

of Canada's North — it underlies the surface wherever the mean annual temperature is less than 24 degrees.

It may be shallow — a few inches deep below the surface — or it may be deep — at Resolute Bay it goes down at least 1600 feet. The surface ground thaws in the summer but the permafrost remains.

It may be mostly ice, it may be a mixture of ice and sand or loam, and it may be solid rock or dry, well-drained gravel.

It is the saviour of the North but it is also its scourge: It plays havoc with roads, it causes spring landslides when the soggy soil on the surface slides down the hillsides over the ice base, and it makes building expensive and difficult. A heated building flush on the earth's surface would melt the permafrost below for a few inches or a

few yards and (as has happened) walls would sink and floors would buckle. Buildings are now built on thick, well-drained, gravel pads or on wooden piles hammered into the frozen ground.

The permafrost has been in place since the Pleistocene epoch. It is receding — at a rate of 25 miles a century — but it will remain the basic foundation of Canada's North for a very long time to come.

[THE FLORA AND THE FAUNA]

The captured, cradled water of the North and the brief but constant summer sun — which shines around the clock in mid-summer — make things grow. The surface ground thaws, wildflowers line the banks of the Mackenzie and in some places vegetables mature quickly and grow to large size.



The government of the Northwest Territories has its own set of splendid emblems. The tapestry on the front page, created by Mrs. Jessie Oonark of Baker Lake, is hung on the wall whenever (and wherever) the NWT Council meets. On page two is the Mackenzie delta; ice, water, brush, trees and beavers. Climate affects fauna. The ptarmigan, above, has feathers on his feet, and the big fish is older than one might think. Fish in the Arctic grow slowly; a year-old trout is only two inches long.

Photo Credits: Cover photo: Government of Northwest Territories (GNWT). Page two: Ed Long, *Canadian Geographical Journal*. Page three: ptarmigan, *North/Nord*; fish, G.A. Erickson. Page six: mountain avens flower, GNWT; saxifrage flower, R.R. Taylor; Arctic poppy, M. Hoyer, *Canadian Geographical Journal*. Page seven: Imperial No. 1, Norman Wells, Imperial Oil Ltd. Page eight: Dick Hill, Inuvik Research Laboratory. Pages nine, ten and eleven: Bill Braiden, GNWT.