waterfowl. Shorebirds breeding in wetlands include the short-billed dowitcher, common snipe, and greater yellowlegs. Canada goose, red-breasted merganser, common goldeneye, belted kingfisher, solitary sandpiper, spotted sandpiper, and least sandpiper nest in the vicinity of freshwater.

Fish occurring in the lakes, rivers, and streams of the String Bog ecoregion include Atlantic salmon, three-spine stickleback, nine-spine stickleback, brook trout, lake trout, northern pike, rainbow smelt, longnose sucker, and white sucker. Arctic char occur occasionally, and fish that have been seen, but are considered rare for this ecoregion are American eel, lake whitefish, and burbot. No amphibians or reptiles have been recorded for this ecoregion.

Photo: Parks and Natural Areas Division

Species in Focus: The solitary sandpiper is a common breeder throughout the Eagle River Plateau. It lays its four eggs in the old nests of tree-nesting birds, such as the American robin and gray jay, in both deciduous and coniferous trees. It has dark black-brown upper parts, a white belly, streaked breast, and olive-green legs. Solitary sandpipers have a habit of nodding as they pick their way among the margins of quiet streams, marshes, and ponds in search of insects, worms, and other invertebrates.

Photo: Paul Linegar

Extensive string bogs dominate this ecoregion. Here narrow strings of bog vegetation alternate with numerous pools.

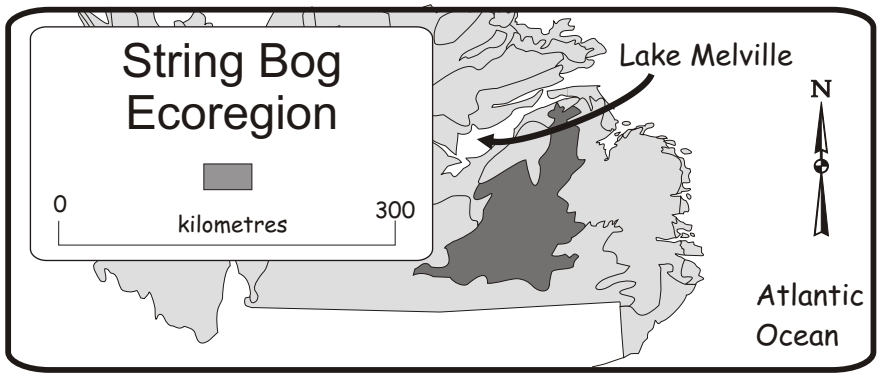
Climate

This ecoregion experiences cool summers and cold winters. The growing season is 120 to 140 days.

Annual rainfall
1000 to 1200 mm

Annual snowfall
5 m

Mean daily temperatures
February -13°C to -16°C
July +13°C



Protected Areas Profile

There are no protected areas currently located in this ecoregion. However, a portion of the ecoregion falls within the proposed Mealy Mountains National Park.

Focus on Salmon/Eels

Atlantic salmon occur commonly in the lakes and streams of the String Bog ecoregion, though the area has no coastal zones. It is anadromous, meaning it spends the bulk of its life in the ocean and migrates to fresh water to breed. Every autumn adults return to spawn in the gravel bottom of the same streams and rivers where they hatched. Unlike the Pacific salmons, which normally die after spawning, most Atlantic salmon return to sea and spawn again in subsequent years.

The eggs develop slowly, and do not hatch until the following spring. The young go through a number of stages in fresh water, but after two to four years (depending on environmental conditions) they turn from a dark, mottled colour to gleaming silver, and swim swiftly downriver to the sea.

The silvery colour helps camouflage the salmon during its life at sea, but makes it easy prey to birds while it's still in fresh water. After one to several years at sea, during which time tremendous growth generally occurs, the adults return to spawn in the same river in which they were hatched.

The American eel, on the other hand, is catadromous, meaning it spends most of its life in fresh water and migrates to the ocean to spawn. While in fresh water it occupies pools and eddies, and feeds on a wide variety of fish and invertebrates. Eels can wriggle overland through wet vegetation between disconnected bodies of water. During the winter they burrow beneath bottom mud to hibernate.

The American eel's fresh water period lasts several years, sometimes as many as 20. While in fresh water, they are brownish-yellow in colour, but like salmon, turn silvery before migrating to sea. The destination of migrating adult eels is the Sargasso Sea, a large area in the central North Atlantic Ocean at the same latitude as Florida. They reach the Sargasso Sea by following the Labrador current southward. There they spawn 400 to 700 metres below the surface before dying.

Eel eggs hatch into delicate, leaf-shaped, transparent larvae, which slowly move north along the western edge of the Gulf Stream. They can drift for months, even years, before meeting the coast. Metamorphosis into elvers (young eels) occurs after one year — before or during their entry into rivers. They then travel inland to ponds and streams where they remain several years until sexually mature and ready to begin their migration to sea.

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

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