

# Northern Peninsula Forest Coastal Plain subregion



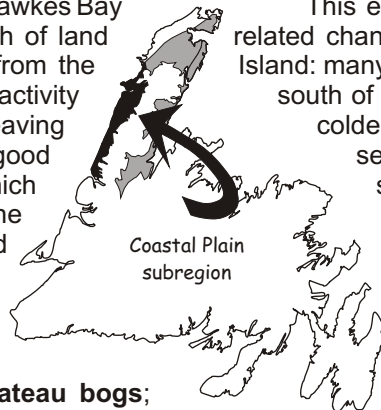
**M**ore than 8,000 km<sup>2</sup> of the island of Newfoundland's Great Northern Peninsula belong to the Northern Peninsula Forest ecoregion.

Covering much of the peninsula's coastal areas, this ecoregion is bordered by the Strait of Belle Isle Barrens ecoregion to the north, and the Western and Central Newfoundland Forest ecoregions to the south and east. As well, it almost completely surrounds the northern part of the Long Range Barrens ecoregion in the central highlands.

The Coastal Plain subregion occurs on the west side of the Great Northern Peninsula, along the coast from Bonne Bay in the south to Hawkes Bay in the north. This long, narrow stretch of land separates the Gulf of St. Lawrence from the interior highland plateau. Glacial activity greatly influenced this coastline, leaving many deeply cut bays and fjords. A good example is Western Brook Pond, which became separated from the ocean as the land rebounded after the ice had melted.

Only partly forested, the subregion is mainly flat and less than 200 metres above sea level. Large portions of it are covered by low **plateau bogs**; forests are restricted to the slopes leading up to the central plateau, to the southern part of the subregion near Bonne Bay, and to a localized forest near Hawkes Bay. For the most part, forests in this ecoregion belong to the great boreal forest — the mainly coniferous forest that prevails in the northern latitudes of much of North America, Europe, and Asia.

The Northern Peninsula Forest is one of the coldest ecoregions on the Island. In fact, its short cool summers and long cold winters give it the shortest growing season on the Island, and the shortest growing season of any forest ecoregion in the entire province. Short as it is, the growing season here is highly variable: it can range from 150 days in the south to 110 days in the north.



These cold conditions are due to the ecoregion's more northern location compared to other Newfoundland ecoregions, and to its exposure to the cooling influences of the Labrador current. No part of the ecoregion is more than 50 km from the sea, so it doesn't experience the dry cold winters and hot summers that occur in the more inland areas of Newfoundland such as the Central Newfoundland Forest.

The Northern Peninsula Forest ecoregion also has less precipitation than most. However, its cool summers provide less opportunity for moisture to evaporate from the soil. As a result, the moisture deficiencies experienced in the Central Newfoundland Forest, for example, do not occur here.

This ecoregion marks an important, climate-related change in the vegetation patterns on the Island: many species reach their northern limits just south of this ecoregion. This is mainly because colder summers and a shorter growing season prevent the growth of many species common in our southern forests.

Much of the Coastal Plain subregion's underlying bedrock is limestone. In the north near Hawkes Bay there are large limestone and dolostone formations, which were deposited in a shallow sea during the Cambrian period about 550 million years ago. Farther south, near Cow Head, are limestone deposits formed in the deeper waters of the late Cambrian era, 510 million years ago. These rocks were metamorphosed — changed by tremendous pressures and temperatures — to form schists and marbles.

Limestone and dolostone form when an accumulation of marine organisms makes a sediment layer rich in calcium carbonate. Dolostone is very similar to limestone except that it contains magnesium. Limestone barrens exist where limestone rock is exposed — which often occurs in the northern part of the Coastal Plain subregion. Such barrens feature plants especially adapted to limestone soils.

**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.

**Plateau bogs:** A type of bog that forms in coastal areas, where a build-up of sphagnum mosses 2 to 10 metres deep

forms a plateau-like raised surface.

**Calciphiles:** Plants adapted to calcium-rich (or "calcareous") soils, such as those found in limestone barrens.

Check your public library for a full set (36) of these booklets: one introductory document and one for each of the 35 ecoregions and subregions in the province. For more information about the series see page 4.

