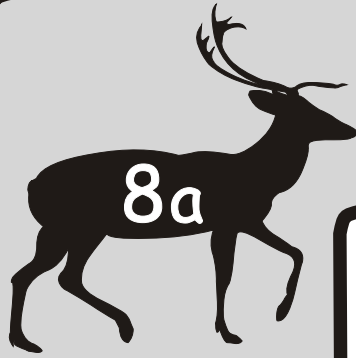




Long Range Barrens

Southern Long Range subregion

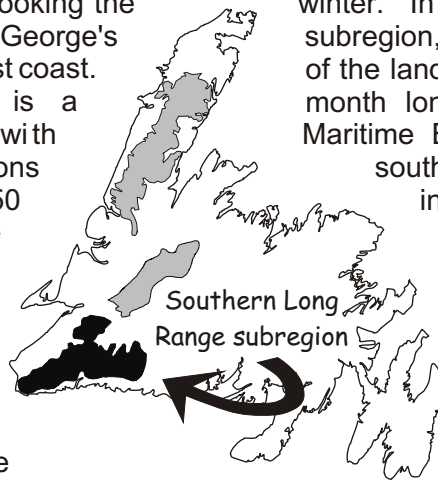


One of three distinct subregions of the Long Range Mountains ecoregion, the

Range Barrens are separated from each other by forest. Except where small patches of forest occur in sheltered valleys within each subregion, trees are stunted and form low, dense thickets of tuckamore. This is due to the frequent exposure to high winds. **String fens** and **slope bogs** are also common and cover large areas.

Southern Long Range subregion lies just inside the southwest corner of the island of Newfoundland. It includes the Blue Hills of Couteau along the south coast of the Island, and the Long Range Mountains overlooking the Trans Canada Highway from St. George's to Port aux Basques along the west coast.

The Southern Long Range is a windswept, highland area with extensive **barrens** and elevations rising from 200 to more than 650 metres above sea level. Unlike the Maritime Barrens, the barrens that occur here were never forested. The Southern Long Range subregion is characterized by the presence of a number of plant species that have their main range to the south and west of the Island.



The climate of the entire ecoregion is notable for its short growing season and permanent snow-cover throughout the winter. In the Southern Long Range subregion, snow covers about 60 percent of the landscape into late May — about a month longer than in the neighbouring Maritime Barrens ecoregion, just to the south and east. Where exposed sites

in the Maritime Barrens are clear of snow throughout winter, similar sites in this higher area are completely covered. In fact, extreme snow drifting is typical of this landscape. Winter visitors to the area usually encounter a stark, snow-covered world from which only a few scattered

The three subregions of the Long larch, or "juniper," branches emerge.

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.

Barrens: Primarily treeless areas containing low-growing plants that are well adapted to

Soils: Soils here are almost entirely "humo ferric podzols" — brown soils with mostly inorganic material that occur in relatively dry sites. There are also some areas of exposed bedrock or bedrock with a thin soil covering (less than 10 cm).

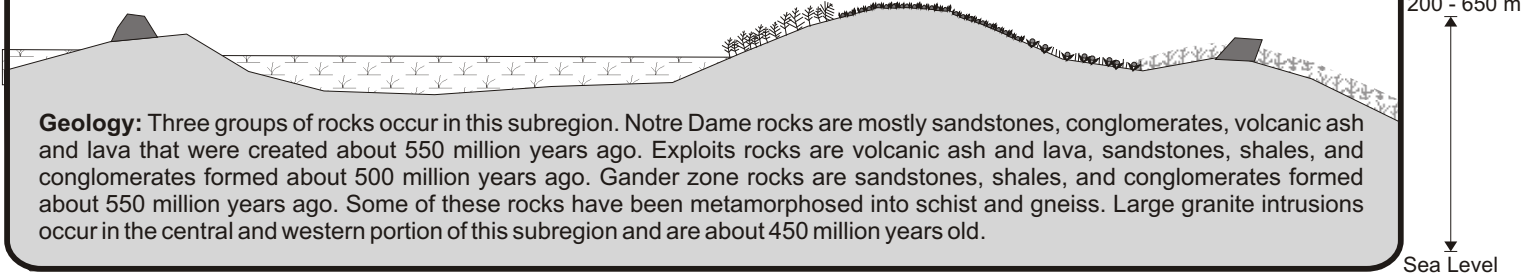
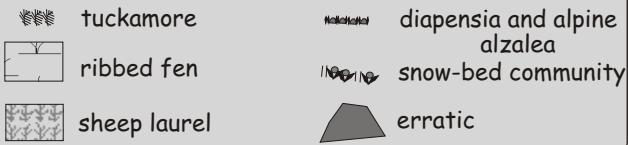
exposed conditions and soils low in nutrients. Barrens are also known as "heath" or "heathlands," since much of the plant life found on them belongs to the heath family.

