The Bay of Fundy is a 170-mile-long (270 km), straight-sided, somewhat funnel-shaped bay which splits at its northeastern head into two narrow bays, Chignecto Bay and the Minas Basin. It was formed as the continental plates parted millions of years ago, forming deep rift valleys which filled with sediment washed in from the land. The Bay of Fundy is one of these ancient rifts.

The Bay of Fundy is an eco-attraction on par with such marvels as the Great Barrier Reef of Australia and the Rain Forest of Brazil.

Its mighty tides are the greatest on earth. Every day, twice daily, one hundred billion tons of seawater roll in and out of the Bay.

At low tide, you can literally walk on the ocean floor. At high tide, just six hours later, your footprints will be covered by the ocean. In some places, the vertical difference between high and low tide is 14 meters—roughly the same height as a four-story building!

In Micmac lore, it was a giant whale, who angered the god Glooscap and created such a splash with his mighty tail, that the water sloshes back and forth to this day.

In actuality, the story of the tremendous Bay of Fundy tides is no less the stuff of legends.

Some 350 million years ago, it was not Glooscap, but rather the sun and moon who conspired to create this awe-inspiring natural phenomenon. That is, some 100 million years before the first dinosaurs roamed the earth, this pulsing arm of the North Atlantic was formed, its unique shape amplifying the tides to staggering proportions.

Fundy's onslaught of water every 12 hours and 30 minutes is estimated to nearly equal the 24-hour flow of all the rivers in the world. The nutrient-rich seawater churned up twice a day by the powerful tides is estimated to nearly equal the flow of all the rivers in the world.

The rich feeding grounds around the Fundy Isles in southwestern New Brunswick make the Bay of Fundy one of the world's most accessible sites for viewing marine mammals. Every summer whales of all sizes (up to 15 species of toothed and baleen whales) come to the Bay of Fundy, one of the marine wonders of the world, to mate, play and feast on the bountiful supply of food churned up twice a day by the powerful tides.

The stirring of deep nutrient-rich water into shallow surface water causes immense blooms of plankton—passively floating food that nutrients all marine life.
The water may rise and fall as much as 56 feet (17m) each day.

The great tides of the Bay of Fundy are due to two unique characteristics of this finger of the Gulf. The bay itself is U-shaped, and tapers significantly at its northernmost end. Similarly, the tide does not ebb and flow in both directions at the same time. Consequently, the Bay of Fundy tends to rise and fall much more dramatically than other coastal areas. Furthermore, the time it takes for the tide to move up the Bay of Fundy is nearly identical to the time it takes for the tide to come in from the open Atlantic. This means that the tide's range is amplified, similar to the effect produced by children sloshing water into waves in a bathtub. These two factors, combined with several other lunar features, make the tides of the Bay of Fundy a natural wonder of the world.

Weathered headlands

Drawn by the rich waters flowing from the Bay of Fundy and the resulting abundance of phytoplankton and fish in the area, the whales — such as humpbacks, minke, and the rare right whale — come to feed. The Canadian government has established a seasonal conservation zone that restricts vessel traffic in the area. In addition, the rich waters of the Bay of Fundy are also home to the endangered right whale. Recognizing the vital role the waters around Grand Manan Island play in the life cycle of the endangered right whale, the Canadian government established a seasonal conservation zone that year-to-year extends from June to October each year.

Whales of the Bay of Fundy

Right Whale

Right Whales were regarded by eighteenth century whalers as the 'right' whales for their industry. By the 1860's their numbers were so severely depleted that whalers could no longer profitably hunt them. By 1965 their world population was estimated at 40,000 whales, 30,000 were taken from Australian and New Zealand waters alone.

Today the world population numbers about 2,000 of which 500 visit southern Australian waters to mate and breed. It is feared that the eastern American stock, now less than 300, is in great danger of extinction due to the accidental deaths of right whales involved in shipping accidents.

All Right Whales are protected internationally under the convention for the regulation of whaling and have not been actively hunted since 1935. The whales migrate to warmer temperate waters to give birth and mate. They also teach their young how to swim in the warm sheltered waters. The new-born calves have virtually no blubber to insulate them from the cold. They are fattened on rich whale milk which has a 40% fat content. This produces spectacular results and whale calves may double their weight within a week. However, there is no food here for the mothers, who must fast while they raise their young.

Most births occur in early winter, after which the adults begin their courtship displays of breaching, tail slapping, jostling and caressing. Calves stay close to their mothers, suckling for a year or less and playing together. Calves learn skills they need to survive in one of our planet's great wilderness areas, the Ocean.

Length: 15-18 metres (60-72 feet) Life-span: 40 years
for "furrow" and refers to the pleated grooves running along its surface. This whale grows to a length of 12-17m (36-51ft) and weighs 30-80 tonnes but on the average it is much smaller. The Blue whale is called a "rorqual" a Norwegian word for furrow. Both the Blue and Fin whales are highly inquisitive and will approach quite closely, showing little fear. During breeding season the Humpback males are known for singing, their voices standin...
The Minke whale is the smallest of the rorquals. The male of the species can grow to a length of 9.8m (32ft) and weigh 10 tonnes. Populations in the Southern hemisphere are slightly larger than other areas. Some animals are inquisitive and approach quite closely, but in most cases it is unusual to get a clear view. The Minke can be confused with the Sei, Bryde's, Fin or Northern Bottlenose whale, however, the dive sequence is distinctively different, the head is unscarred and its mouthline is relatively straight.

Minke whales can be found virtually worldwide, but are less common in the tropics than in cooler waters. The Minke often enters estuaries, bays and inlets and during summer may feed around headlands and small islands. Most, seasonally migrating from polar feeding grounds to warm temperate to tropical breeding grounds although there appears to be some groups resident year-round. There are three geographically isolated populations recognized, in the North Pacific, in the North Atlantic and in the Southern Hemisphere.

Length: 8-10 metres (26-33 feet) Life-span about 50 years.

The Killer whale is the largest member of the dolphin family. This distinctive jet-black, brilliant white and grey marked, huge dorsal finned male, makes this animal relatively easy to identify. The Orca can grow to a length of 7m (23ft) and weigh 4-5,000 kg in the male and 6.6m (21ft) 2.5-3,000 kg in the female.

Despite its name, the Killer whale has never hurt a person in the wild. It is inquisitive and approachable and aggression within a pod is rare. The pod is a close-knit family group that is stable from one generation to the next. Its members usually stay together for life. When two or more pods come together temporarily the group is called a “superpod” and may number more than 150 whales. Usually larger groups split up into two or more smaller ones as the population grows. These groups of closely related pods (clans) often develop their own dialects.

Between 1938 and 1967 the Norwegians took 1,400 Killer whales in the Northeast Atlantic. During its 1979-80 Southern Hemisphere whaling season the Soviet fleet targeted the Killer whale, with 916 killed, along with many other larger species. A perceived conflict between man and whale in pursuit of a common source of food has led to many Killer whale deaths in the Icelandic and Norwegian herring fisheries.
Video: Greenpeace
30 minutes