300 fathoms in Cabot Strait, to 100 fathoms in the St. Lawrence Estuary a short distance below the Saguenay. In referring to the Estuary of the St. Lawrence it is of interest to record that, off the mouth of the Saguenay, the water of the St. Lawrence is salt; at the lower end of Orleans Island it is brackish and the range of tide here reaches its maximum; at Quebec the water is fresh. The true head of the Estuary, therefore, is at the lower end of Orleans Island.

The main features of the topography of the Atlantic marginal sea-floor are attributed to glacial origin, but other agencies are at work constantly modifying the submarine relief. Land erosion is an important factor, eroded materials from the continent being carried by rivers, ice, or winds to the foreshores from whence the solid detritus is spread over wide areas by sea and ice. Stones, gravels, sand and muds are thus transported. Wave action against cliffs and shore banks accounts for enormous masses of continental substances being washed away and deposited over the surrounding sea-floor. The processes of erosion on a great scale are apparent in the Magdalen Islands area in the centre of the Gulf of St. Lawrence. There, the comparatively soft sandstone cliffs are continually being nibbled into fantastic shapes, or worn away by the violent seas to which the coast is exposed. As a result, shallow submarine flats and sand-bars are formed, and bottom contours fluctuate to a considerable degree.

Sea ice, also, is an active agent in the processes of littoral erosion, transport and deposition of eroded materials. A very good illustration can be seen each spring in Cabot Strait where, for many weeks prior to the opening of navigation, an extensive procession of winter ice from the Gulf and River St. Lawrence and Chaleur Bay streams out along the Atlantic coast of Cape Breton on its journey to the sea. The ice which was formed in shallow water and along the shores is laden with erosion products, the mud, sand or clay scoured from the bottom, or swept from the land by gales. The origin of such ice can be recognized: that formed in the St. Lawrence River and Chaleur Bay is dark with the characteristic muds and clays conveyed from those regions, while the ice from the Northumberland Strait area is red with the coloured sand peculiar to the southern part of the Gulf. Ice navigators and coastal dwellers refer to the latter as "red" ice—a welcome sight in the spring as it moves down the coast of Cape Breton for, being the last of the winter ice to flow out of the Gulf, it heralds the opening of navigation. Much of this ice-borne material is carried well out on the Continental Shelf, some of it reaching even beyond Sable Island before the ice deteriorates.

Icebergs, also, are partly responsible for continental shelf-building. Each year a great number of these 'bergs, calved on the shores of Greenland and carrying detritus gouged from the land, are brought south by the Labrador Current. Some become stranded off the Labrador Coast, some on the Great Banks of Newfoundland, others drift until melted by the warmer water of the Gulf Stream. In any case, they succeed in transporting and depositing quantities of stones, mud and other solid material. Wave motion and tidal currents complete the work of distribution. The configuration of the continental sea-floor is continually changing, and vigilance is necessary to keep navigation charts of Canada's eastern seaboard up to date.

Arctic and Sub-Arctic.—The submerged plateau protruding from the northern coast of North America is a major part of the Great Continental Shelf surrounding the North Polar Sea and on which lie all the Arctic Islands of Canada, Greenland, Iceland and most of the islands north of Europe and Asia. In the Canadian segment