Slope bogs: One of several types of bogs that occur throughout Newfoundland.

They are generally found on slopes in poorly drained areas and can sometimes contain a scattering of pools.

String fens: Narrow ridges or 'strings' of hummocky vegetation alternating with numerous pools. Also known as ribbed fens.

Landscape Profile — Southern Long Range



Geology: Three groups of rocks occur in this subregion. Notre Dame rocks are mostly sandstones, conglomerates, volcanic ash and lava that were created about 550 million years ago. Exploits rocks are volcanic ash and lava, sandstones, shales, and conglomerates formed about 500 million years ago. Gander zone rocks are sandstones, shales, and conglomerates formed about 550 million years ago. Some of these rocks have been metamorphosed into schist and gneiss. Large granite intrusions occur in the central and western portion of this subregion and are about 450 million years old.

Vegetation Profile

Due to almost continuous exposure to strong winds, the flat-topped mountainous landscape of the Southern Long Range subregion is typified by extensive areas of tuckamore containing mostly black spruce. Wind nips back the growing tips of branches, resulting in dense tangles of stunted trees usually less than a meter high, but with thick trunks, indicating that many of these trees are very old. Tuckamore is widespread in valleys and on slopes in this ecoregion, but doesn't grow on hilltops, where winds are too severe for any tree growth.

Only in the deep, sheltered valleys are there forests that have full-sized trees — mostly balsam fir. Larch is also common in these forests. It is, in fact, the only tree that grows taller than the winter snow level on exposed slopes. "Southern plant species," such as curly grass fern and black huckleberry, also occur in these valleys, as they do along most of the south coast. These are plants that have their main range south and west of the Island, and are absent from

Labrador. On the Island, they are found in the most climatically favourable sites.

Speckled alder, which is absent from the Northern Long Range subregion, grows here on alluvial soils (soil carried from an upland area to a lowland area by a stream and deposited in a fan-shaped formation). Small numbers of yellow birch can also be found scattered within the forests of these valleys.

Dwarf shrub vegetation is widespread on the barrens in the Southern Long Range subregion. Sheep laurel and rhodora are the most common plants. Pink crowberry occurs abundantly on

exposed sites that are subject to erosion, while diapensia and alpine azalea are common on all exposed, highland areas.

"Snow-bed species" are characteristic of this subregion, although they are not as common here as they are in the Northern Long Range subregion. These are plants that grow where patches of snow continue late into the growing season. The melting snow provides increased moisture to these plants, as well as protection against frost damage. Dwarf billberry, mountain sorrel, and moss heather are examples of snow-bed species occurring here. 🐇



Photo: B. Pinsent

Species in Focus: A characteristic plant of the Southern Long Range subregion is trailing arbutus (*Epigaea repens*). This member of the heath family is known as a "snow-bed" species, which means that it grows only in areas where snow does not fully melt until late in the growing season (in this case not until the middle of June), thus providing protection against severe night frosts. Trailing arbutus is a low-growing evergreen shrub with large, oval, leathery leaves and fragrant, pinkish-white tubular flowers.

Wildlife Profile

Caribou belonging to the La Poile herd inhabit the upland barrens of this subregion. Moose, lynx, snowshoe hare, red squirrel, and little brown bat are mammals found in both forest and shrub habitats. Black bear, red fox, mink, masked shrew, meadow vole, deer mouse (mostly near human habitation), and short-tailed weasel occur in an even wider variety of habitats. Mammals found in aquatic habitats include beaver, muskrat, and otter. Arctic hare, which prefers rocky slopes, is primarily restricted to the highlands of the Long Range Mountains and Buchans Plateau.

