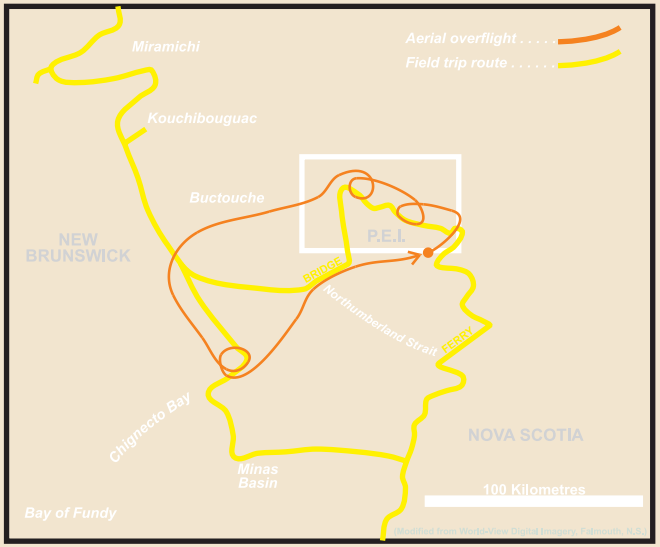
AERIAL RECONNAISSANCE OF PRINCE EDWARD ISLAND, SOUTHEAST NEW BRUNSWICK COAST AND CHIGNECTO BAY, BAY OF FUNDY

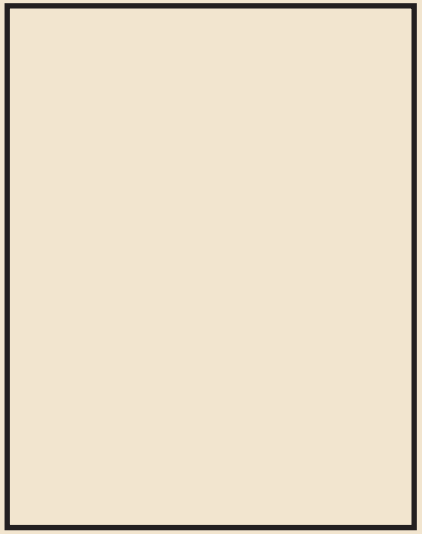
AERIAL AND GROUND ROUTES



PRINCE EDWARD ISLAND

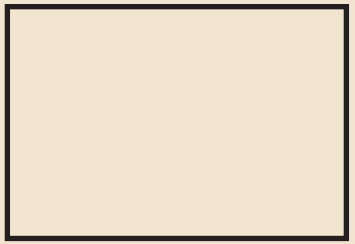
The north coast of Prince Edward Island is characterized by a series of barrier island/ estuary bay systems separated by eroding glacial till/Permian bedrock headlands

TRACADIE SYSTEM

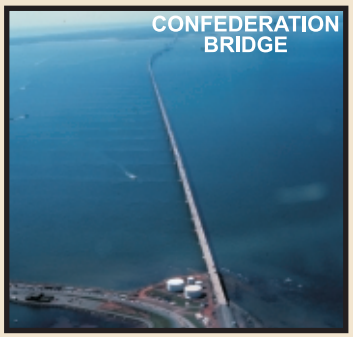


Bathymetric chart of Tracadie Bay

Westward view of Tracadie Barrier



Eroding Brackley Beach situated at till headland west of Tracadie Bay



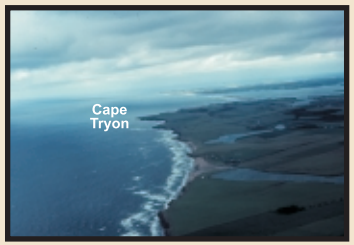
Prince Edward Island: no longer an island! A 13.8 km bridge spans Northumberland Strait

MALPEQUE

View of entrance to the large Malpeque Bay, showing the former inlet that dates back to 1845

CAVENDISH SYSTEM

Westward view of Cape Turner, Cavendish Beach, New London Bay and Cape Tryon



Eastward view of Cape Tryon and Cavendish Beach; New London Bay in distance

Multiple overwash channels - distal Cavendish Beach

RUSTICO SYSTEM

Rustico Bay and Rustico Inlet illustrating erosional termination of Coastal Highway and landward movement of the entire barrier

