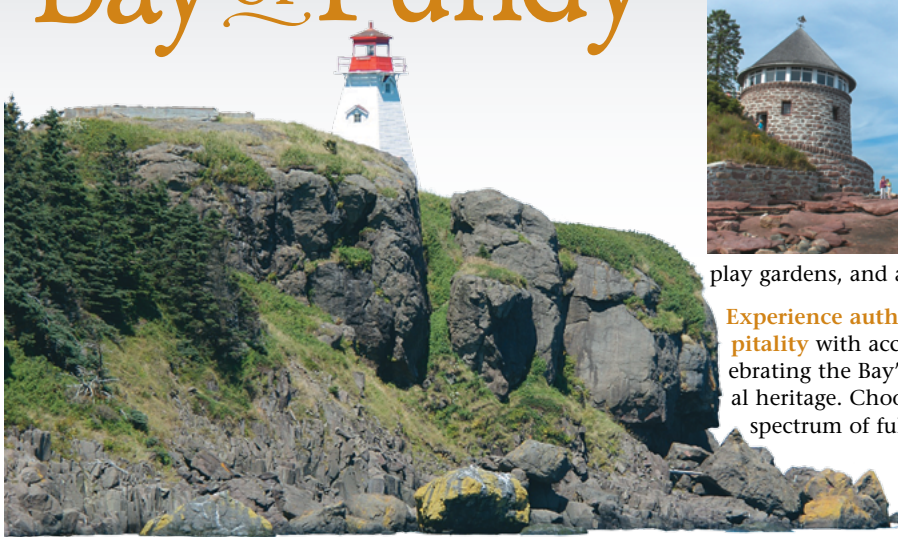


Bay of Fundy



Attractions showcasing Fundy's dynamic ecology and geology are spread throughout the region. Such crown jewels of the Fundy seascape include national & provincial parks, coastal hiking trails, natural history museums, lighthouses and tidal harbours. The region's culture and history are celebrated at Fundy interpretation centres, historic sites, museums, horticultural display gardens, and artisans' studios.



Experience authentic Fundy hospitality with accommodations celebrating the Bay's rich architectural heritage. Choose from a broad spectrum of full-service hotels, distinctive country inns, historic bed & breakfasts, and beautifully crafted coastal cottages.

Catch the Fundy action with an exciting range of outdoor adventures. Explore the seasonal habitat of the ocean's most amazing mammals under the caring guidance of whale watch tour companies. Round out your exploration of the Bay with a sea kayaking adventure along Fundy's sculpted coast or a guided horseback ride



beside Fundy's serene tidal marshes. If you like your adventure wet and wild, take a roller-coaster-style tidal boat ride as the Bay's incoming waves clash with the outgoing flow of Fundy's rivers.

Between the provinces of New Brunswick and Nova Scotia lie the highest tides on earth... **Canada's phenomenal Bay of Fundy**. With each daily tide cycle, 100 billion tonnes of seawater flow in and out of the Bay of Fundy — more than the combined flow of the world's freshwater rivers. Fundy's astonishing **50-foot (15 metre) tidal range is five times higher** than typical tides on the Atlantic coast.

