

# Western Newfoundland Forest Codroy subregion

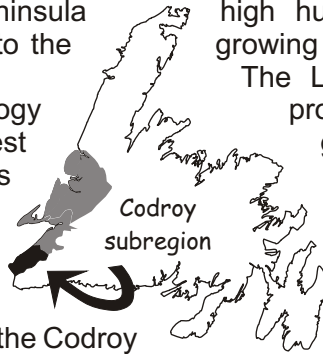


One of the largest ecoregions on the island of Newfoundland, the Western Newfoundland Forest covers more

than one million hectares in the western portion of the Island. It stretches from the Codroy Valley in the south to Bonne Bay in the north and extends from the west coast inland, including much of the Long Range Mountains.

Its neighbouring ecoregions are the Maritime Barrens to the south, the Long Range Barrens and Central Newfoundland Forest to the east, and the Northern Peninsula Forest and Long Range Barrens to the north.

Local variation in the geology of the Western Newfoundland Forest ecoregion has affected its geography and biology, and has led to this ecoregion being divided into six subregions. The Codroy subregion is the most southerly part of the ecoregion, and includes the Codroy Valley northwest of Port aux Basques.



The Codroy subregion has a rich glacial history. Glaciers had an enormous effect on the landscape as existing mountains were eroded. The U-shaped Codroy Valley is itself evidence of glacial activity. The last glaciers retreated about 10,000 years ago.

This mountainous, rugged section of the Western Newfoundland Forest is heavily forested. It is characterized by deep protected valleys containing rich soils formed from glacial deposits and runoff. The Codroy subregion experiences the province's most favourable

climate, with warm summers and the longest growing season. In fact, its valleys are the warmest on the Island. This, in combination with the rich soils, have resulted in lush vegetation and a diversity of wildlife — particularly songbirds — not found elsewhere on the Island. Not surprisingly, large areas of the Codroy subregion have been cleared for agriculture.

The favourable climate found here is the result of several factors. The mountainous interior of the Western Newfoundland Forest ecoregion leads to high rainfall amounts, as winds off the Gulf of St. Lawrence drop their moisture when they ascend the slopes. This high humidity contributes to the favorable growing conditions within the Codroy Valley. The Long Range Mountains also provide protection from cold northeasterly winds, giving this ecoregion the longest frost-free periods on the Island.

Topography and location within the Western Newfoundland Forest also affect precipitation and the length of the growing season. As you move from the west coast inland, precipitation increases, winters become colder, snow cover lasts longer, the growing season shortens, and the number of frost-free days lessen. The same trends also occur as one moves from south to north.

But these are general trends. There are significant local variations as well, and in the Codroy subregion these are due to the many mountains and valleys. On mountain slopes and summits, winters are generally colder and the growing season is shorter than in the protected valleys. West-facing mountain slopes also tend to receive more precipitation than low-lying valleys.

**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. Subregions occur when distinctive variations within ecoregions are on a smaller scale than between ecoregions. The Western Newfoundland Forest is broken down into six subregions.

