

# ECOTOUR<sup>®</sup>

of the Trans-Canada Highway  
New Brunswick



Canada



# A Word About Ecotours

Ecotours are prepared by the Canadian Forestry Service to help you, as a traveller, observe and understand the forces that have shaped the landscape you see – forces ranging from earthquakes to ice ages, from fires to forests, and from wind and water to man. The route is divided into major areas called “ecozones”. Together with brief descriptions, supplementary maps for each zone show the locations and distances between interesting ecological features. While most of these features can be seen en route, a stop is suggested for some points. For maximum value from this Ecotour, we suggest you keep a record of your mileage alongside the maps and read beforehand about each point of interest.

## About This Ecotour

Since earliest times people and goods have moved along the route now followed by the New Brunswick section of the Trans-Canada Highway. As you travel across the Province you are following routes traced by Indians, fur traders, colonial administrators, French and English troops, and early lumbermen, all of whom used the rivers as highways. The Loyalist settlers of the 18th century developed rudimentary road systems, as well as using riverboats and barges. The Saint John River was then navigable for 142 km from its mouth and even after the advent of railroads, steamboats carried freight and passengers between all riverside towns and villages from Saint John to Fredericton. Where the modern-day Trans-Canada Highway diverges from the main rivers it follows the portages of the by-gone era.

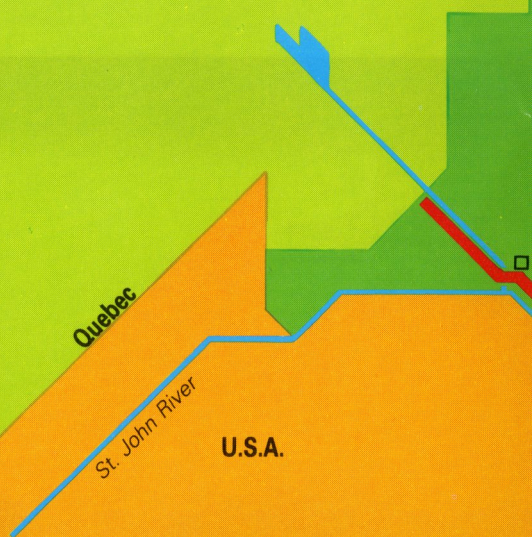
The route has been divided into eleven ecological zones (ecozones), each differing from all the others in its natural features and consequently in the way it has been put to use to meet the needs of society.

In the “Madawaska” ecozone, Acadian, British, and New England influences mix in the eastern extremity of the Great Lakes/St. Lawrence forest region. Forests cover most of the ecozone, good agricultural land being found only in a narrow strip along the Saint John River. In “Perth-Andover” and “Woodstock” Scottish settlers developed prosperous farms on the productive upland soils. Forest harvesting and apple orchards are common in “Mactaquac” whereas in “Maugerville” you will find people of Puritan ancestry and newcomers from Holland market-farming the rich alluvial soils of the flood plain. On the loop which passes through “Gagetown”, “Westfield”, and “Nauwigewauk”, mixed forests on the uplands, apple orchards

on intermediate slopes, and mixed farming on the lowlands reflect changing soil quality.

“Coles Island” is the overland transition from the Grand Lake waterway to the valley agricultural and English influence at Sussex. “Petitcodiac” reflects the changes from agricultural to mixed forests and forestry. The landscape of “Tantramar” reflects the influence of Acadian settlements and the most recent impact of railway and radio communications systems.

Interesting side trips and alternate major routes are shown should you wish to leave the Ecotour route. The bridge at Burton and the free ferries at Upper Gagetown and Gagetown enable you to leave the main route by crossing the Saint John River. The Canaan River route offers another tranquil alternative. In each ecozone, information is given on various points of interest.







Quebec

Gulf of  
St. Lawrence

undston

Grand Falls

# New Brunswick

Prince Edward  
Island

Florenceville

Trans-Canada Highway 2

Meductic

Fredericton

Young's Cove

Berry Mills  
Station

Moncton

Amherst

Sussex

Welsford

Saint John

Route 7

Route 1

Trans-Canada Highway

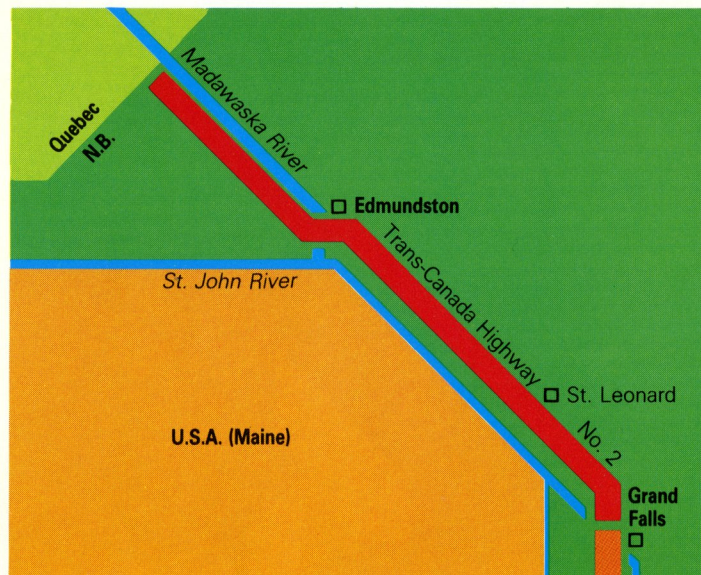
U.S.A.

Bay of Fundy

Nova Scotia



# Madawaska



## (Quebec Border to Grand Falls: 77 km)

Balsam fir, white spruce and black spruce on the uplands and shade-tolerant hardwoods, such as yellow birch, on the intermediate slopes, characterize this ecozone. Tree roots often penetrate vertical cracks in the underlying slate bedrock. These productive forests, which were once the cause of skirmishes between New Brunswick and Maine lumbermen, provide the economic base for the "Republic of Madawaska", a flourishing mixture of French, British and New England cultures.

### 16.6 km from Quebec Border

1. Pulp slurry from the Fraser Incorporated mill in Edmundston is carried across the Saint John River to the Madawaska paper mill in Maine by a wooden-stave pipeline, one of the many modes of transportation and communication that you will see as you travel this highway.

### 17.0 km

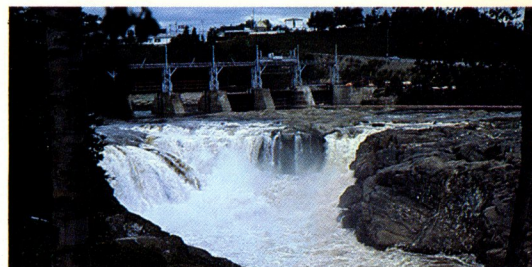
2. The Saint John River forms the international boundary between the United States and Canada from a point about 50 km west of Edmundston as far south as Grand Falls. Nature, however, ignores man-made boundaries and, as you can see here, the farmlands on either side of the river show marked similarities.