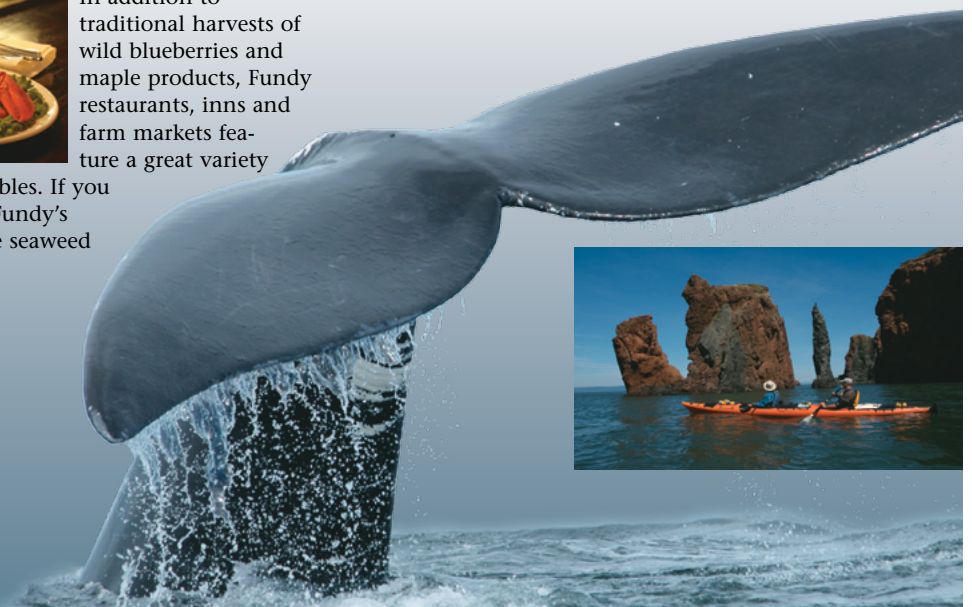


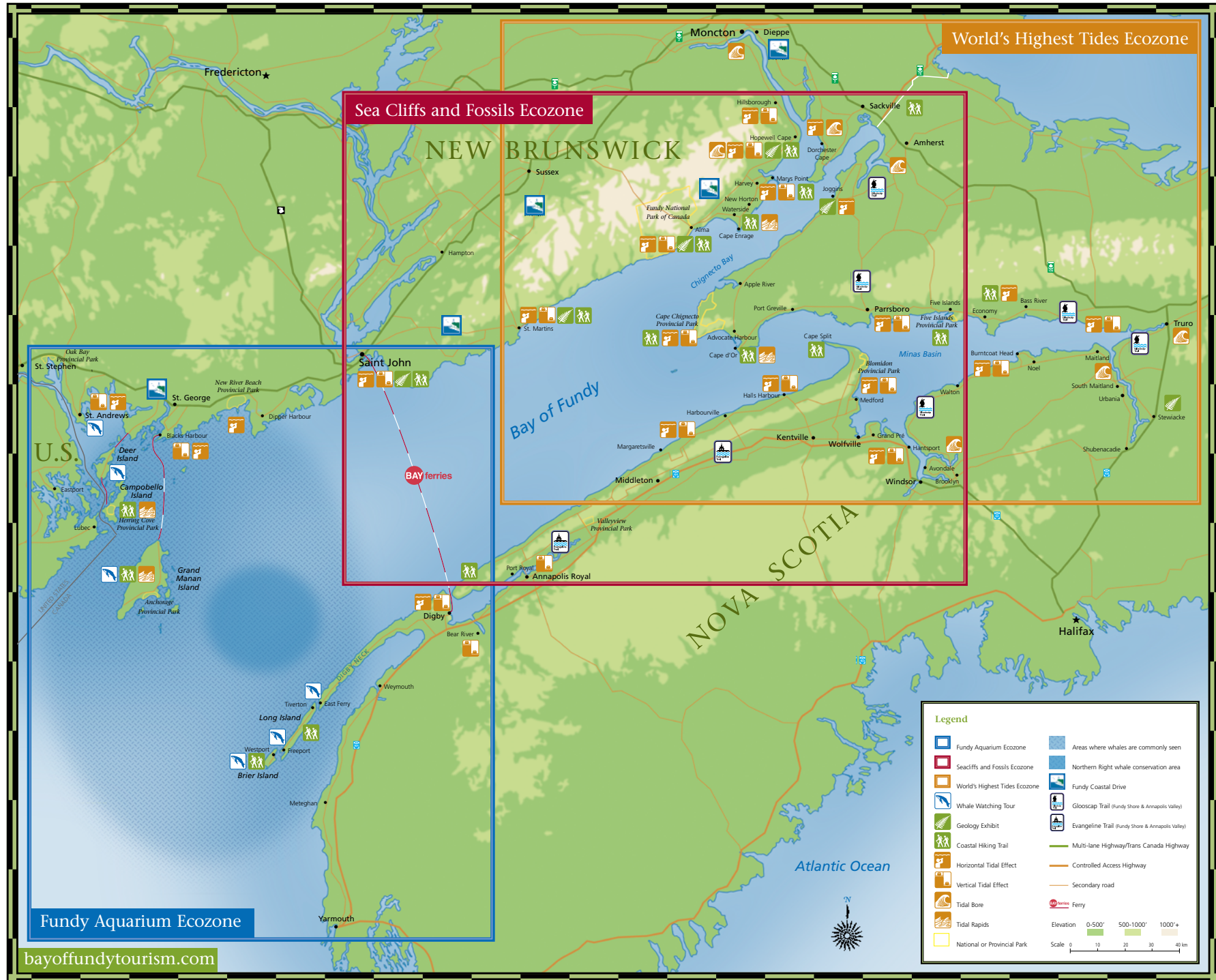
Bay of Fundy cuisine is not to be missed! Lobster, scallops, mussels, smoked salmon, and other fresh fish are perfect complements to