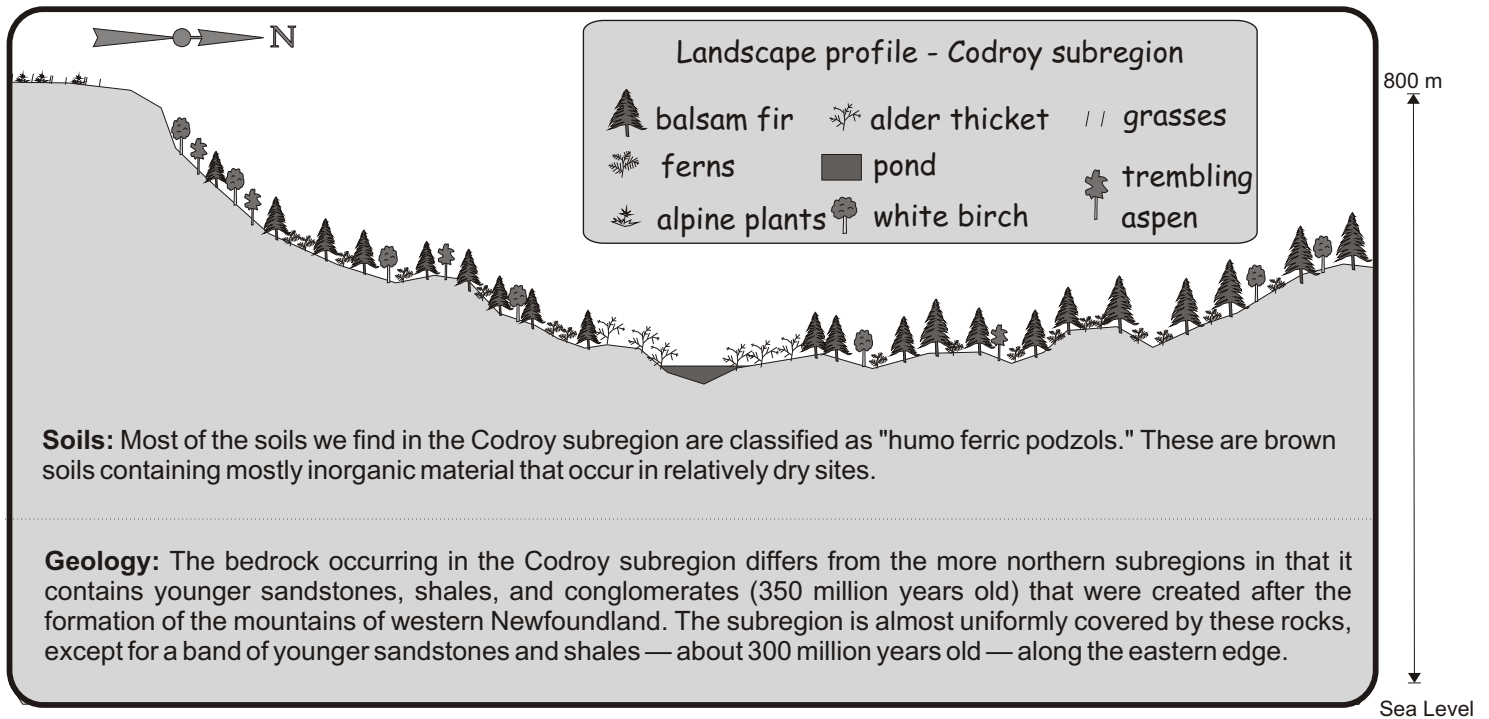
Check your public library for a full set (36) of these booklets: one introductory document and one for each of the 35 ecoregions and subregions in the province. For more information about the series see page 4.

ECOREGION  
Forest  
Barren  
Tundra  
Bog



LAB





## Vegetation Profile

The combination of nutrient-rich soils and favourable climate have produced lush vegetation in the Codroy Valley. Forests found in this subregion consist mostly of balsam fir with a floor covering of wood ferns. Balsam fir forests with only a feathermoss floor covering (common in central Newfoundland) are restricted to rocky slopes. The presence of primarily fern-dominated forests in this ecoregion helps distinguish it from the forests of the Central Newfoundland Forest, which are primarily moss-dominated.

Black spruce occur mostly on poorly drained locations, or in areas with exposed bedrock. Since forest fires are rare, fire stands of black spruce are not common. Fire stands are groups of trees well adapted to colonizing burnt areas.

Two types of alder swamps occur nowhere else on the Island but in this ecoregion: golden rod/alder and bracken fern/alder swamps. Both are found where the soil is water-logged or poorly drained,

making these areas high in nutrients and giving them a rich layer of herbs. In some of these areas maple thickets also form, which are unique to the western portion of the Island.

Yellow birch, white pine, red maple, and trembling aspen are common throughout the forests of

this ecoregion.

As well, mayflower, showy lady's slipper, Carolina spring beauty, and stands of black ash are, for the most part, found only in the Western Newfoundland Forest ecoregion of the Island. 🌲



Photo: Glen Ryan

Photo: Sandy Newton

**Species in Focus:** Alder (*Alnus*) swamps occur on water-logged, nutrient-rich sites where a rich herb layer forms. Golden rod and bracken ferns are commonly associated with alder swamps.

## Wildlife Profile

Wildlife in the Western Newfoundland Forest ecoregion is among the most diverse on the Island. Moose, mink, snowshoe hare, lynx, black bear, red fox, beaver, muskrat, and otter all occur. Other mammals can be seen in the area as well, such as little brown bat, eastern chipmunk, masked shrew, and red squirrel.

Due to its favourable climate and lush vegetation, the Codroy Valley is the most diverse area for birdlife on the island of Newfoundland. A wide variety of thrushes, woodpeckers, and flycatchers occur here. Vireos are also common, while about 20 species of warblers, including the Cape May, blackburnian, and bay-breasted have been reported breeding. In addition, the ruby-throated hummingbird nests in the Codroy Valley, making this one of the only areas on the Island where this tiny, energetic bird can be regularly found in summer.

Due to its geographic location, the Codroy subregion also attracts a wide variety of bird species during their fall migration. Large numbers of birds of prey can be observed here in fall as they migrate southwards; examples include northern harrier, sharp-shinned hawk, rough-legged hawk, American kestrel, peregrine, and even golden eagle and red-tailed hawk. The area is also known for its high concentrations of migrating fall waterfowl, such as thousands of Canada geese and a variety of ducks.

The rivers and ponds host nine-spine stickleback, three-spine stickleback, black-spotted stickleback, arctic char, Atlantic salmon, brook trout, rainbow smelt, American eel, and the banded killifish, which has been designated vulnerable in Newfoundland.