### 19.0 km

3. St. Leonard is a crossroads town and it's here that the Madawaska Weavers have developed a homecraft industry of hand loomed woollens that are sold throughout Canada. If you would like to see a traditional industry thriving in this modern age, take the short diversion to the west of the Trans-Canada Highway.

### 17.2 km

4. The Saint John River ceases to be the border between New Brunswick and Maine at this point. Here the river plunges through a magnificent gorge, said to be haunted by the spirit of the Maliseet maiden Malabeam. Captured by invading Mohawks and forced to guide them to her tribe's encampment, she took her place in the leading canoe and led the entire flotilla to destruction over the falls. Visit the scenic lookout just above the bridge.

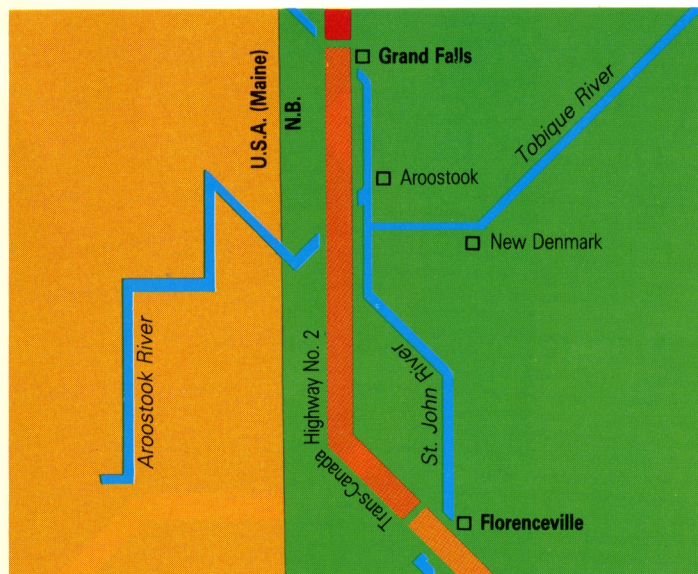


4  
Grand Falls





# Perth-Andover



## (Grand Falls to Florenceville: 76 km)

*A combination of deep, fertile, well-drained soils and a warm climate with ample precipitation has led to extensive agricultural clearing of the once prevalent mixed hardwood forests. Potatoes are the main crop. Isolated remnants of butternut, white ash, ironwood and basswood occur in associations dominated by sugar maple. The ground vegetation is distinguished by many species not found elsewhere in the Maritime Provinces, including bloodroot, goldie fern, and black raspberry. Sweet-cicely and a number of buttercups and violets are also common.*

## 17.2 km

5. You may wish to take a side trip to the Village of New Denmark. In 1872 immigrants came from Denmark to settle here and their descendants form Canada's largest Danish community. Many villagers still speak Danish within the family circle.



5  
New Denmark

6. The confluence of the Aroostook and Saint John rivers was the site of the bloodless "Aroostook" or "Pork and Beans" war between Maine and New Brunswick lumbermen in 1839. On one occasion British redcoats and Maine militiamen faced each other only 30 m apart on opposite sides of the Aroostook River. "Rock hounds" will be interested in the rocks with light bands through the surrounding material, commonly known as "ribbon rocks". These alternating layers of limestone and shale can be seen for the next 11 km or so.

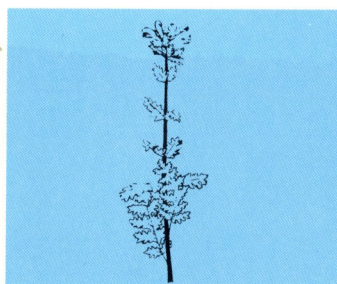




# Woodstock

11.7 km

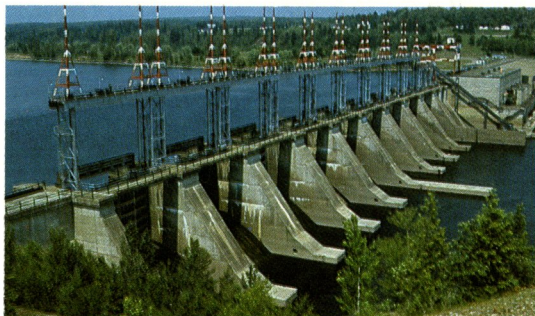
7. Saint John River Wood Betony is a plant that grows nowhere in the world except along the upper stretches of the Saint John River. The existence of this plant suggests that New Brunswick was not entirely covered by glaciers in the last ice age.



7  
St. John  
River Wood  
Betony

17.0 km

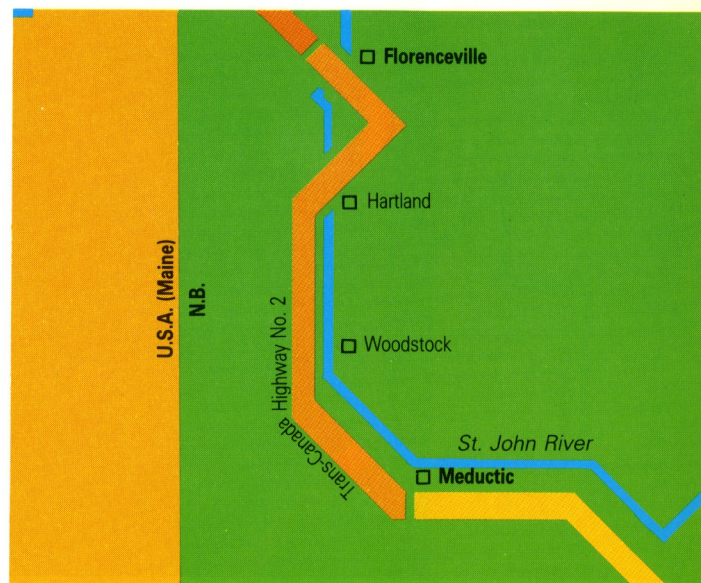
8. Here at Beechwood Park, we have an opportunity to see more recent geological changes. The drainage flows from ancient ice sheets deposited gravels which were then washed down the Saint John River Valley to form a series of terraces. These terraces were in turn cut by the river to form the steps receding from today's riverbed.



8  
Beechwood  
Dam

18.0 km

9. Potatoes are the main crop on these uplands, and everyone takes part in the harvest. The local children start school two weeks early in August so they may be excused in the principal harvesting season towards the end of September.



**(Florenceville to Meductic: 56 km)**

*This ecozone is similar to "Perth-Andover" in both original vegetation and current use. Well-drained heavy loams derived from shales and slates are common, but poorly-drained sites occur frequently. These wet sites are characterized by white cedar, black ash, red maple and white elm and by spruce-fir-cedar swamps.*





White Birch

White-tailed  
Deer

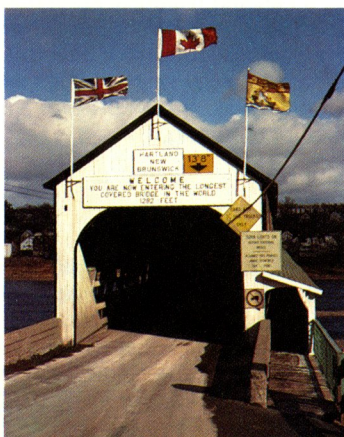


### 10.8 km

10. Plant succession is a slow process in cedar-spruce bogs such as this one. Initially, ponds that may be present because of restricted drainage are colonized by water-loving plants such as water lilies and pond weeds. After many years the pond becomes filled with organic material derived from the accumulated deposit of dead plants, allowing bulrushes and sphagnum moss to occupy the site, to be followed in due course by broad-leaved herbs, shrubs and eventually trees. Tamarack, which cannot tolerate shade, is often the first tree species to colonize such wet sites, but sooner or later is deposited by the shade-tolerant cedar and spruce. If the water is released and the site dries out, various hardwoods might ultimately take over.