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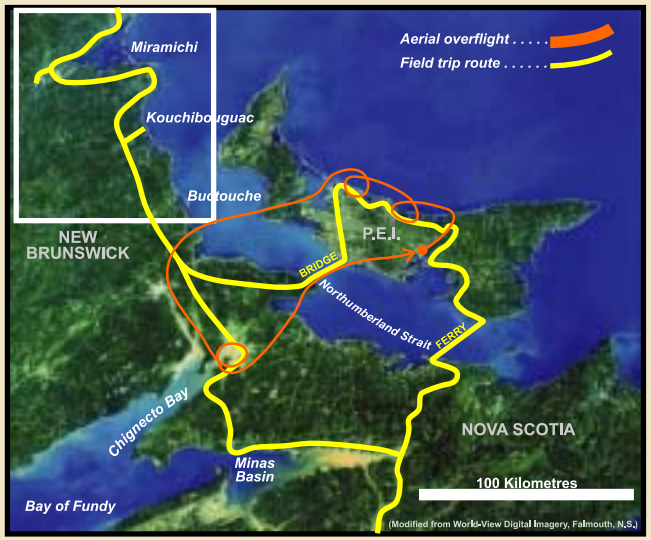
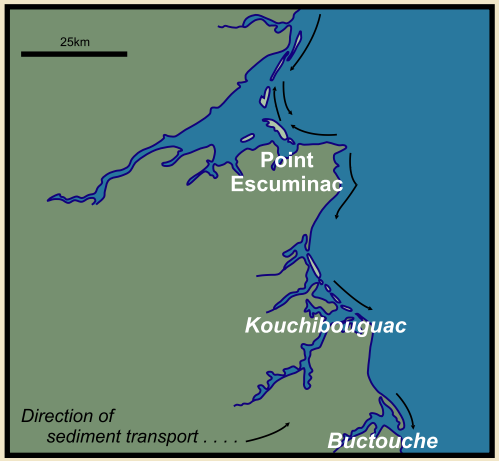
AERIAL RECONNAISSANCE OF PRINCE EDWARD ISLAND, SOUTHEAST NEW BRUNSWICK COAST AND CHIGNECTO BAY, BAY OF FUNDY

AERIAL AND GROUND ROUTES



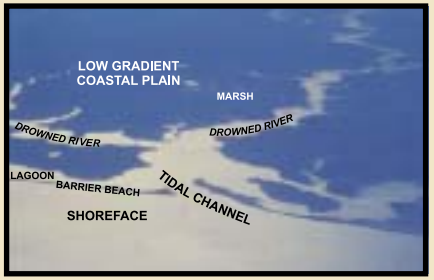


EAST NEW BRUNSWICK COAST AND CHIGNECTO BAY

BUCTOUCHE SYSTEM

Buctouche is a classical drowned river valley with a large 15 km long recurved spit formed across its mouth.

KOUCHIBOUGUAC SYTEM



Kouchibouguac is a multiple drowned river system semi-enclosed by a strand of barrier islands and spits

CHIGNECTO BAY

The macrotidal coastal environments of Chignecto Bay and Minas Basin differ drastically from the microtidal wave-dominated, barrier-estuary/lagoon environments that characterize the southern Gulf of St. Lawrence coasts of P.E.I. and New Brunswick. Spring tidal ranges in the order of 16 metres at the heads of Chignecto Bay and Minas Basin, create broad intertidal sub-environments dominated by muddy sediment deposition, tidal run-off creeks, and classical tidal point bar and tidal flat deposits.

POINT ESCUMINAC

Pleistocene(?)-Holocene peat cliffs at Point Escuminac illustrating perched water table forming surface ponds, and active erosion of peat bog margin by high energy waves

