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CHANGES OF CLIMATE IN NORTH-WESTERN CANADA SINCE THE GLACIAL PERIOD.

BY

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North Western Canada as here understood comprises the provinces of Manitoba, Saskatchewan, and Alberta, and the country to the north of them as far as the shores of the Arctic Ocean. It is bounded on the east to a large extent by the basin of Hudson's Bay and Lake Winnipeg, and on the west by the Rocky Mountains which extend almost continuously northward to the Arctic Ocean. Speaking broadly and generally it is a vast plain which has an elevation of more than 4000 feet above the sea at the base of the Rocky Mountains in the south-western portion of the region, and thence declines north-eastward, with a more or less regular slope, till it reaches sea level at Hudson's Bay.

From south to north it may be divided naturally into three divisions, viz. dry grassy steppes destitute of timber in the south; forests, chiefly coniferous, across the middle; and sedgy plains destitute of timber in the north.

During the Glacial period this whole country came within the influence of the Keewatin Glacier which had its centre on what are known as the Barren Lands, within the northern part of the Laurentian peneplain, somewhere between latitudes N. 60° and 64° .

From the centre it spread out in all directions, westward into the valley of the Mackenzie River, southward over what are now the fertile plains and prairies of Alberta, Saskatchewan and Manitoba, and eastward over the rocky surface of Keewatin and Ontario and down into the basin of Hudson's Bay. At its maximum extent it had an area of about 1 750 000 square miles, at which time, or times (as it possibly had about the same extreme regional extent more than once), it reached south of the southern boundary of Canada and into the United States, where its limit has been traced by several American Glaciologists.