### 7.2 km

11. The two bridges over the Saint John River at Hartland illustrate how transportation has changed over the years. The modern steel and concrete structure stands in contrast to the wooden covered bridge, whose length of 391 m makes it the longest covered bridge in the world. These bridges were covered for protection to the superstructure and to weary travellers and their animals, especially in the winter. Sometimes called "kissing bridges" they afforded a romantic seclusion much enjoyed by the local young couples. New Brunswick's covered bridges are gradually disappearing mainly through natural deterioration, but the province is still famed for having more covered bridges crossing its waterways than any other place in Canada.



11  
Hartland

### 7.7 km

12. At this point, two interesting features are visible. On the east side of the road, notice how evenly cattle have browsed the cedar grove. This "browse line" is also common in "deer yards" where the animals congregate over winter. On the west side of the road, the low barn roof is constructed over an excavated cellar to provide winter storage for the local potato crops.



12  
*Browse line*

### 16.4 km

13. This area burned in 1972 when fire-weather conditions were extreme. At one point the fire jumped the Trans-Canada Highway and water bombers were called in to prevent it reaching Woodstock. As you can see, the forest land has responded vigorously and succession has been far more rapid than in the cedar-spruce bog (Feature 10). Light demanding species such as poplars and birches have colonized the burn either by sprouting or from seeds. These "pioneer" trees will provide shade and thus a more acceptable environment for succeeding species of hardwoods and conifers. Ultimately, in the absence of natural or man-made disturbance, the forest will assume a mixed-wood character. With wise management, the many products of the forest will be made available for man's use while the forest's productivity is maintained.

### 11.3 km

14. Long after the arrival of the white man on the Saint John River the Maliseet village of Medoctoc, with its palisaded fort built as protection against the warlike Mohawks, occupied this site on the Ancient Indian portage joining Acadia with New England via the Meduxnekeag and Penobscot rivers. French missionaries built a chapel here in 1717, but when the village was abandoned later it was demolished to prevent profane use by transient voyageurs.





# Mactaquac



## (Meductic to Princess Margaret Bridge, Fredericton: 85 km)

*In this zone you travel eastward from rugged uplands with a pronounced hardwood forest character to a gentler terrain with more conifers present, especially in the valleys. The shade tolerant hardwoods on the upper and middle slopes are interspersed with such pioneer species as aspens, birches, and red maple, apparently the consequence of a long fire history. The headpond, which starts near Woodstock, stretches almost 80 km to the Mactaquac Dam and generating station. Below the dam, through which passes 11 200 m<sup>3</sup>/sec. of water when in flood, you may see eagles soaring above their nests built on the "interval" islands.*

15. For the next 16 km or so, see how many hardwood species you can identify. Make note of where each species grows (i.e. lower slopes, hilltops, wet, dry, etc.) and see if you notice a pattern developing.

### 13.0 km

16. The St. Ann-Nackawic Pulpmill, which started production in 1970, utilizes a mixture of 85% hardwoods such as birch, poplar, maple and ash, and 15% conifers, primarily spruce and fir, in its chemical digesters. Production ranges from 544 to 635 t per day of bleached kraft pulp. The mill is also able to recycle paper and cardboard to produce the corrugated medium you find as the middle element in cardboard boxes.

### Next 16.0 km

17. As you drive along this stretch you should be able to see signs of the tremendous impact that creation of the headpond has had on the landscape and the lives of its inhabitants. Note the fields extending right down to the water's edge and the old houses on new foundations. See what other clues you can find to the fact that the original settled valley is now under 15 m of water.

### 7.1 km

18. King's Landing historical settlement is a recreation of an 1860 Saint John River community. Forty buildings, including a working farm, have been built or relocated from nearby areas. Classical rural skills such as weaving, dyeing, candle-dipping, and preserving, are undertaken and some products are available for sampling.

### 5.6 km

19. Here at Long's Creek, winds blowing off the Mactaquac Headpond were sometimes strong enough to cause the bridge decking to lift a little. Engineers corrected this problem by installing the triangular-shaped "spoilers" you see on the sides. You may wish to see the native birds and mammals in the private Woolastook Wildlife Park or enjoy the beach and provincial park on the headpond.





Red-breasted  
Nuthatch

Eastern White  
Pine



### 8.7 km

20. The Mactaquac project was initiated in 1964 to provide hydro-electric power for the region and at the same time make full use of the recreation potential of the headpond. By crossing the dam, you gain access to a large provincially operated camping facility which has a lodge, golf course, nature trails, power and sailboat marinas, a craft village producing pottery and glassware, and local farm produce of apples, corn, strawberries, etc.

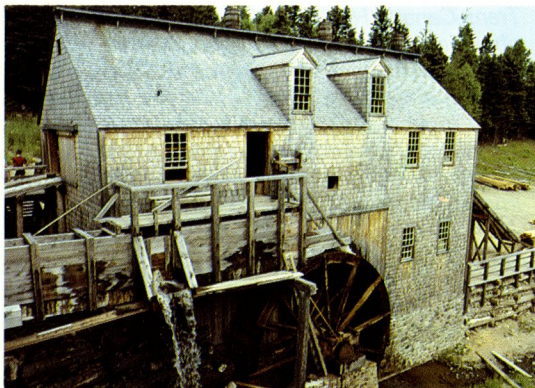
### 1.1 km

21. This red soil is derived from conglomerates and silt-stones which have a high iron content. Outcroppings of these rocks are quite distinct from the more usual gray sandstones and shales. They may also be seen in the Nauwigewauk and Coles Island ecozones.

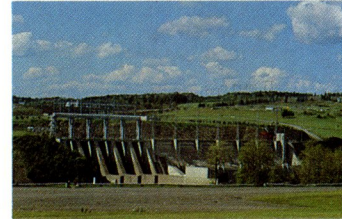
### 0.5 km

22. The largest salmon hatchery in the world was constructed in conjunction with the Mactaquac hydro-electric project. Visitors are welcome and may see some of the mature salmon as well as millions of eggs used to produce the smolt which are transported above the headpond by specially designed trucks. To operate the hatchery, up to 2.7 million L of clean, fresh water are needed every hour, every day. This is one of the reasons that the industrial and municipal sewage of all communities along the Saint John River is now treated.