Fundy's award winning wines. In addition to traditional harvests of wild blueberries and maple products, Fundy restaurants, inns and farm markets feature a great variety

of fresh fruit and vegetables. If you dare, sample Fundy's popular edible seaweed snack: **dulse!**





World's Highest Tides Ecozone

When can you experience the tides?

In the World's Highest Tides Ecozone, visitors can see 2 extraordinary high and 2 low tides every 24 hours. The time between a high tide and a low tide is, on average, 6 hrs & 13 min. As such, you can reasonably expect to see at least 1 high & 1 low tide during daylight hours. Tide times move ahead approximately 1 hour each day, and tide times vary slightly for different locations around the Bay. Check with the community you are planning to visit for accurate high & low tide times. There are 3 interesting ways to observe the tides: the Vertical Effect; the Horizontal Effect; and Tidal Bores & Rapids.



Low tide, Hopewell Cape, NB



Low tide, Five Islands Provincial Park, NS

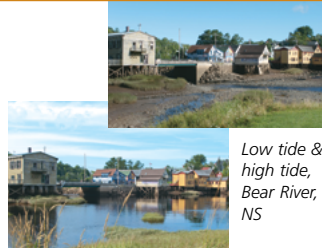
Where to experience the greatest vertical tidal effect

The tidal range is normally measured as a vertical distance: the change in the ocean's elevation from high tide to low tide. In the World's Highest Tides Ecozone, the tide's vertical change can be 15 m (50 ft) or more. The best way to see vertical tides is to visit small harbours around the Bay that empty at low tide and then completely fill about 6 hours later at high tide. Fishing boats that bob in the water alongside wharves at high tide sit on the ground below at low tide. Wharves along the Fundy coast in Nova Scotia (Halls Harbour, Parrsboro, & Advocate) and New Brunswick (Alma & St. Martins) are good locations for viewing extreme vertical tides. At Hopewell Cape, NB, and Burntcoat Head, NS, visitors at low tide can walk on the ocean floor among the incredible rock formations that the tides have carved. As the tide comes in,



Low tide, Hopewell Cape, NB

visitors can see these formations become small islands. The best way to see the tide's vertical change is to visit a site at high tide and then return to the same site 6 hours later at low tide.



Low tide & high tide, Bear River, NS



Low tide, Blomidon Provincial Park, NS

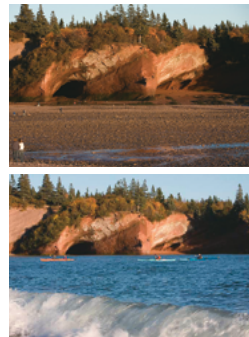
Where to experience the greatest horizontal tidal effect

The tidal range can also be observed as a horizontal change. In some parts of the Bay, the tide retreats as much as 5 km (3 mi) at low tide, leaving vast areas of the ocean floor exposed. In Chignecto Bay and the Minas Basin, a fascinating inter-tidal zone of beaches, rock ledges, and sand flats is exposed at low tide. At low tide, visitors are able to walk on the ocean floor. The ocean floor is accessible at low tide through local parks and beaches in communities all around the Bay of Fundy's coast. However, visitors who venture onto the inter-tidal zone in Chignecto Bay and the Minas Basin at low tide must be very cautious, as the tide can move extremely fast when it turns and starts to come in again. At Evangeline Beach (NS), Dorchester Cape (NB), & Mary's Point (NB), huge flocks of up to 100,000 migratory shorebirds converge to feast on the inter-tidal zone's fertile mud and sand flats. Each summer, this area exposed at low tide becomes a critical feeding area for birds on their inter-continental migratory flight. Care must be taken not to disturb migratory birds during their feeding period.