Coyote can also occur here. This medium-sized member of the dog family was "naturally introduced" during the 1980s when individuals travelled here on drifting ice pans, probably from Nova Scotia.

Both willow and rock ptarmigan occur year-round in the Southern Long Range Barrens subregion. While willow ptarmigan can be found throughout Newfoundland, the range of rock ptarmigan is more restricted: a common arctic breeder, its more northerly range extends southwards through the highlands of the entire ecoregion.

Blackpoll warbler and northern waterthrush are typical breeders in the forested areas of this subregion, while in wetland habitats swamp sparrow, Lincoln's sparrow, and common yellow-throat occur. The common redpoll can often be seen in areas of tuckamore, and the Savannah sparrow frequents the barrens.

The region's many lakes and rivers support a variety of fish, including Atlantic salmon, brook trout, rainbow smelt, American eel, and three-spine and nine-spine sticklebacks. 🐟



Photo: Sandy Newton

Species in Focus: The red fox is found in a wide variety of habitats in the Long Range Barrens ecoregion, as well as throughout Newfoundland and Labrador. Near the top of its food chain, it is an opportunistic feeder that hunts a variety of small prey. Though it's called the "red fox," it actually can have any of four different colours of coats (or "colour phases"). The most common is the red-coated phase, with more than 90% of the Newfoundland population this colour. But the hair of the red fox can also be black, black and white mixed with red, or black with white tips. All four phases can occur in any litter; litter sizes are usually five or six pups.

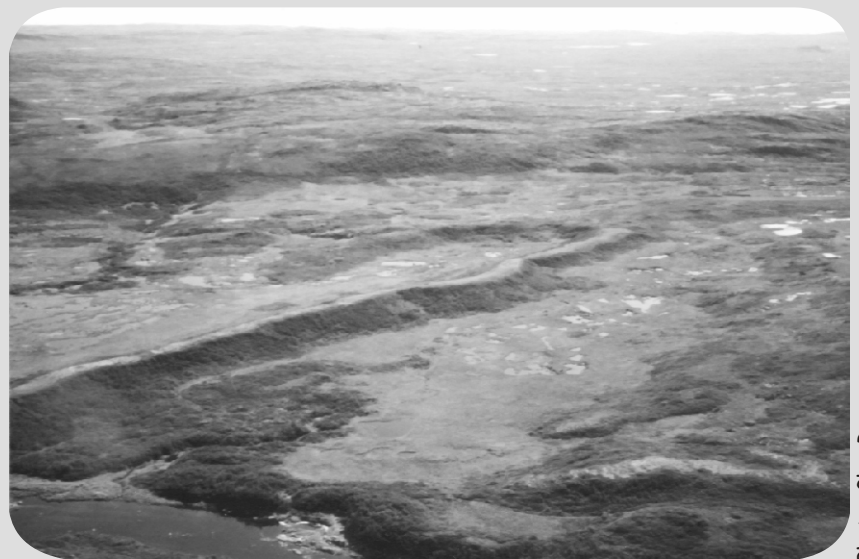


Photo: Glen Ryan

Much of this subregion is characterized by barrens and scattered pockets of forest on slopes and in sheltered valleys. Unlike the Maritime Barrens, fire was of little importance in the development of these barrens.

Protected Areas Profile

There are no protected areas in this subregion.