Tourism New Brunswick



18  
King's Landing



20  
Mactaquac Dam



22  
Mactaquac  
Fish Hatchery

### 2.3 km

23. Those neat rows of trees marching up the mid-slopes on the far side of the river are apple orchards, some of which were planted on the fertile soils following World War II. It takes about 20 years before an orchard comes into full production. At apple blossom time the orchards afford a spectacular scene. In the fall, a Cortland or MacIntosh fresh from the tree is hard to beat.

### 1.4 km

24. "Silviculture" is the forester's term for establishing and growing forest crops. Following the harvest of mature trees, many areas are prepared for planting by baring strips or patches of soil with heavy equipment. Selected or improved seedlings from this New Brunswick Department of Natural Resources tree nursery are then planted to create a new forest. Up to 18 million seedlings of white and black spruce, jack and red pine, and balsam fir are produced annually from this nursery. You may wish to visit – you'll certainly be welcomed.

### 10.8 km to Regent Street Interchange

25. The Saint John-Oromocto exit in Fredericton (Route 7) forms the western connecting link with the loop via Saint John. If you plan to take the loop, turn to pages 12 to 15; if not, your journey continues on page 10.



# Maugerville

## City of Fredericton

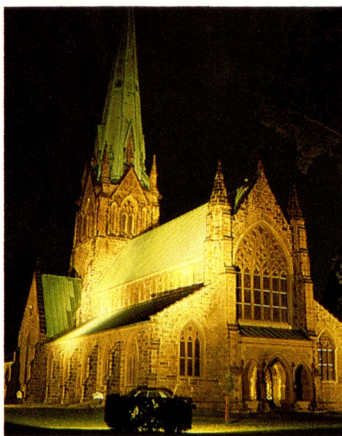
26. The long graceful sweep of the Saint John River is framed by the well-kept greens in Fredericton, New Brunswick's capital city. The river forms a reflecting pond for the Legislative Assembly building, the Beaverbrook Art Gallery and many other historical and cultural points of interest to the visitor. Along the streets you may see gaps in the rows of stately elms caused by Dutch elm disease, a fatal disease introduced to North America on a load of lumber from Holland. No sure cure for this disease has yet been found, but by a carefully followed integrated program including tree removal, sanitation, and other procedures, Fredericton has so far managed to keep most of its elm trees alive and healthy.

If you are travelling the Saint John route turn to page 12. Rejoin the Trans-Canada Highway at Sussex on page 16.



**(Princess Margaret Bridge, Fredericton to Youngs Cove: 76 km)**

The rich alluvial soils of this ecozone (pronounced "Major-ville") brought New England settlers to this area shortly after the Seven Years War that ended in 1763. Products from the farms are sold in Fredericton on Saturday mornings at the Boyce Farmers' Market (on George Street). The spring freshets which annually enrich the soil can also damage farmlands, halt traffic and tear houses from their foundations. In 1973 the flood level at Sheffield was 7.5 m, almost 1 m above the level of the Trans-Canada Highway and even the raised foundations you will observe under many of the houses did not afford complete protection against water damage. When the floods recede, "fiddleheads", the newly emergent fronds of the ostrich fern, are a much sought after delicacy. Underlying these alluvial soils are horizontally bedded sandstones and shales with conglomerates and coal "neds" which are mined in the area immediately west of Grand Lake around Minto.

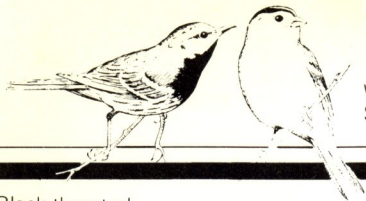


26  
Cathedral -  
Fredericton



26  
Fredericton  
"green"





Black-throated  
Green Warbler

White-throated  
Sparrow

Black Duck



### 19.0 km

27. Until a few years ago, these islands in the middle of the river formed anchor points for booms of logs chained end-to-end across the river. During the spring freshet, pulpwood which had been cut and piled on the ice or near the edges of tributary streams was "driven" downstream, collected into "bag booms" at this point, and towed downstream by tugs to the pulp mill at Saint John.

### 14.5 km

28. "Interval" islands are just that – flooded in spring, their rich alluvial soils are available to local farmers for hay crops during the remaining interval. But since the term is used in New England to describe all river bottom grasslands, it probably refers to the interval in space, not in time. The barns, some strongly askew, frequently have their foundations undermined by the high water, but in June or July you may see farmers driving cattle across the dry river channels.

28  
*Interval  
Islands*



### 17.7 km

30. The Grand Lake system drains 3800 square kilometres. Around the shore of the lake intensive recreational development has taken place, but much of the shoreline is in a primitive state. You may be able to see several old wharves where the paddle wheel river boats used to land passengers and freight. The shoreline also has several historic Indian sites where stone implements, broken pottery and flint arrowheads can be found.



*Fiddleheads*

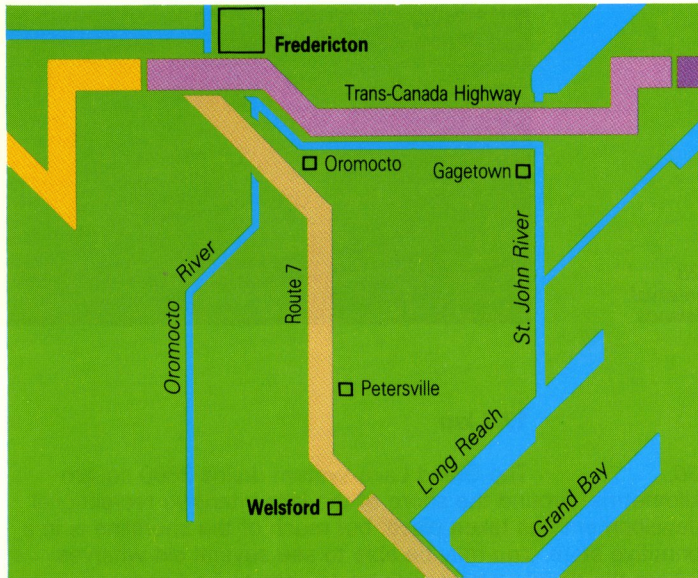
### 17.1 km

29. Jemseg, meaning "great marshes", is a bird watcher's delight. In season, Canada geese, ducks, osprey, owls, red-winged blackbirds, warblers, Baltimore orioles, black terns and barn and tree swallows may be seen in this area. Indian Point was a favorite camping spot for the Maliseet Indians, perhaps for the goose hunting.



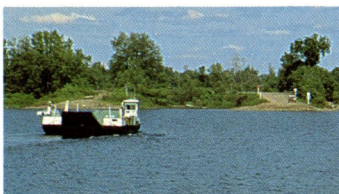


# Base Gagetown



## (Fredericton to Welsford: 69 km)

The bedrock of this zone consists of sedimentary sandstone, siltstone and slate. Remnant white pines can be seen thrusting their tops above the red and white spruce, tamarack and balsam fir to which the area, much of which was once farmed, is reverting. This forest growth is managed by the Canadian Forestry Service for the Department of National Defence, with supervised harvesting operations being conducted by local contractors. The zone terminates abruptly with the mountain-like topography at Welsford. (Some travellers may wish to take the more scenic route via Route 102 through Oromocto and the old village of Gagetown. As indicated by its number and alignment, this alternate route has a lower quality surface than Route 7. It is possible to return to the Trans-Canada Highway via free ferries at Upper Gagetown and Gagetown/Lower Jemseg, or you may continue on Route 102 to Westfield and Saint John.)