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Where to see tidal bores & rapids

The Bay of Fundy's tides also cause tidal bores, rapids, and whirlpools. Tidal bores can be viewed from shore in the Hantsport and



Low tide & high tide, sea caves, St. Martins, NB



Tidal bore rafting, Shubenacadie River, NS



Tidal rips, Grand Manan Island, NB (above). Tidal rips, Cape d'Or, NS (right).



Maitland areas of Nova Scotia or, even better, can be experienced in the water during a zodiac boat ride on the nearby Shubenacadie River. Here, visitors can ride on the Bay's largest tidal bore when the incoming tide meets the resistance of the river's exposed sandbars, creating 3 m waves and wild rapids. Visitors can also visit the Reversing Falls in Saint John (NB) where the incoming tide reverses the river's natural flow and creates extreme tidal rapids. Cape d'Or (NS) and Cape Enrage (NB) are great locations for seeing tidal rapids from shore. Intense tidal whirlpools also occur around the coasts of Deer Island and Campobello Island in New Brunswick.

The science of the tides





















Tides are the periodic rise and fall of the sea caused by the gravitational pull of the moon & the sun on the Earth. Fundy's tides are the highest in the world because of an unusual combination of factors: resonance and the shape of the bay. The water in the Bay of Fundy has a natural resonance or rocking motion called seiche. You could compare this to the movement of water in a bathtub. Although the water in a bathtub sloshes from one end to the other and back again in a few seconds, it takes about 13 hours for the water in the bay to rock from the mouth of the bay to the head of the bay and back again. As the ocean tide rises

and floods into the bay every 12 hours and 25 minutes, it reinforces the rocking motion. To imagine this, picture an adult giving a gentle push to a child on a swing. Just a very small push is required to keep the swing moving. Likewise the seiche in the bay is sustained by the natural resonance of the ocean tides. The bay's shape and bottom topography are secondary factors contributing to Fundy's high tides. The bay becomes narrower and shallower — from 130 to 40 m (426' to 131') — toward the upper bay, forcing the water higher up onto the shores.

Source: "Tides of Fundy" by the Fundy Guild at Fundy National Park

World's Highest Tides Ecozone

Legend

-  Fundy Aquarium Ecozone
 -  Seacliffs and Fossils Ecozone
 -  World's Highest Tides Ecozone
 -  Whale Watching Tour
 -  Geology Exhibit
 -  Coastal Hiking Trail
 -  Horizontal Tidal Effect
 -  Vertical Tidal Effect
 -  Tidal Bore
 -  Tidal Rapids
 -  National or Provincial Park
 -  Areas where whales are commonly seen
 -  Northern Right whale conservation area
 -  Fundy Coastal Drive
 -  Glooscap Trail (Fundy Shore & Annapolis Valley)
 -  Evangeline Trail (Fundy Shore & Annapolis Valley)
 -  Multi-lane Highway/Trans Canada Highway
 -  Controlled Access Highway
 -  Secondary road
 -  Ferry
- Elevation 0-500' 500-1000' 1000'+
- Scale 0 10 20 30 km



Fundy Aquarium Ecozone

The ocean tides push nutrient-rich water to the surface where the Bay of Fundy meets the Gulf of Maine, between Brier Island (NS) and Grand Manan Island (NB). The constant tidal influx of nutrients into the Bay of Fundy supports a rich and diverse marine ecosystem of bottom-dwelling sea plants, common and unusual fish, and sea birds. Several whale species, including the rare North Atlantic Right whale, and other marine mammals congregate in this "aquarium without walls." Four whale species are common in the Bay of Fundy, and other species occasionally visit. Porpoises and seals are also frequently seen in this ecozone.

