

summers of this interval have been devoted mostly to surveying and exploring portions of the Hudson's Bay territory at greater or less distances inland. In the course of my geological investigations, I have made surveys of the principal rivers, together with their larger branches, which flow from the west and south into Hudson's Bay, including the Great and Little Churchill, the Nelson, Hayes, Hill, Severn, Albany, Kenagami, Moose, Missinabe, Mattagami, and Abitibi. On account of its great geological interest, I made a topographical survey in 1877 of about 300 miles of the Eastmain Coast, from Cape Jones northward. Some of the maps showing these surveys have been already published with the annual reports of the Geological Department, and those representing the remainder will soon be forthcoming.

During the past autumn, in coming to England in one of the ships from the bay, I happened to enjoy unusually good opportunities of seeing both sides of Hudson's Strait, and of acquiring much valuable information in reference to its navigation.

In the popular mind, Hudson's Bay is apt to be associated with the polar regions, yet no part of it comes within the Arctic circle, and the southern extremity is south of the latitude of London. Few people have any adequate conception of the extent of this great American sea. Including its southern prolongation, James's Bay, it measures about 1,000 miles in length, and it is more than 600 miles in width at its northern part. Its total area is approximately 500,000 square miles, or upwards of half of that of the Mediterranean Sea of the old world. It is enclosed by the land on all sides except the north-east, where it communicates by several channels with the outer ocean. The principal or best known of these is Hudson's Strait, which is about 500 miles in length, and has an average width of about 100 miles.

Hudson's Bay, which might have been more appropriately called Hudson's Sea, is the central basin of the drainage of North America. The limits of this basin extend to the centre of the Labrador peninsula, or some 500 miles inland on the east side, and to the Rocky Mountains, or a distance of 1,300 miles, on the west. The Winnipeg Basin constitutes a sort of outlier of the region more immediately under notice since the waters drain into it from north, south, east, and west, and discharge themselves by one great trunk, the Nelson River, into Hudson's Bay. The southernmost part of this basin, namely, the source of the Red River, extends down nearly to latitude 45° . The head waters of the southern rivers of James's Bay are not far to the north of Lake Huron, while one of the branches of the Albany rises within 25 miles of the north shore of Lake Superior. Including the Winnipeg system, the basin of Hudson's Bay has a width of about 2,100 miles from east to west, and a length of about 1,500 miles from north to south, and its dimensions approach the enormous area of 3,000,000 square miles. Over a great part of this vast region there is a temperate climate, and although much of the surface is comparatively barren, yet large tracts possess a very fertile soil. The numerous large rivers and lakes embraced within these limits will prove of great value in the settlement of the country.

Both the bay and straits are remarkably free from rocks and shoals which might interfere with their free navigation. The groups of islands near the east side of the bay are surrounded by deep water, and a wide channel leads up the centre of James's Bay. Fortunately the main body of the bay, which is the portion likely to be hereafter frequented by shipping, is entirely without shoals, reefs, or islands. The depth is very uniform over most of the bay, and