A1  
Gagetown ferry

A1. Oromocto – In 1952, approximately 1100 km<sup>2</sup> of farm and forest land were expropriated to form Canadian Forces Base Gagetown, the largest military training area in the British Commonwealth, and almost overnight a quiet country village was transformed into a fully planned modern residential town with schools, shops, apartment buildings and recreational facilities for the troops and their families.

## 12.9 km

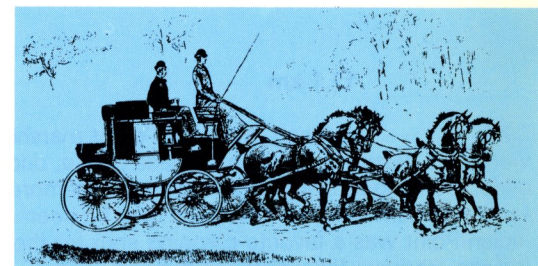
A2. At the junction of the Broad Road and the Blissville Road once stood a "half way" house for travellers on the stage coach which followed this route from Fredericton to the Port City of Saint John. The house, at one time known as "Widow Smith's Tavern", served weary travellers until the stage coach era ceased in 1869.

## 18.3 km

A3. The Irish settlement of Petersville was the largest one to be uprooted when the military base was established. Remnants of old buildings and fields are still visible and the military maintain the old cemetery and exclude it from their manoeuvres. Carefully controlled fires and herbicides are now used to prevent brush and forest encroachment on the open, formerly agricultural fields.

## 12.2 km

A4. The Combat Arms Training School of CFB Gagetown uses these high granite cliffs of Mt. Douglas for mountain warfare training. Temporary encampments frequently appear at the base of the cliffs and men may be seen scaling the rock faces.

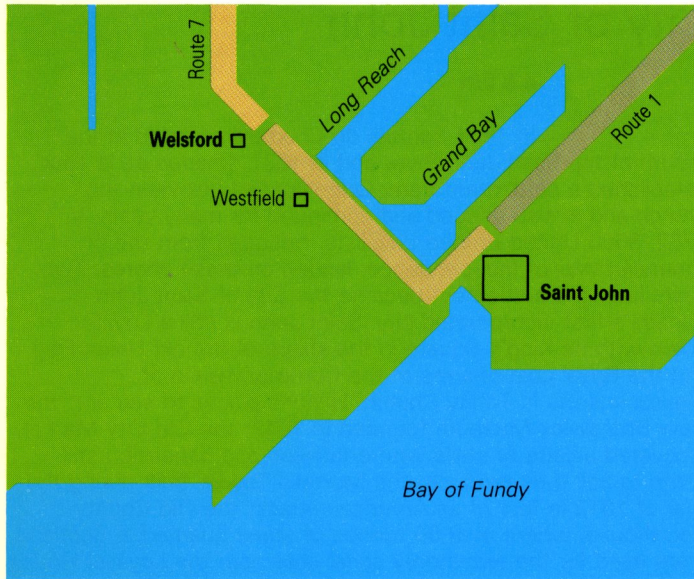


A2  
Stagecoach



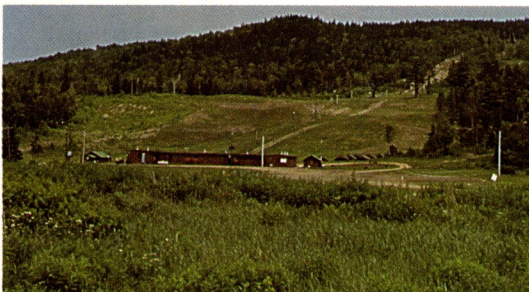


# Westfield



## (Welsford to Saint John: 40 km)

*This ecozone is dominated by the mountainous topography through which the Saint John River is finally able to break at Westfield. These hills have a complex geological structure. The hills sheltering Welsford are composed largely of Devonian and Silurian granites, siltstones, sandstones and conglomerates, while those around Westfield are made up of very ancient Precambrian sedimentary and volcanic rocks. These geological formations continue northeastward crossing the Trans-Canada Highway in the Coles Island ecozone, with the waters of the Washademoak, Long Reach, Grand Bay and the Kennebecasis lying between them.*



A4  
Combat Arms  
School

## To exit to Oak Point, 16.2 km

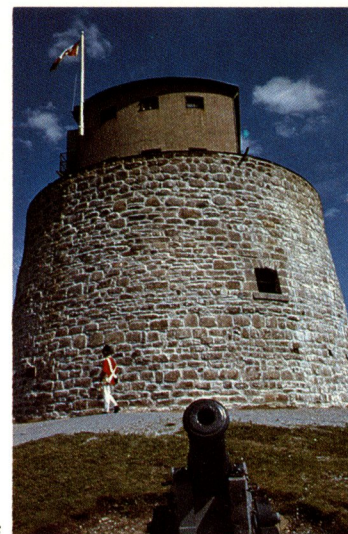
A5. Built by traders and fishermen from St. Malo (Jacques Cartier's home port), Oak Point (22.8 km on Route 112) was the second European settlement in North America. In 1758, British soldiers under Brig. Monckton proceeded from here to Fredericton and later, in 1783, American Loyalists settled and built the church which, along with many 18th century gravestones, still stands.



A5  
Oak Point

## 14.5 km

A6. The Musquash River watershed is the location of an integrated land use and forest management program which supplies water for the City of Saint John together with providing a site for closely monitored forest production and recreational use.



►  
A7  
Martello Towers



9.7 km

A7. Here the 725 km of the Saint John River empty into the Bay of Fundy through a 195 m wide mouth. The famous tides of Fundy have a vertical rise (or fall) of 8.7 m at Saint John, and the falls or rapids, visible at low tide, "reverse" as the unrelenting tide overcomes the outward flow and cascades upstream. This mouth is the final passage for the river through the aligned mountain-like ridges in Westfield ecozone.