ECOREGION

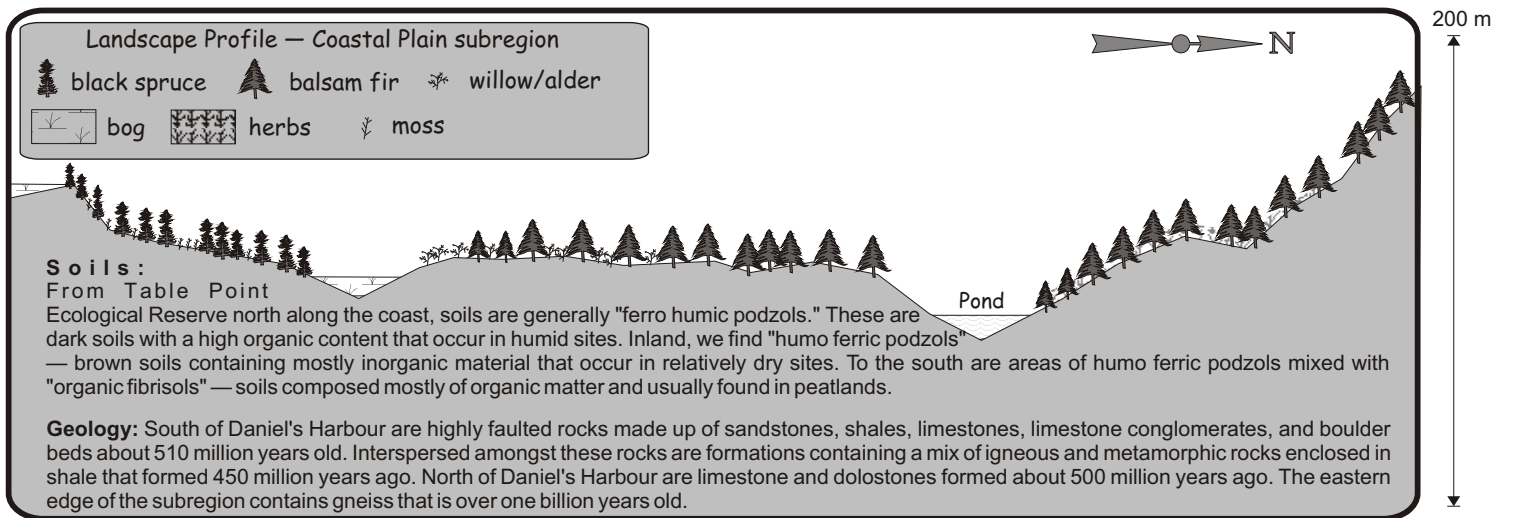
Forest  
Barren  
Tundra  
Bog

NF



LAB





## Vegetation Profile

Extensive, low-lying plateau bogs cover much of the coastline area of the Coastal Plain subregion. These plateau bogs differ from others on the Island because their pools are almost circular, and because they have well-developed drainage channels — elsewhere such pools are more irregular-shaped. Here, as well, large areas of the bogs' surfaces are covered by caribou lichen (*Cladonia*), a plant that is rare on plateau bogs in other locations in Newfoundland.

Heath moss (*Rhacomitrium lanuginosum*) is the dominant plant in these bogs, though sedges, alpine bilberry, and the moss *Dicranum elongatum* also frequently appear.

Also in areas close to the coast, particularly the north, the subregion is distinguished by limestone barrens. These barrens are not as well-developed and have fewer plant species than the Strait of Belle Isle Barrens farther north. But many **calciphiles** — such as mountain avens, swamp birch, red bearberry, dwarf willow, purple saxifrage, sedges, Greenland primrose, northern green orchis, oxytropis, and liquorice root — grow here. Oval-leaved bilberry, which grows only on limestone barrens in the Western Newfoundland Forest to the south, occurs throughout the subregion.

