

Forestry on Prince Edward Island

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Forestry On Prince Edward Island

Forests play many different environmental, social and economic roles. They offer employment and income, habitat, clean water and air, and places for recreation and solitude. Traditionally on Prince Edward Island, the forestry sector has been the runt of the litter among the resource-based industries. Farming and fishing have long enjoyed a higher profile, generating far more income and employment. Indeed, it may be fair to say that- at least in the eyes of the general public; our Island forests have been rather undervalued and taken for granted. This in spite of the fact that they cover roughly 50% of the province's land mass.

The Island has some 260,000 hectares of public and private forest land. Most of this forest has experienced decades or even centuries of pressure from land clearances for agriculture and settlements, poor harvest practices, the loss of some native species, and the introduction of new species, diseases and insects. Today, the Island's forest is divided into thousands of small parcels owned by thousands of individuals. This makes it easy to manage small blocks of forest but hard to achieve larger scale changes or improvements. Over the years, successive management programs have made efforts to reverse or ease the impacts of many instances of past land use, sometimes with mixed results.

The Acadian Forest:

The Island is part of Canada's Acadian Forest region. This forest region covers all of PEI and Nova Scotia and most of New Brunswick. Ecologically, it is very similar to the Great Lakes-St Lawrence Forest Region of central Canada and is also a part of the much larger Transition Forest region of eastern North America.

The Transition Forest marks the region where Boreal Forest species of the north overlap with more southerly species from the Deciduous (Northern Hardwood) Forest Region. This forest stretches from the Maritimes west across the Great Lakes to the borders of Manitoba and Wisconsin and south through New England and along the Appalachians into northern Georgia.

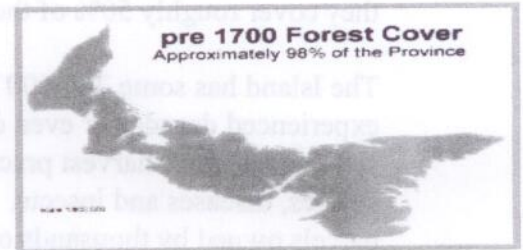
On rich, well drained soils and upland sites, Island forests tend to be dominated by Northern Hardwood forest species such as American Beech, Yellow Birch, Sugar Maple, White Pine, Eastern Hemlock, Red Oak and White Ash. On poorly drained sites, poor soils, exposed coastal areas or areas recovering from significant disturbances such as fire, insects, or harvest activities, the forest will usually be dominated by Boreal Forest species such as White Spruce, Black Spruce, Eastern Larch, Poplar, or White Birch. Balsam Fir and Red Maple tend to occur in all Island stand types.

Many Acadian Forest tree species can live for more than 200 years. Sugar Maple and White Pine are capable of living for as long as 400 years while the Eastern White Cedar and Eastern Hemlock have been known to reach nearly 1,000 years of age in some parts of their North American range. These old giants have the ability to produce large volumes of edible seeds for birds and mammals and support many different species of lichens and mosses on their bark and branches. Many will develop large hollows or "cavities" in the trunk that can be used as denning and nesting sites for larger mammals and birds of prey. Taller trees also offer excellent vantage points for predators, while their large branches provide vertical structure within the forest.

Forest History: The last Ice Age to 1900:

Approximately 10,000 years ago at the end of the last Ice Age, PEI was covered by ice that was a kilometer or more thick. Over the next few thousand years, the ice retreated and the landscape began to transition from ice cover to Tundra, then to Taiga, and eventually to a Boreal Forest type of ecosystem. The climate began warming up and richer soils had developed enabling more southerly species such as maple, pine, ash and oak to begin colonizing the Island's landscape and mix with spruce, larch, birch and poplar already growing here.

In the early 1700's, forest covered some 98% of the Island's surface with the remainder divided among ponds, wetlands and sand dunes. Often the hills and valleys were covered with huge old maple, birch and oak trees as well as large white pine, spruce and hemlock.



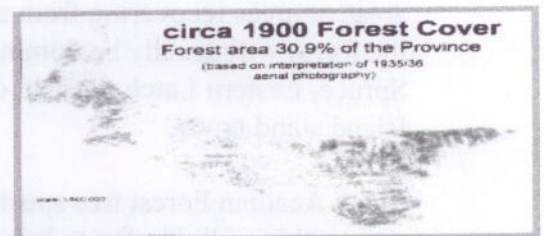
With the first significant European settlements in the 1720's and continuing well into the 1800's; much of the forest was cleared for habitation and farmland. Even areas that were not cleared were heavily altered through the use of fire, hygrading forests (taking the best and leaving the rest) and constant harvest pressure on the remaining forest for building materials and fuelwood.