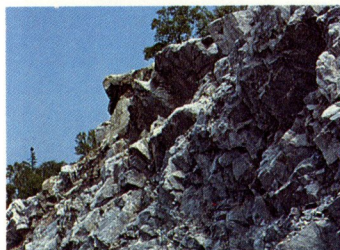
City Market -  
Saint John

Tourism New Brunswick



Saint John  
Harbour

Tourism New Brunswick

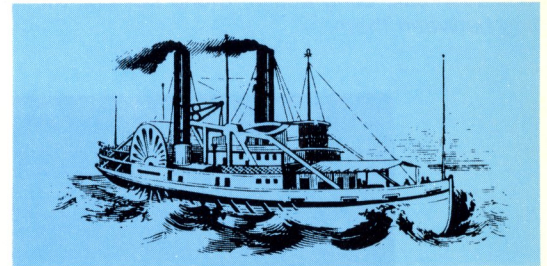


►  
A10  
Limestone

## City of Saint John

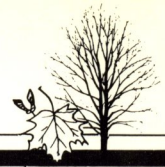
4.8 km

In 1604 Samuel de Champlain landed at the mouth of the Saint John River and in 1631, Charles de la Tour established a settlement here. Open conflict between the French and British ensued and continued for many years. In 1782, 3000 United Empire Loyalists, refugees from the American War of Independence, landed on these shores. Two years later the settlement became the City of Saint John, Canada's first incorporated city. Saint John is still a Loyalist Town with its King's Square in the shape of the old Union Flag and the Royal coat-of-arms of the Commonwealth of Massachusetts in Trinity Church. Historic places to see are: the New Brunswick Museum founded in 1842; the Old City Market, a covered arcade of stalls where farmers and fishermen still come to sell their produce; the Martello Tower, built during the War of 1812 in fear of an American attack; the Old County Courthouse, where over 90 tonnes of stone quarried in Scotland were used for the two-storey spiral staircase; the Loyalist House built in 1817; the Loyalist Burying Ground; and the Barbours old-time country store. Saint John is the terminus for the ferry, M.V. Princess of Acadia, which crosses the Bay of Fundy daily to Digby, N.S. and rivals Halifax as a harbour for ocean going vessels. Once the harbour was crowded with sailing vessels loading squared timber for Europe. Today it is the site of a modern forest products terminal from which pulp and paper products from New Brunswick mills are shipped to all parts of the globe.

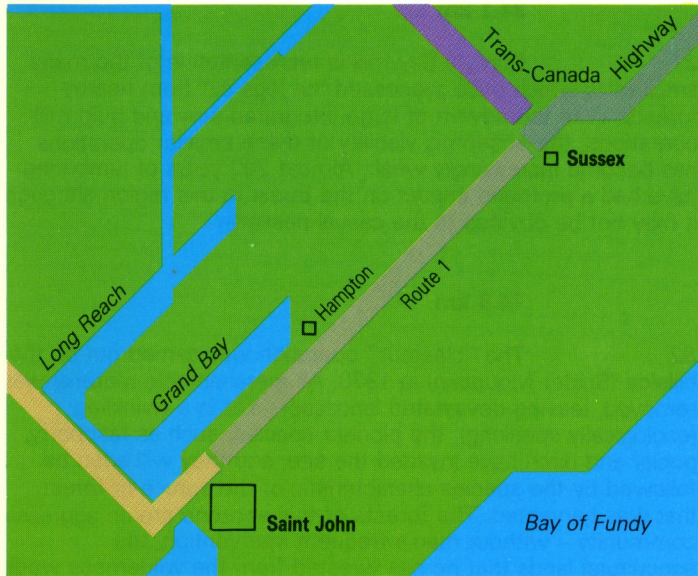


►  
A11  
Stern Wheeler





# Nauwigewauk



**(Saint John to Sussex: 71 km)**

*Nauwigewauk is a Maliseet Indian name meaning "the place of a long stream seen for a long distance". We have used this name to remind us of earlier travellers through this largely pastoral ecozone. The original high-quality stands of sugar maple and ash on the deep, well-drained soils have largely been cleared for agriculture, but on the thinner soils of upper slopes and ridges evergreens still predominate. Trees near the coast may be somewhat reduced in stature because of wind effects and reduced in vigor as a result of the repeated spruce budworm infestations to which they have been subjected in recent years.*

*This route runs parallel to the underlying rock strata; in fact, Kennebecasis Bay forms the dividing line between Precambrian sedimentary and volcanic rocks on the west and much younger (geologically speaking) Mississippian limestones, shales and sandstones and conglomerates in the road cuts. Similar conglomerates occur on the Trans-Canada Highway northwest of Sussex.*

**17.2 km**

A8. Impeded drainage over limestone strata often gives rise to soils supporting calcium-loving trees such as the cedar you see here. Associated "invaders" are black spruce with its high moisture tolerance, and tamarack (or eastern larch). All three, with an admixture of grey birch, poplar, and alder, are represented here.

**8.7 km**

A9. As a stream slows, its ability to erode or carry gravel, sand and silt decreases. Thus at river mouths or confluences transported materials are deposited and deltas are built up. This "interval" land is a small example of the resulting rich (alluvial) soils and their agricultural potential.

**6.1 km**

A10. In the past 24 km, geological forces have created outcrops of red-coloured, iron-rich sand or siltstones alternating with pale limestone. The former likely correlate with similar outcrops visible near Sussex and Fredericton, while the latter are more strongly aligned with the Kennebecasis and Petitcodiac valleys.

**16.4 km**

A11. Years ago, a stern-wheeler plied its way up the Kennebecasis River from Saint John to Hampton. The cable ferries across the rivers remind us of this bygone era.

**10.1 km**

A12. Compared to the length of the growing cycles of shrub and tree species, man's agricultural influence on the land can be short-lived. On the opposite hillside, you can see where he has cut off the forest and, soil quality and husbandry permitting, he has been able to maintain his agriculture. Where either was lacking, the land quickly reverted to forest and only remnant fence lines persist. In another 11 km, you will rejoin the Trans-Canada Highway at Sussex.



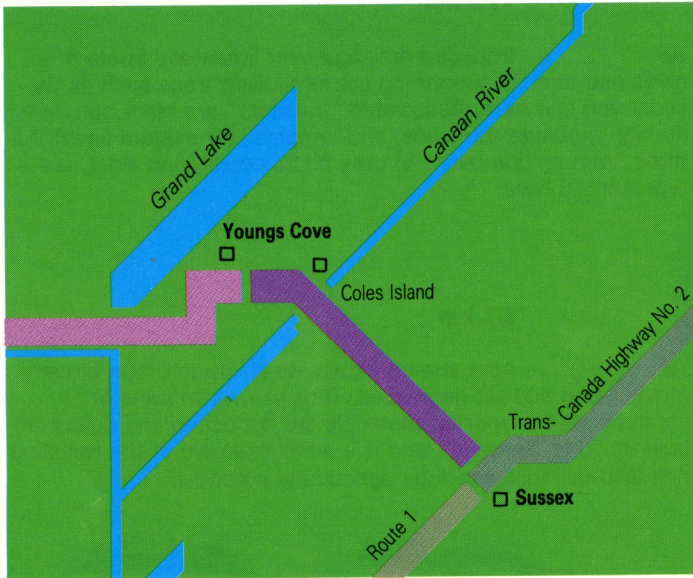
Black Bear



Raccoon



# Coles Island



(Youngs Cove to Sussex: 45 km)

This ecozone is small but complex. It forms an overland transition from the parallel but separate water courses of the Washademoak Lake and Canaan River at Coles Island to the Kennebecasis River at Sussex. Refer to the "Westfield" ecozone for a description of the parallel rock formations responsible for this change. Also apparent are changes typical to forests from hardwoods on well drained higher grounds to spruce and fir reclaiming the cleared lands at lower elevations. Spruce budworm, a native insect currently in epidemic proportions, has seriously defoliated the forests of this region. You may be fortunate enough to glimpse deer, black bear, porcupines or raccoons in this area, and perhaps even the eastern panther, which is believed to inhabit the wilderness of New Brunswick, but which is rarely seen.