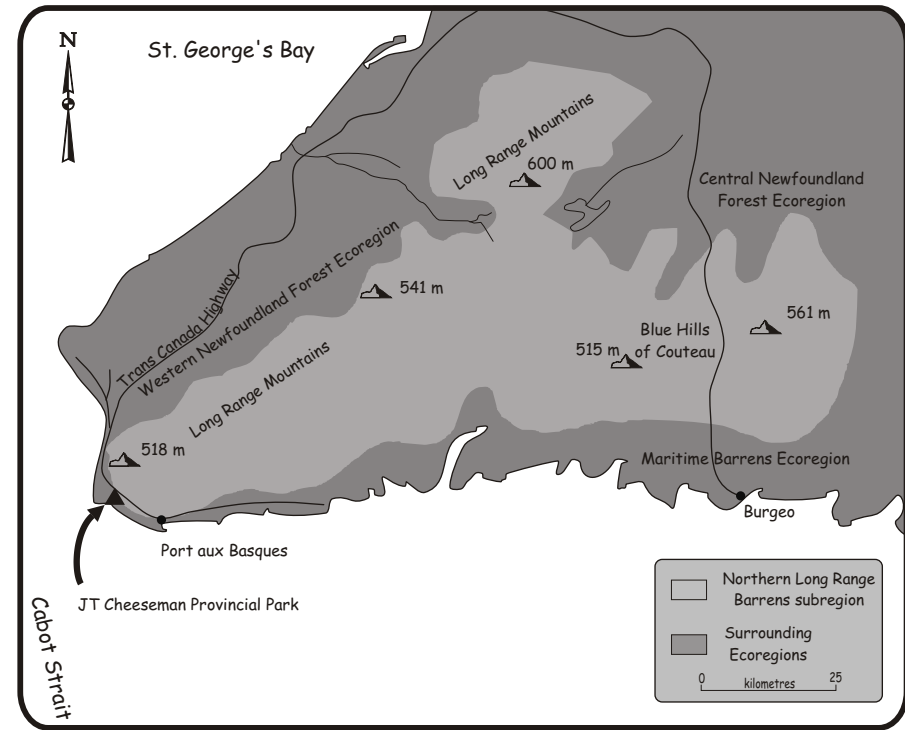
Focus on Tuckamore

Tuckamore, as the term is used in this province, describes a specialized growth-form of coniferous trees. Primarily black spruce and balsam fir, and to a lesser extent white spruce, tuckamore contains severely stunted, dense thickets of trees, whose growth is limited by meteorological or other factors.


Sometimes simply called "tuck," tuckamore is common on exposed coastlines where "frost pruning" creates sometimes impassable forests that have a dramatic, gnarled, swept-back appearance. Frost pruning occurs when wind and the formation of ice crystals kills any growing branch tips that are not protected by snow.

Tuckamore can also occur at high elevations, such as in the Long Range Barrens ecoregion, where exposure to wind is extreme.

Elsewhere in the world, tuckamore is known as



"krummholz," which generally refers to wind-deformed trees growing in the transition zone between the treeline and the region of low-growing, treeless vegetation in mountainous areas such as the Swiss Alps.

Tuckamore can also result when excessive soil moisture, which prevents sufficient uptake of nutrients, stunts tree growth. Because black spruce is relatively tolerant of this kind of unfavorable condition, it is the tree that most commonly occurs in wet areas. 

Climate

This subregion experiences cool summers and cold winters. Snow cover is permanent during winter and can persist until June. The growing season is short. Winds, frequently quite strong, are primarily from the southwest and west.



Annual precipitation
>1300 - 1500 mm



Annual snowfall
3 - 4m



Mean daily temperatures
February -5°C to -8°C
July +13°C to +15°C



Protected Areas Association of Newfoundland and Labrador (PAA) gratefully acknowledges the following partners for their generous contributions to the Newfoundland and Labrador Ecoregion Brochures project:

- Department of Environment and Conservation
Parks and Natural Areas Division
- Department of Natural Resources
- Gros Morne National Park - Parks Canada
- Terra Nova National Park - Parks Canada
- Natural Resources Canada - Canadian Forest Services
- Aliant
- Mountain Equipment Co-op
- The Samuel and Saidye Bronfman Family Foundation
- WWF Canada
- Western Newfoundland Model Forest
- Gros Morne Co-operating Association

To view this full brochure series visit <http://www.paanl.org> – To obtain additional copies contact PAA or any of the following:

Department of Environment and Conservation
Parks & Natural Areas Division
PO Box 8700, St. John's, NL A1B 4J6
PH (709) 729-2664
FAX (709) 729-6639
Email: parksinfo@gov.nl.ca
<http://www.env.gov.nl.ca/parks/>

Terra Nova National Park
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
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/>