The Humpback Whale

The Humpback whale is the most common large whale in the Bay of Fundy. Humpbacks grow to be about 16 m (52') long and weigh up to 36 tonnes. These slow-swimming whales are sometimes seen playfully breaching or lunging out of the water. Humpbacks have different markings along their pectoral fins and flukes (tails), so each whale is easily identifiable. These baleen whales feed on plankton such as krill (tiny shrimp) and small fish such as herring. Baleen whales scoop up



A Humpback whale rolls over on its back

mouthfuls of water and filter the food through their baleen "strainers". An average Humpback will eat two tonnes (5,000 lbs) of plankton and small fish and live up to 77 years.

Humpbacks are commonly seen in the Bay of Fundy. At any one time during the summer, 100 Humpbacks may be found in the Fundy Aquarium Ecozone. Humpbacks are famous for being "singing whales" — their exotic songs are thought to

be a means of communication. These migratory whales travel to food-rich northern waters such as the Bay of Fundy for the summer and return to warm tropical waters each winter to reproduce.

The North Atlantic Right Whale

Only 300 North Atlantic Right whales are currently in existence because they were nearly hunted to extinction in the 1800s. Although Right whales have been a protected species since 1930, extinction remains a threat for the world's most rare whale. 18th-century whalers named them "Right whales" because these easy-to-catch whales that floated when killed were the "right" ones to harvest.



A Northern Right whale swims gently.

Right whales, which are found only in the North Atlantic, come to the Bay of Fundy to feed, mate, and raise their young. These baleen whales are attracted to the abundant food in the Bay of Fundy and the Gulf of Maine. Although few in number, Right whales still come together as a community, which may be important in helping young whales find mates. Right whales grow up to 15 m (50') in length and weigh approximately 45 tonnes.

The Finback Whale

The Finback whale, the second largest animal on earth, can be up to 24 m (80') long, which is just short of the Blue whale. Their long streamlined bodies make them fast swimmers; they are known to travel 40 km/h (25 mph). They weigh an average of 73 tonnes. Finback whales are not as numerous in the Bay of Fundy as Humpbacks, but they sometimes arrive early in the season (late May) and stay until late fall.

Finbacks can live up to 100 years. Like Humpbacks and Right whales, Finbacks are baleen whales that feed on krill and small fish such as herring. Finbacks tend to travel in groups or "pods," but they are often seen alone or as a mother-and-calf pair early in the Bay of Fundy's season.



A Humpback whale "waves" with its pectoral fin.

The Minke Whale

Minke whales, the smallest baleen whale, are normally 9 m (30') in length and weigh about 9 tonnes, and they live up to 50 years. Although Minke whales are relatively small, they can make amazingly loud sounds. Their underwater communication has been measured at 152 decibels, equivalent to the sound of a jet taking off! Minke whales can also make loud noises through their blowholes; they like to swim close to land, and their breathing can sometimes be heard from shore.

Minke whales are much more common than the larger whales, but they seem to be shy and are often seen alone. There are an estimated 8,000 Minke whales worldwide. Minke whales normally occupy the Bay of Fundy from May until late fall. While they are safe in the Bay of Fundy, countries such as Norway and Japan still hunt them in other parts of the world.

The White-Sided Dolphin

White-Sided dolphins are often seen riding the bow waves of Passamaquoddy Bay ferries! These small marine mammals sometimes frolic alongside whales and vessels. These dolphins are common along the eastern seaboard and are normally encountered during the summer in the Bay of Fundy. White-Sided dolphins are usually seen in small groups but sometimes travel in groups of up to 100. Dolphins are quite agile and often leap playfully out of the water.

The Harbour Porpoise

Harbour porpoises are common in the Bay of Fundy. These marine mammals are not as agile as dolphins and move by "rolling" slowly forward in the water. Porpoises tend to travel in small groups of two to five animals.

How to see the whales

Many companies offer whale-watching boat tours in the Fundy Aquarium Ecozone. Tours are available from May until October and usually take 3 to 4 hours.

Whale-watch operators are based primarily out of Digby Neck and Islands, St. Andrews, or the Fundy Isles. Whale-watching tours are available on refitted fishing boats, sailing vessels, and zodiacs.