Several animal species were lost during this period. The passenger pigeon is PEI's only extinct forest animal but others such as the black bear and woodland caribou were exterminated from Island forests due to habitat loss and hunting pressure to reduce crop and livestock losses.

New creatures such as the striped skunk and plants such as Japanese Knotweed were also added to the Island's forest ecosystem. Diseases such as Dutch Elm Disease (DED) virtually eliminated wild elms stands on PEI. While not as lethal as DED, Beech Canker Disease also had a profound effect on the quantity and quality of Island beech trees. Fortunately, this species seems to be recovering but the process is still ongoing.

1900 to Today:

By 1900, only about 30% of the Island remained under forest cover. Large scale clearances for agriculture and other human uses, combined with the constant harvest pressure on the remaining resource led to significant changes in the mixture of tree species and a serious decline in the overall health and quality of Island forests. Through much of the 20th Century, people began to leave PEI for opportunities in other places. Often they abandoned their farm and over time, the forest began to reclaim the old fields. By 1990, forests once again covered about 48% of the Island's surface area, most of it east of Charlottetown and West of Summerside. However, this "new" forest was very different for the Acadian Forest of earlier times.



Instead of large tall shade tolerant species, today, Island forests are mostly composed of young, small diameter stems. Abandoned old fields reverted to single species, white spruce. Unlike

other Acadian Forest species, white spruce was able to establish itself on heavily grassed sites and compete for growing space and light. While white spruce produced many valuable products, the way these strands established themselves led to problems with early mortality and low quality. By the end of the 20th Century, the Island's forest area was once again in decline. The 2000 Forest Inventory found that the total forested area had fallen from 48% in 1990 to 45% in 2000, largely due to conversions to agriculture, blueberries and other developments in rural areas.

The Future:

While the Island's high percentage of private forest land makes it difficult to achieve common goals, surveys indicate that Island land owners care deeply for their woodlands and use them for many different purposes. The primary issues facing Island forests continue to be poor harvest practices and conversion of forests to agriculture, commercial and residential developments in rural areas.

Over the last 10,000 years, the Island's climate has undergone several periods of warming and cooling due to a range of natural influences and processes. However, in recent years concern has grown over the increasing role human activities are having on the world's climate. With this in mind, studies and research are being conducted into the potential effects of climate change on Island forests.

Prince Edward Island's Climate:

PEI's position between 46° - 47°N, means that it is located about halfway between the Equator and the North Pole and therefore, it experiences a wide range of seasonal influences from northern and southern climates. The Island's climate is also influenced by the Island's proximity to the Atlantic Ocean where the Gulf Stream and Labrador Currents mix and to the frozen Canadian Shield country of Quebec to the north and west.

Most climate change models predict significant challenges for many tree species over the coming century. This will require land owners, government and others to begin planning for the next phase of development in the Island's Acadian Forest.

While we may not be able to restore all of PEI's historical wood lands, most people believe that we should strive to improve the health of our remnant forests by enhancing, not degrading, natural ecological processes and functions in Island forests. The Forest Enhancement Program(FEP) offers a wide range of services to forest owner who want to restore forest health on their lands. The FEP supports three planting systems including:

- Full Planting ~ where an entire site is planted.
- Partial Planting ~ where only some areas of the site require planting, and
- Enrichment Planting~ where selected species are planted in small numbers across the site.

Forestry on Prince Edward Island Quiz

- 1) Forestry has enjoyed a high profile, generating a lot income and employment?
True or False
- 2) The Island has some 260,000 hectares of public and private forest land?
True or False
- 3) Many Acadian Forest tree species can live for more than 200 years?
True or False
- 4) In the 1700's, forest covered 48% of the Island?
True or False
- 5) The passenger pigeon is PEI's only extinct forest animal?
True or False
- 6) The drop in total forest area in 1990 from 48% to 45% was due to conversions to agriculture, blueberries and other developments in rural areas?
True or False
- 7) The Islands climate is not influenced by it's proximity to the Atlantic Ocean?
True or False
- 8) The Forest Enhancement Program (FEP) offers a wide range of services to forest owners who want to restore forest health?
True or False

Answers to Quiz

- 1) False - Farming and fishing have enjoyed a high profile and has generated more income and employment than forestry.
- 2) True
- 3) True
- 4) False - 98% of the Island was covered in Forest in the 1700's
- 5) True
- 6) True
- 7) False - The Island's climate is greatly influenced by it's proximity to the Atlantic Ocean
- 8) True