24.1 km

31. Corey's Sawmill is representative of the many small mills which once processed the logs cut from nearby forests. With the advent of large integrated saw and pulp mill operations, the economic viability of these smaller operations has become increasingly weak. Almost 200 years of lumbering have had a profound impact on the forest in this region although it may not be obvious to the casual passerby.

14.8 km

32. The "clearcut" operation was carried out on the hillside (Snider Mountain) in 1973. All merchantable material was removed, leaving devastated landscape. Yet in a twinkling (ecologically speaking), the pioneer species, such as raspberry, poplar and birch have invaded the site, and they will soon be followed by the species characteristic of the spruce-fir forest that was harvested. The forests of this ecozone are an aggressive community – without man's frequent intervention, the agricultural lands that he has wrested from the wilderness would soon be reclaimed by the forest.

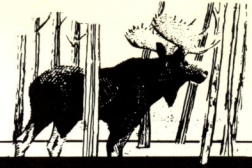


35  
Moose

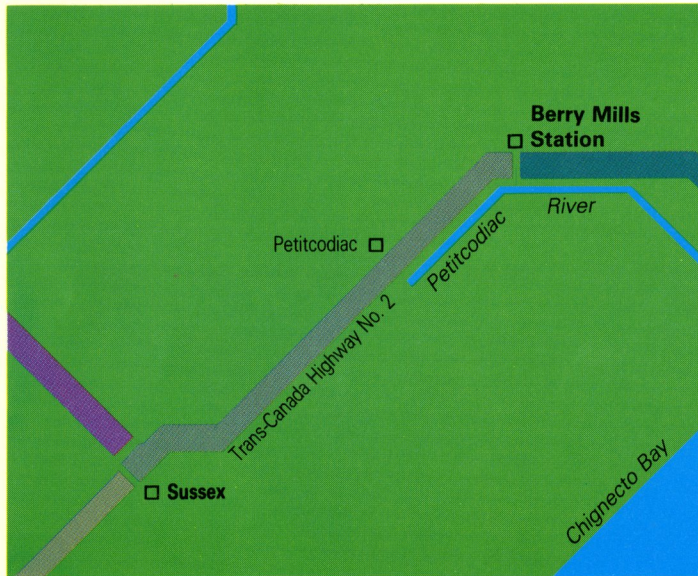


36  
Indian fur  
traders





# Petitcodiac



## (Sussex to Berry Mills: 69 km)

Seasonal climate (as opposed to daily weather) in conjunction with the local topography plays an important role in determining vegetation. The Kennebecasis-Petitcodiac Valley is protected by hills on the west, south and east, and dryer and warmer than average summers prevail. This explains the dominance of white and jack pine on sandy flats and the prevalence of sugar maple, beech, white pine, hemlock and yellow birch on slopes.

The hills which shelter this valley are extensions of the Pre-Cambrian and Mississippian formations which attain greater prominence north of Saint John (see pp. 13 and 15 for more details). The highway passes over massive potash and salt deposits and in the town of Sussex there is a sulphur spring on Main Street.

### 15.0 km

33. Sussex, named for the Duke of Sussex, son of George III, was settled by New Englanders prior to the arrival of the Loyalists in New Brunswick. The suitability of their choice of this fertile valley for their new homes is reflected in the small but thriving dairy and agricultural community which surrounds the town.

### 8.9 km

34. In geological times this area was covered by salt water which gradually evaporated, leaving concentrations of potash and common salt which ultimately were overlain by glacial deposits. When the ice sheet retreated, the depressed land rebounded and the salt water inlet of the Kennebecasis Valley changed to fresh. The rising land may have faulted along the line of the Trans-Canada Highway because on the south side of the road at this point, the salt deposits can be reached in an open, 1.8 m squared timber-shaft, while on the north side, out on the flats, the deposits are 53 m below the surface.

### 16.1 km

35. The "Anagance woods" are fairly typical of the forests of this ecozone. You should get your first view of jack pine, and on higher ground, sugar maple is common. Watch for wildlife along the roadside of this section. Chances are better than good that you will see a deer or even a big moose which may have ambled down from the low wet country to the north.

### 19.0 km

36. This valley was of major importance to Indians, fur traders, the Acadians, and English because of the portage near here which provided access via the Petitcodiac River, the Canaan River, the Washademoak Lake from the upper reaches of the Bay of Fundy and Baie Verte to the Saint John River system and, ultimately Quebec. The Micmac Indians of the valley called the Petitcodiac River "Petkoatkweak", meaning "the river bends round the bow".

### 16.9 km

37. "Old field succession" is a term often used by foresters to describe the reinvasion of abandoned agricultural fields by such species as white and red spruce. Here you can see this process in action, with older, taller trees near the old edge of the field, and younger smaller trees progressing out into the center, further and further from the available seed source. Eventually, these open-grown trees will form a closed canopy, and shade-tolerant species will then begin to appear in the stand.



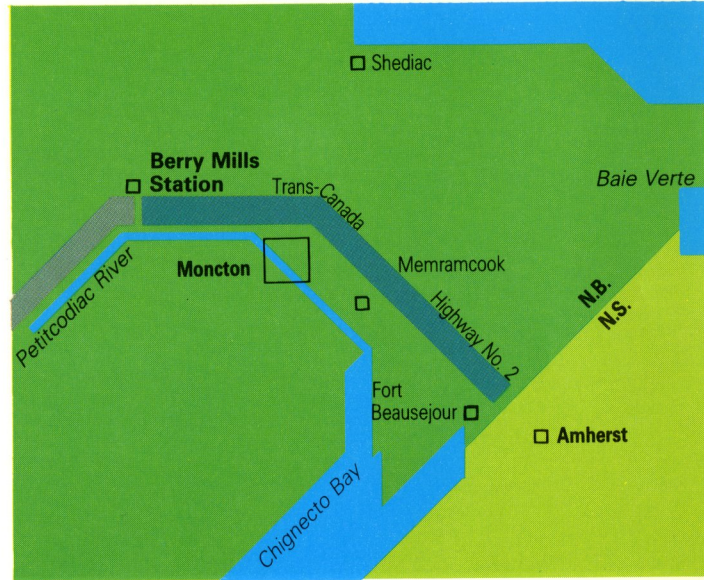
# Tantramar

## City of Moncton

38. "The Hub", as it is referred to, is almost in the geographical center of the Maritime Provinces. It is also the center of Acadian life in southern New Brunswick, particularly through the Université de Moncton which has, among other things, a unique Acadian Folk Museum housing an impressive collection of Acadian artifacts.