Bay of Fundy whale-watch operators have developed a Code of Ethics to govern how they interact with the whales because the Bay of Fundy is an important feeding area for some extremely rare species (such as the Right whale). This Code of Ethics ensures that whale-watching boats don't crowd or harass the whales.

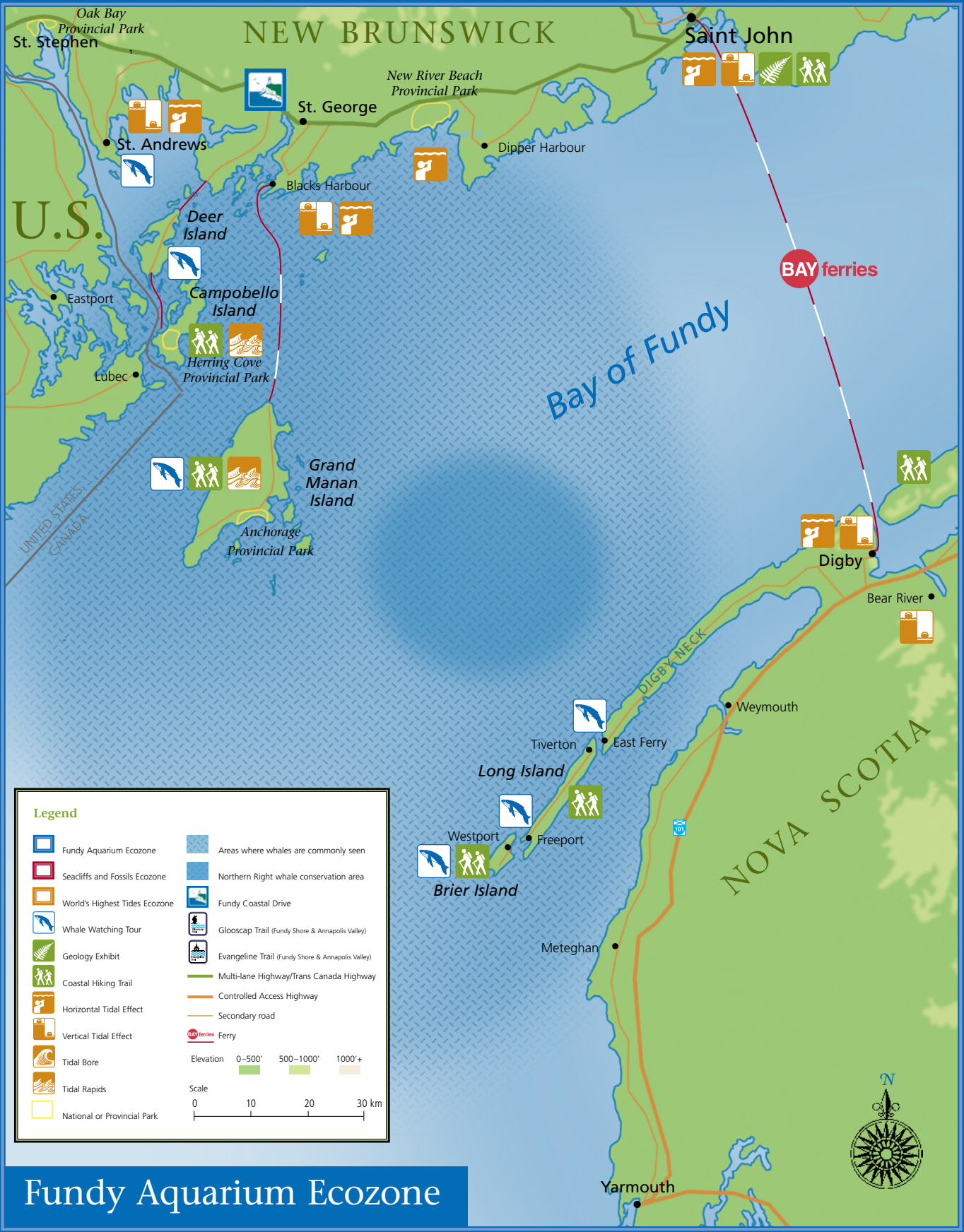
By requirement, all Bay of Fundy Recommended Experience whale-watch companies meet or exceed the high standards of the whale watching Code of Ethics.