The mummichog — a type of

killifish — occurs in the southwestern corner of Newfoundland, in particular in the small freshwater ponds and brooks of the Codroy Valley. A small fish only 15 cm long, the mummichog is olive-coloured with 15 dark bands on its sides. It can tolerate a wide range of salinity levels, from

freshwater to water with salt concentrations several times that of sea water.

There is only one amphibian and no reptiles recorded for this subregion. The green frog, an introduced species, inhabits small quiet ponds and marshes in low numbers.



Photo: Parks and Natural Areas Division

**Species in Focus:** The great blue heron is a large wading bird characteristic of this subregion. It stands four feet high, with long legs and neck, and has a blue-grey plumage. The great blue heron can often be found wading slowly through shallow water in search of small fish that it spears with its sharp bill. Other prey include insects, frogs, and even mice.



Photo: George Draskoy

The Codroy area of the province has the longest growing season and mildest winters. The favourable growing conditions and rich soils make it one of the main agricultural regions in the province.

## Protected Areas Profile

There are no protected areas in this subregion.

## Focus on Glaciation

Glaciers have played a dramatic role in creating the physical features of our landscape. Rocks formed during the processes of plate tectonics and sedimentation millions of years ago were later carved and eroded by the tremendous force of these huge ice sheets, which slowly moved across the whole of Newfoundland and Labrador as recently as 10,000 years ago.

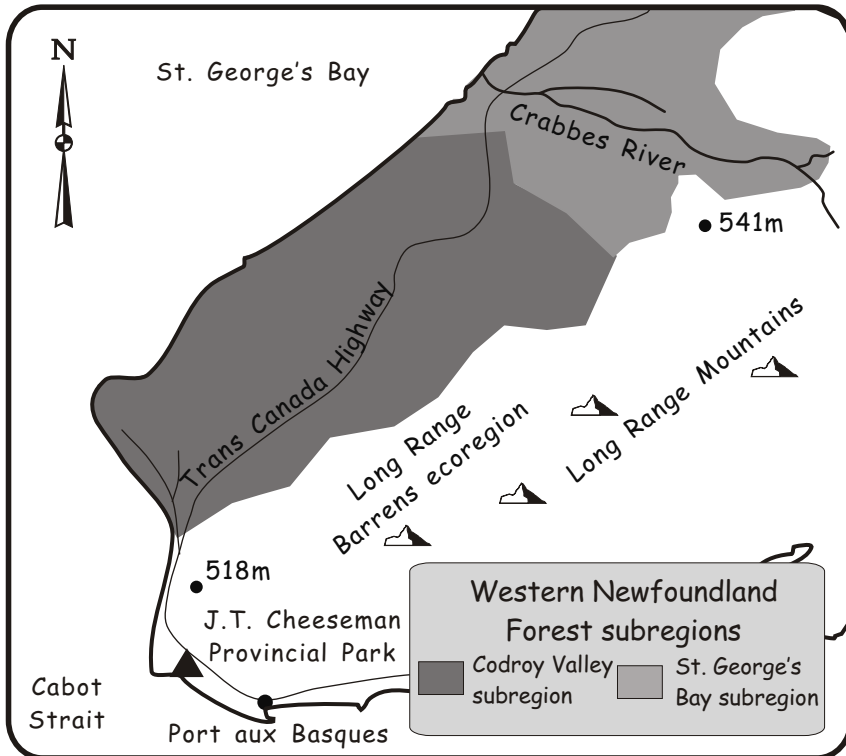
Glaciers are formed when more snow falls in winter than melts in summer. The build-up of snow that results becomes more and more compacted until the lower layer turns to ice. Because this bottom layer is under so much pressure, it acts like a plastic or thick liquid and begins to flow. As it flows, it erodes the land and picks up rocks and debris, which make it even more abrasive.

Not only did these huge ice sheets play an important role in shaping our landscape, but they also removed most of the soil that covered the land, dumping it onto the Grand Banks.

Throughout Newfoundland

one can see many examples of glaciation, such as the hanging valleys in the mountains surrounding the Codroy Valley. The U-shape of the Codroy Valley is a typical example of a valley scoured by ice.

When the ice sheets finally melted they left a barren landscape without soils and forests. As plant life returned, soils were slowly created, deepening until forests and other ecosystems were able to establish themselves once again. ❧



## Climate

This subregion, with its western location, has a humid climate. Generally, the area has some of the most favourable growing conditions on the Island. The Western Newfoundland Forest ecoregion has the warmest valleys and longest growing season on the Island, and it typically experiences warm summers and cold winters.



Annual rainfall  
1200 mm



Annual snowfall  
2-4 m



Mean daily temperatures  
February -5°C to -8°C  
July +14°C to +16°C



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