

of some sort along the Hudson Bay railway and steamship route. In particular, the increase in the use of aeroplanes and their increasing dependability, which have served to make accessible in a few hours or days points in the north which formerly were reached only after weeks of travel by experienced men, have turned the general attention of the world to these northern areas to a degree approaching that of the time of the search for Franklin eighty years ago. The increasing use of the aeroplane in northern Canada at all seasons of the year, has suggested the feasibility of a flying-route to Europe across northeastern Canada, southern Greenland, and Iceland, which would obviate long flights across water and allow frequent refuelling.

For the meteorological data from which the accompanying maps and figures have been made, the Meteorological Service is indebted to the factors of the Hudson's Bay Company and of Revillon Frères, to missionaries of the Church of England and of the Roman Catholic Church, and in the Labrador to the Moravian missions, as well as to explorers and members of Canadian surveying parties, and in recent years to the Royal Canadian Mounted Police in the Baffin and Ellesmere districts. Standard meteorological instruments have been supplied to these men at various times since 1884, while the data have been forwarded regularly to Toronto for little or no remuneration. With the use of radiotelegraphy for communication it is now possible for an increasing number of these posts to forward data to Toronto twice daily. With radio reports from northern Canada, four or five stations in Greenland, from Iceland, Spitzbergen, northern Europe and Alaska, we are now able to make daily charts of the weather for the circumpolar regions, while daily forecasts of the weather for the northerly zones can be inaugurated when required.

In the accompanying tables the observations of temperature and rainfall and snowfall at several northern points have been summarized to show the average and extreme conditions over a period of years. Reference should be made to these if one wishes to know the details of the climate of any particular district. To supply graphically a comparison between the temperature of northern Canada and the temperatures of other parts of the northern hemisphere, maps are given of the mean daily temperature of January and July, while the annual march of temperature for selected points is depicted in the diagram opposite.

At the top of the diagram is the annual march of temperature at Georgetown, British Guiana, just north of the equator and nearly due south of Port aux Basques, Newfoundland. There is very little variation of temperature throughout the year, a slight rise occurring when the sun's rays are vertical over the great land mass south of Georgetown, and a slight fall when the sun is vertically above the ocean to the north. The other curves show that the slight changes in the tropics, due to the seasonal variations in the sun's altitude, become very pronounced as we enter the North American continent. It should also be noted that the changes in temperature are much more pronounced in midcontinent than on the coasts. Thus the winter temperature at Prince Rupert on the northern coast of British Columbia is higher than that of St. Louis, approximately 1,000 miles further south, because of proximity to the slowly changing temperature of the Pacific ocean. The movement of cold air in winter takes place most easily in midcontinent, as may be readily seen by reference to the January temperature map, where the isotherms dip approximately along the 100th meridian. The intensity of the winter cold depends upon both latitude and distance from the Atlantic and Pacific oceans, so that the coldest part of the North American continent on the average in winter lies in the Arctic Archipelago. The curves are given for Ponds Inlet on Baffin bay in the eastern portion of the Archipelago and for Melville island (Winter Harbour 74° 47' N.,