Whale-watching in the Bay of Fundy.



Humpback whale breaching.



Fundy Aquarium Ecozone

bayoffundytourism.com

Sea Cliffs and Fossils Ecozone

Years of tidal activity in the Bay of Fundy have created some of the world's most captivating and unusual landscape formations. The tidal action has carved dramatic cliffs, sea stacks, and caves in the sandstone in many parts of the Fundy coast. Elsewhere around the Bay, spectacular headlands of volcanic rock rise up hundreds of feet from sea level, boldly resisting Fundy's relentless tides.



Cape Chignecto Provincial Park, Advocate, NS

The Sea Cliffs and Fossils Ecozone showcases a full range of the Fundy's naturally sculpted rock formations and escarpments. This zone can be experienced through coastal hiking, sea kayaking, and coastal boat tours. See chart (page 2) for sites that provide good visitor access and Fundy interpretation.

Many stages of the earth's history are revealed in the Bay of Fundy's geology and fossils. Within this internationally significant region, visitors can learn how the super-continent Pangea was formed and how life on earth evolved. The continents



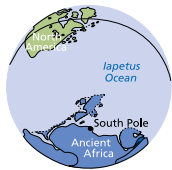
Fundy National Park, Alma, NB

collided where the Bay of Fundy is currently located about 360 million years ago. About 100 million years later, the continents began to separate, eventually creating the Atlantic Ocean.

This continental separation created the great rift valley that forms the Bay of Fundy's fascinating underlying geological structure.

Life on earth was simultaneously evolving. Over many millions of years, land-dwelling animals evolved from ocean-dwelling creatures. Each of these regions around the Bay of Fundy represent an important chapter in the earth's 500-million-year geological and fossil history:

Formation of the continents



The ancient world before the continents collided.



The creation of Pangea.



The continents begin to separate; the Atlantic Ocean is born.

City of Saint John, NB — The Fundy City

Early marine life — 450–600 million years ago

The City of Saint John, NB, features 600- to 450-million-year-old rocks from the Cambrian and Ordovician periods, which pre-date the collision of the continents that led to the formation of Pangea. Fossils of early marine creatures called trilobites, which are distant relatives of crabs and other joint-legged creatures that preceded the emergence of land animals, have been found in Saint John. The New Brunswick Museum in Saint John showcases fossils from this significant chapter in the earth's history and offers comprehensive interpretative displays of the region's geology.



Trilobite fossil, New Brunswick Museum, Saint John, NB

Hopewell Cape, NB

Carboniferous conglomerate — 350 million years ago

Uniquely shaped reddish cliffs of 350-million-year-old rock conglomerate and sandstone comprise the famous "flower pot" rock formations at the Hopewell Rocks. This conglomerate was formed as rocks and pebbles, washed down from a regional mountain range, were compressed and cemented together over millions of years. During a later period of tectonic activity, these layers of conglomerate, sandstone, and shale were lifted up and tilted to a 30–45° angle. Vertical cracks or fissures divided the rock into large blocks, which Fundy's tides have since eroded into sea caves and huge carved-rock formations.



Hopewell Rocks, Hopewell Cape, NB

Low tide visitors walking on the ocean floor at Hopewell Rocks can see evidence of this tilting in the rock face; the vertical cracks which are the genesis of new rock formations; and the telltale high-tide marks along the cliffs. Full visitor services on site at Hopewell Rocks Interpretation Centre.

Joggins, NS

Ancient rainforests & the first reptiles — 315 million years ago

In 1852, Sir Charles Lyell (one of the fathers of modern geology) and the renowned Canadian geologist Sir William Dawson discovered fossils of the world's oldest reptiles in Joggins, N.S. Unlike the amphibians that came before, these early reptiles laid eggs free of the water, allowing them and their ancestors — including dinosaurs and



Fossilized tree, Joggins, NS

mammals — to live virtually anywhere on land. The Joggins Fossil Cliffs are the world's most outstanding example of the Carboniferous "Coal Age", a period where ancient rainforests of strange and extinct trees covered the Earth. Along with the oldest reptiles, a host of plants and animals are fossilized in the Joggins Fossil Cliffs, including: giant lycopsid trees, seed ferns, amphibians, primitive fish and sharks, flying insects, and tracks of the gigantic millipede-like creature Arthropleura. The site features guided tours of the beach and cliffs, an interpretive centre and research facility as well as full visitor services.

