

Climate.—There are only three meteorological stations in the Western Arctic* from which climatic records may be obtained. They are at Cambridge Bay, Coppermine and Holman Island. They indicate that the western part of the region, around Amundsen Gulf, is milder than the interior sections around Queen Maud Gulf. The region has an Arctic climate, which means that no month has an average mean temperature above 50°F. This 50° isotherm for the warmest month is generally found a short distance north of the tree-line.

Old records at the Herschel Island whaling station indicate that its warmest month is below 50°F., and it is, therefore, within the Arctic zone. The treeless, tundra character of the vegetation of Herschel Island and the nearby mainland substantiates this Arctic characteristic.

Aklavik, in the Mackenzie River Delta, has two months when average mean temperatures are above 50°F. This places it in the Subarctic zone. The forested character of the country is further proof of its relatively mild summers. The Arctic line is found somewhere between Aklavik and the barren coast. Although not within the region, the Aklavik figures may be used as characteristic of the coast since there are no other meteorological stations along the western mainland of the Western Arctic. Actual temperatures at the coast would be somewhat lower than the Aklavik figures. East of the Mackenzie Delta the coast and the inland areas between rivers are treeless tundra. Forests finger north along the valleys of the Anderson and Horton Rivers, but do not reach the coast.

Coppermine settlement is in the zone between Arctic and Subarctic. The meteorological station there has an average of 50°F. for July, placing the Settlement on the line between the two climatic regions. Trees are found a short distance inland along the sheltered valley of the Coppermine River, indicating the warmth of the summer months.

Because of inaccessibility, no meteorological stations are located in the vast region of the Canadian mainland east of Coppermine, until Baker Lake and the west coast of Hudson Bay are reached. The tree-line trends away from the Arctic coast to the southeast. It is located north of the east end of Great Slave Lake and continues eastward to the Hudson Bay coast near Churchill. Exactly where the southern limit of the Arctic is in this area is not known, but it probably parallels the tree-line as it does in other regions where there are climatic records.

Summers may be described as cool in the Western Arctic. The four months of June to September have average mean monthly temperatures above 32°F. in the southern parts of the region. In July and early August, afternoon temperatures may rise above 60°F., and usually fall to around 40°F. in the evening. The day-by-day temperature at settlements may depend upon the direction of wind. A wind blowing from the warm land will be milder than a breeze from the cold waters of the Arctic gulfs. Temperatures seldom rise above 65°F. at Cambridge Bay and 70°F. at Holman Island. The absolute maximum recorded at both stations is 75°F. Occasionally during the summer, temperatures may reach almost 80°F. at Coppermine, and the maximum recorded is 87°F.

The change from autumn to winter is very rapid during early October. During that month the lakes and harbours have frozen over and the length of the period of daylight has decreased rapidly. Average mean monthly temperatures drop below zero in November and remain below zero for 5 months at Coppermine, Holman Island and Aklavik, and for 6 months at Cambridge Bay.

* As defined in the opening paragraphs of this article.