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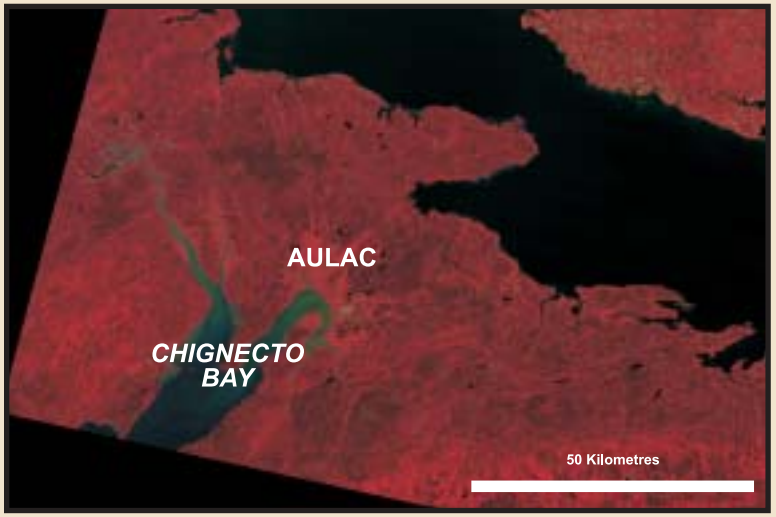
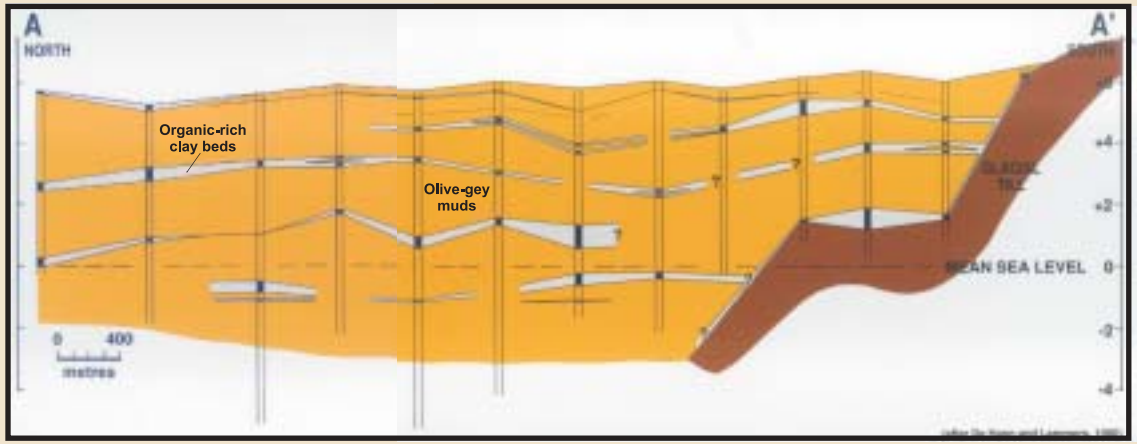
MACROTIDAL CHIGNECTO BAY TIDAL FLATS, AULAC, N.B.

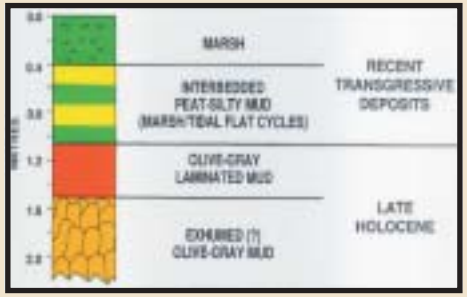


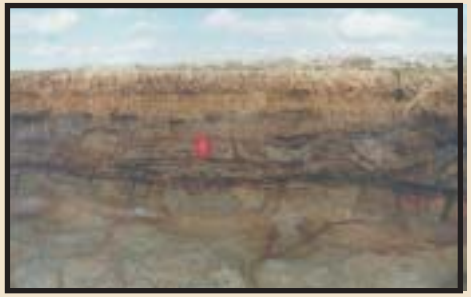
HOLOCENE STRATIGRAPHY - TANTRAMAR MARSHES

Tantramar Marsh stratigraphy consists of up to 12 metres of intertidal to supratidal mudflats (silty muds and clays), interbedded with thin organic layers representing marsh or bog deposits. Transgression began some 4100 ybp as indicated by the age of the lowest organic layer



TIDAL FLAT STRATIGRAPHY





INTERLAYERED MARSH/TIDAL FLAT CYCLES

VIEW OF RECENT TIDAL FLAT DEPOSITS OVERLYING EXHUMED LATE HOLOCENE MUDS

PALEO-MUDCRACKS OR PALEOPEDS ?

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