Parrsboro, N.S.

Dawn of the dinosaurs — 200 million years ago

The Jurassic period heralded the beginning of the dinosaur age, a period that would continue for 140 million years. Some of the earliest dinosaur fossils ever found were discovered near Parrsboro, N.S. These finds are internationally significant because they contain fossils from both the end of the Triassic period and the beginning of the Jurassic period (before and after the extinctions). Fossils of amphibians and crocodile-like reptiles from before the extinction and dinosaurs that emerged after the extinction are both found in different layers of rock in this region. The Fundy Geological Museum's extensive exhibits, working laboratory, and interpretive beach walks offer several ways to explore this chapter of Fundy's natural history.



Dinosaur skeleton, Fundy Geological Museum, Parrsboro, NS



Hillsborough, NB, and Stewiacke, NS

Ancient mammals — last two million years

The dinosaurs that had ruled the earth for over a hundred million years disappeared at the end of the Cretaceous period, 65 million years ago. Their decline created an opportunity for a new group of animals to become the dominant land-based creatures: mammals. Skeletons of extinct "Ice Age" mastodons have been discovered at Hillsborough, NB, and Stewiacke, NS.



Hillsborough Mastodon bones, New Brunswick Museum, Saint John, NB



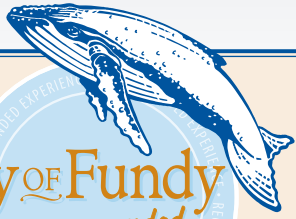
Life-size reproduction of the mastodon at Mastodon Ridge, Shubenacadie, NS

Location	Landscape features	Activities
Grand Manan Island, NB	Sea cliffs, volcanic headlands	Hiking trails
St. Martins, NB	Sea caves	Beach access at lowtide
Fundy Trail, St. Martins, NB	Coastal cliffs, rock escarpments	Hiking & biking trails, guided walks, beach access
Fundy National Park, Alma, NB	Coastal cliffs, headlands	Hiking trails, guided programs, beach access, kayaking
Hopewell Rocks, Hopewell Cape, NB	Sandstone cliffs, carved formations	Walking trails, beach access, kayaking
Joggins Fossil Cliffs, NS	Sedimentary coastal cliffs, cobble beach	Guided beach access
Cape Chignecto Provincial Park, NS	Volcanic rock headlands, rock formations	Hiking trails, beach access, kayaking
Cape d'Or, NS	Volcanic cliffs	Hiking trails, beach access
Five Islands Provincial Park, NS	Sculpted sandstone & sea cliffs, volcanic rock islands	Hiking trails, beach access
Cape Blomidon Provincial Park, NS	Volcanic rock headlands, sea cliffs	Hiking trails, beach access
Balancing Rock, Tiverton, Digby Neck, NS	Volcanic rock columns	Hiking trail

Bay OF Fundy

bayoffundytourism.com

has more touring tips, tide times, maps, high-low tide videos, helpful links and the Bay of Fundy blog. Got a question? Tweet us @bayoffundy.



Bay OF Fundy
Recommended Experience

Bay of Fundy Recommended Experiences

is a network of great accommodations, exhilarating outdoor adventures and the area's most

mesmerizing natural and cultural attractions.

Businesses in the *Recommended Experiences* network voluntarily exceed Bay of Fundy Tourism's rigorous standards of quality, customer service, ecological sustainability, and Fundy knowledge.

By choosing to explore the Bay of Fundy with our *Recommended Experiences* members you're assured of an authentic vacation with your hosts: people passionate about sharing and celebrating life, history, culture and cuisine around *the world's biggest tide bay!*

Fundy Travel Tip

It takes 6 hours, 13 minutes for tides to go from low to high.

Check daily tide times: bayoffundytourism.com



Halls Harbour, NS Low & High Tides