Forests occur only in three locations in the Coastal Plain subregion: on slopes that lead to the Long Range Mountains, in the south where the Northern Peninsula Forest blends and

meets with the heavily-treed Western Newfoundland Forest ecoregion, and on a large deposit of glacial till near Hawkes Bay. These forests, in which balsam fir is the predominant species, have little forest-fire history. In areas where fires frequently occur, such as the Central Newfoundland Forest, colonizing species such as birch and aspen form significant portions of the forest. But the Coastal Plain subregion experiences few such disturbances, and these species are mainly absent.

The forests in this ecoregion

can be further distinguished from more southern regions by the absence of a number of other species. The most dramatic differences in plant communities can be linked directly to the changes in climate that occur from south to north. For example, white pine, red maple, trembling aspen, rhodora, mountain holly, and about 100 other species of plants that are common in the Island's other forests can be found no farther north than the southern edges of the Northern Peninsula Forest ecoregion.



Photo: A Glen Ryan

**Species in Focus:** Willow (*Salix*) thickets grow in water-logged soils throughout the Northern Peninsula, forming dense thickets along rivers, flooded shores of ponds and lakes, and in other areas where the watertable is near the surface. These thickets provide nesting areas for birds such as yellow warbler, mourning warbler, and swamp sparrow. Found elsewhere in Newfoundland as well, willows are easily recognized in the spring by their white-tufted "pussy willows," which form the protective coat of male flowers. Willows are a widespread and diverse group of plants, with more than 30 varieties in the province.

## Wildlife Profile

**B**ecause it has a wide range of habitats — from forest to open barrens — most mammal species common throughout the island of Newfoundland are also found in the Coastal Plain subregion. Moose, lynx, mink, snowshoe hare, black bear, red fox, beaver, muskrat, otter, and caribou, for example, can all occur here.

The caribou encountered in the subregion are usually members of the Northern Peninsula herd; they wander both here and throughout the Long Range Barrens ecoregion to the east. Sometimes, too, caribou seen in the Coastal Plain subregion are members of the Humber herd, which leave their winter habitat in the Eastern Long Range subregion and move to the southern portions of the Long Range Barrens and Coastal Plain in summer.

Many bird species typical of boreal forests can be found here, such as the ruffed grouse, boreal chickadee, ruby-crowned kinglet, fox sparrow, white-winged crossbill, yellow-bellied flycatcher, hermit thrush, blackpoll warbler, and northern waterthrush. Another chickadee — the black-capped — is also found in this ecoregion. This tiny bird generally inhabits mixed or deciduous forests. It feeds on seeds, insects, and insect eggs, and has been known to allow humans to approach, especially if food is held out. The forests of the Coastal Plain also have their birds of prey: bald eagle, merlin, and osprey.

In the barrens and shrublands, willow ptarmigan, song sparrow, mourning warbler, white-throated sparrow, Wilson's warbler, and yellow warbler are often seen. American bittern, short-eared owl, and Lincoln's sparrow inhabit the plateau bogs.

Canada geese nest on coastal bog ponds, as well as stage during fall migration at St. Paul's

**Species in Focus:** The introduced mink has thick, rich fur that makes it well adapted to life in the water. It feeds on fish, birds, and other mammals. The mink itself is hunted by humans for its silky fur.



Photo: Paul Linegar

Inlet, Parson's Pond, and other coastal sites.

The harlequin duck, whose eastern population is endangered, breeds in this subregion in low numbers at the upper reaches of fast-flowing rivers. Although not all Newfoundland rivers have been surveyed, most harlequin ducks breeding on the Island are concentrated around the water systems of the southwestern portion of the Great Northern Peninsula. Current estimates of breeding harlequin ducks on the peninsula is about 70 individuals.

The rivers and lakes provide

habitat for three-spine stickleback, nine-spine stickleback, Atlantic salmon, brook trout, rainbow smelt, and American eel.

