

The Mackenzie Inuit Winter House

When thinking of Inuit architecture, many people picture the typical dome-shaped iglu built of snow. Yet the word iglu traditionally means a house made of any material. In the Mackenzie Delta area, the Inuit who called themselves "Siglit" seldom used the snow iglu and instead built their winter houses out of the abundant driftwood lining the river banks and coastal areas.

Prior to the impact of Euro-Canadian and American traders and whalers, the Siglit spent the winters in villages they reoccupied annually and subsisted largely on stores of meat and muktuk from beluga whales hunted in summer. Their pre-contact population is estimated at 2500 or more, making the Siglit one of the largest groups of Inuit in the Arctic (Usher, 1971:171). Among the reasons for their successful adaptation was their ability to devise a type of house suited to the harsh winter environment.

The architectural style exhibited by Siglit houses has its roots in technological developments introduced into the Bering Strait region more than 2000 years ago. This style spread farther north and then eastward into the Canadian Arctic during the last millennia with the expansion of the Thule culture (A.D. 1000-1600). Winter houses characteristic of this period were substantial semi-subterranean structures framed with whatever material was available, such as whalebone, stone or driftwood.

One of the earliest written descriptions of Siglit winter houses dates to 1865, when Father Emile Petitot, an Oblate missionary, visited a Siglit village and provided the following description of the house of his host, the chief Noulloumallok:

The houses of the Chiglit are crudely constructed somewhat like cages. Four tree trunks, their roots up in the air, unless they happen to be forked, are forced into the ground. They hold four cross beams arranged in a square which in turn supports a ceiling of cudgels lined up side by side. Thus a sort of huge table is formed, its centre occupied by the ice block skylight. Poles passing at a slant from the ground up to the edge of this table form the walls of the building. The poles are fastened at the top and consolidated with some large pieces of wood

below. Mosses, lichens, clay, snow and slush are used to fill up the gaps in these primitive walls and with the last two materials an airtight sealing off of the structure is secured. . . .

Each side of Noulloumallok's house thus formed an alcove furnished with a platform where one or two couples or families could settle down. Only the alcove in which the lamp stood was different. It sloped downwards and in its floor was the trap door covered with a piece of skin which served as an entrance. [Petitot, 1981:36-37.]

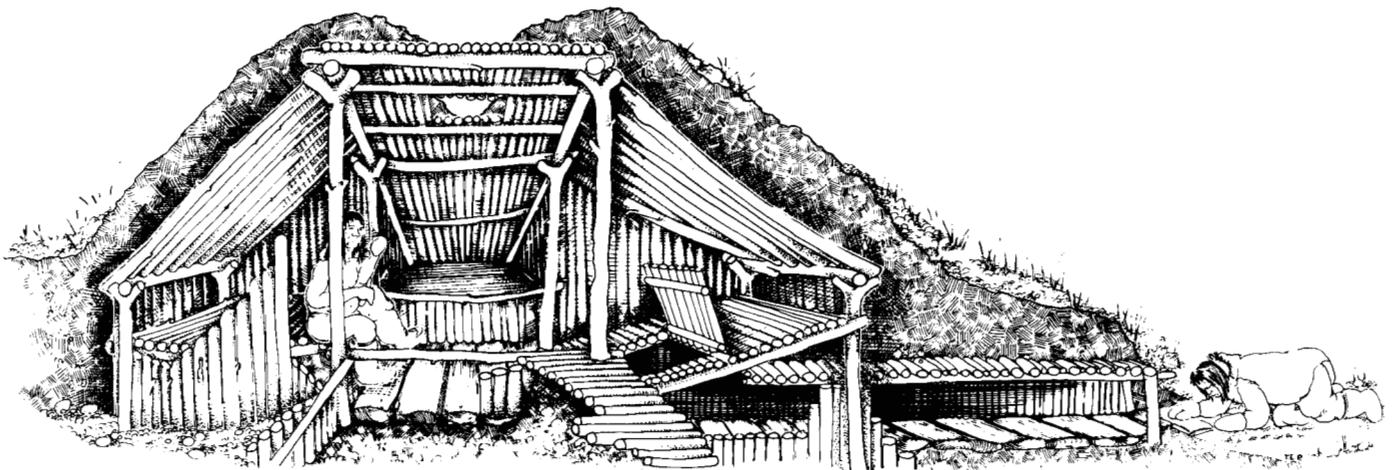
The alcoves on three sides, with a passageway projecting from the fourth, gave the Siglit winter house its distinctive "cruciform shape."

Siglit winter houses were superbly designed to conserve heat. The passageway or porch entered the house from below ground level, forming a cold trap, which prevented warm air inside the house from escaping. Ceilings were sometimes sharply angled to the backs of alcoves, where they rested on low walls, conserving heat by reducing the volume of air inside the dwelling. The cruciform shape minimized the floor area, and thus the interior volume as well.

Raised benches used for sleeping, lounging or working and cushioned with willow or heather twigs and skins elevated the occupants into a layer of warm air. As reported by Petitot, heat was generated by an oil-burning lamp kept above floor level, thus keeping the temperature at floor level cool and safe for storing meat. In archaeological remains, open hearths are found along with oil lamps and may have served as an alternate source of heat or light.

Heat conservation was also made possible through insulation provided by a number of means. The floors of the houses were dug below ground level, leaving less wall area exposed to outside air. Heat loss through conduction was minimized by a thick layer of sod enveloping the roof. Snow provided an extra insulative layer as it fell and reduced heat loss through infiltration between sod blocks.

Ventilation was important for reducing the build-up of water vapour within the house and allowed for the exchange of stale



Artist's interpretation of a Siglit house.

or smoky air. The exact nature of the ventilation system used by the Siglit is not known, but quite likely they had venting holes in the roofs that could be unplugged when necessary.

At this time, our understanding of Siglit architecture is incomplete. Only through continued archaeological research and the recollections of elders will we gain further insights into the technological innovations that enabled the Siglit to adapt to an arctic environment.

FURTHER READING

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