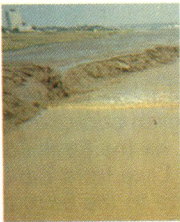
Moncton is also a good location to view the famed Tidal Bore of the Petitcodiac River. The rich mud and ooze of the river bottom, exposed during low tide, is covered by a roaring torrent of muddy water as the tide returns. The view is best at "Bore Park" in the center of Moncton. The wall of water which runs in to cover the muddy bottom is caused by the Fundy Tide, among the highest in the world, jamming its way into the narrow valley of the Petitcodiac River.

To the south, Moncton provides easy access to Fundy National Park via Route 114 or, for backpackers, the 80 km Fundy Trail originating in Riverview. Along Route 114, you may want to see the Hopewell Rocks, the world's largest flowerpots, formed by the tides at the mouth of the Petitcodiac River.

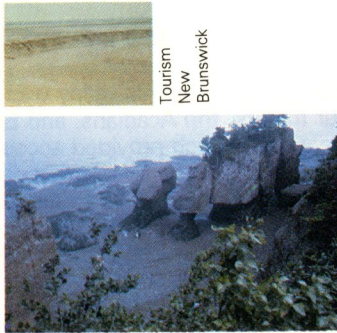


(Berry Mills to Amherst, N.S.: 74 km)

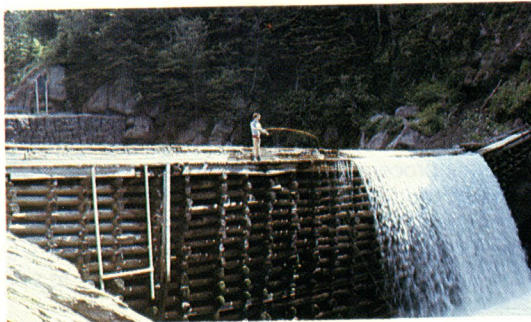
On the underlying geological formations of red to grey sandstones, siltstones and conglomerates, the forests appear unusually short, especially the second growth stands. In the absence of taller old growth forest to act as a shelterbelt, winds and coastal fog from the Bay of Fundy produce one-sided and often damaged crowns which lean away from the wind. Average summer (critical growing season) wind speeds along the coast are almost double those inland. Repeated burning has also contributed to the poor appearance and lack of vigor in the forest – you may see burnt stumps and snags (dead, but still standing trees) in the bogs. Black spruce and tamarack frequent these bogs while jack and white pine, white and red spruce, hemlock and red maple are more common on the drier sites.



38  
Tidal Bore

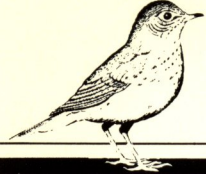


38  
Hopewell  
Rocks



38  
Fundy National  
Park





Swainson's  
Thrush

#### 14.6 km

39. At Berry Mills, you ride along the ridges of drumlins which rise off the floor of the Petitcodiac Valley. A drumlin is a glacial accumulation of boulders, stones and soil often containing an abundance of clay, with its long axis paralleling the direction of flow of the former glacier.

40. Although it is not apparent on this Ecotour, except perhaps in Saint John, New Brunswick is a maritime province. In fact the north, south and eastern limits of the province is the sea. If you go north from here you will see the beautiful sand beaches of Shediac, and farther north, at Kouchibouquac National Park, miles of offshore sand spits and barrier beaches.

Tourism New Brunswick



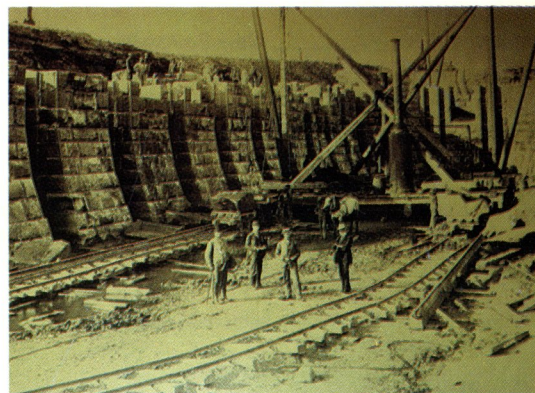
40  
Parlee Beach,  
Shediac

#### 31.9 km

41. The Tantramar Marshes were created by the 17th century Acadians who dyked back the sea. An outpost was established and by 1686 there were 1100 people in the area. Fort Beausejour was built for defence, but was finally taken by the English in 1755. Expelled Acadians returned in 1766 to Memramcook-Dorchester, which subsequently became a shipbuilding center. The last wooden ship was launched in the 19th century.

#### 4.2 km

42. The high towers of CBC International Radio beam the voice of Canada, in many languages, to the radios of the world. The antennae were built here to take advantage of the water-saturated marshland which, by improving the "electrical ground", strengthens the radio signals "bounced" off the ionosphere. These antennae are a long step from the Chignecto Ships Railway included in the illustration.



42  
Chignecto  
Ships Railway

#### 4.2 km

43. This intersection gives you options of turning to the National Historic Site at Fort Beausejour, its museum and documentation of the Chignecto Ships Railway; of turning to the Prince Edward Island ferry; or of continuing on to the Nova Scotia border marked by the Missaguash River 2.4 km away.





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Contribution au  
Programme l'homme  
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### Our forest environment and the Canadian Forestry Service

The volume and multiplicity of forest products has earned Canada a place of prominence among the forest nations of the world. But now, with a dawning comprehension of its role in the great ecological complex, Canadians begin to perceive the forest's broader value as a stabilizer of desired natural patterns and as a retreat for the relaxation and well-being of a people living in crowded cities.

The Canadian Forestry Service of the Department of the Environment is intimately concerned with the forest environment and the forest industries. Its objective is to promote the most efficient management and use of Canada's forest resources compatible with environmental concerns by:

- *conducting research and development in the forest management and forest products fields.*
- *disseminating information and providing technical services to provincial governments, forest industries, and other agencies.*
- *preparing and distributing information to the general public.*
- *providing grants to universities to encourage development of centers of research excellence in forestry.*

### Suggested Reading:

*Hosie, R.C.* 1979. Native Trees of Canada. 8th ed. Canadian Forestry Service, Department of Environment, Ottawa, 392 pp.

*Loucks, O.L.* 1962. A Forest Classification for the Maritime Provinces. Proc. Nova Scotian Institute of Science, Vol. 25, Part 2. 85-167 pp. plus map. (Reprinted by Canada Department of Forestry, Forest Research Branch).

*MacNutt, Stewart* ——— New Brunswick and its People.

*Rowe, J.S.* 1972. Forest Regions of Canada. Canadian Forestry Service, Department of Environment, Ottawa, Pub. No. 1300, 172 pp.

*Russell, F.* 1970. The Atlantic Coast. Illustrated Natural History of Canada. (Reprinted 1975). 160 pp.

*Sabina, A.P.* 1965. Rock and mineral collecting in Canada. Volume III. New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland, Geol. Survey of Canada, Misc. Report 8, 103 pp.

*Raymond, W.O.* 1950. The River Saint John. 2nd Ed. Tribune Press. Sackville, N.B.

*Wright, B.S.* 1962. Wildlife sketches, near and far. Brunswick Press, Fredericton, N.B.

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