The three-spine stickleback is one of the most commonly seen freshwater fish in Newfoundland. Though they also live in saltwater, stickleback enter the Island's rivers and lakes to spawn during the summer. They are easily identified by the three long, sharp spines that extrude from their backs, which deter predators from swallowing them whole. Grey to olive-brown in colour, they can grow to 10 cm in length. 🐟



Photo: A Glen Ryan

The Coastal Plain subregion is known for its wide range of habitat types, from treeless barrens to forests where balsam fir is the most common tree.



## Protected Areas Profile

**G**ros Morne National Park, established in 1973 and covering 1,805 km<sup>2</sup>, is the largest national park in Atlantic Canada. Close to 40,000 hectares of its area encompasses the Coastal Plain subregion. All essential features of this subregion are protected by Gros Morne.

Here we find a spectacular array of unique plant communities, from sphagnum moss bogs on the coastal plains to alpine heaths on the summits. In addition, there are fjords, deep glacial lakes, scenic coastal cliffs, and widely contrasting views of the Gulf of St. Lawrence and the Long Range Mountains.

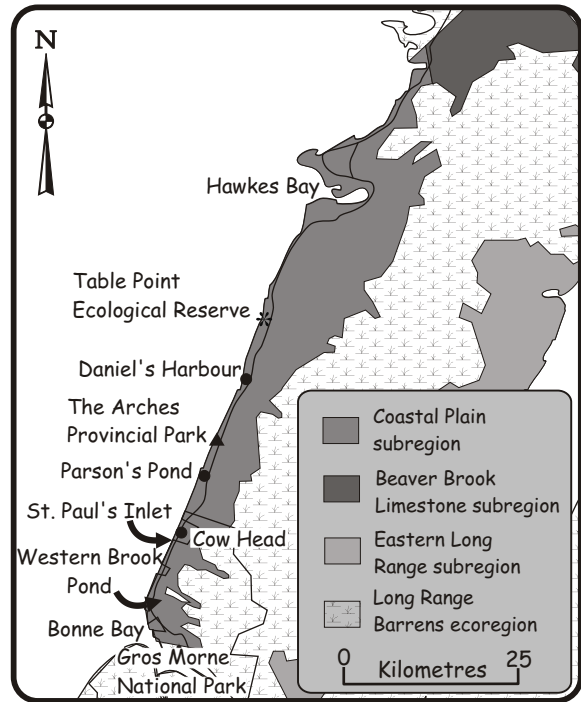
Caribou, arctic hare, red fox, black bear, and ptarmigan are among the many wildlife species protected within the park borders, providing visitors with superb opportunities to observe nature in the wild. Hiking trails, remote camping, swimming, and other recreational activities also allow for close-up encounters with the natural elements of this subregion.

Due to its significant geological formations, Gros Morne was designated a World Heritage Site in 1987 by UNESCO (United Nations Educational, Scientific, and Cultural Organization), joining a group of outstanding natural and

cultural sites worldwide.

Table Point Ecological Reserve, located just north of Daniel's Harbour, protects one of the best and most diverse Middle Ordovician fossil assemblages in the world. These fossils include brachiopods, bryozoans, echinoderms, cephalopods, conodonts, graptolites, sponges, and trilobites 570 to 490 years old. All of these creatures lived during a time when the region was covered by the huge, shallow Iapetus ocean, which separated two ancient landmasses — Laurentia and Gondwana. These land masses eventually collided, brought together by the process of plate tectonics. The collision closed the Iapetus Ocean and raised the sedimentary rock beneath it to form the Appalachian Mountains. The Long Range Mountains are a part of this ancient chain.

Just north of Gros Morne is The Arches Natural and Scenic Attraction Provincial Park. Its name derives from a rock arch created by the erosional forces of the ocean on submerged sandstone, shale, and limestone conglomerates. Geological shifting later raised the natural arch, which is now visible



above sea level.

Although both The Arches and Table Point protect important natural features, neither provides adequate subregion representation.

### Climate

The Northern Peninsula Forest ecoregion experiences long cold winters and short cool summers, and its growing season (110 to 150 days) is the shortest of any forested ecoregion on the Island.



Annual rainfall  
1300 mm  
- 1500 mm



Annual snowfall  
3-3.5 m



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



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