
Into the Pass

Module 3 - Akshayuk Pass Expedition



The Akshayuk Pass with the sheer face of Mount Thor to the right. Notice the broad U-shaped form of the valley that was carved by glaciers. (photo: Nestor Lewyckyj)



INTO THE PASS

After many months of preparation today is the day that the i2P expedition team finally heads into Akshayuk Pass. The Pass is considered one of the most dramatic and stunning locations in the world. It is a one hundred kilometer long corridor cut deep into the bedrock of the Canadian Shield, which rises on the west Coast of Baffin Island to form a dramatic mountain chain called the Baffin Mountains. Where the Pass meets the water

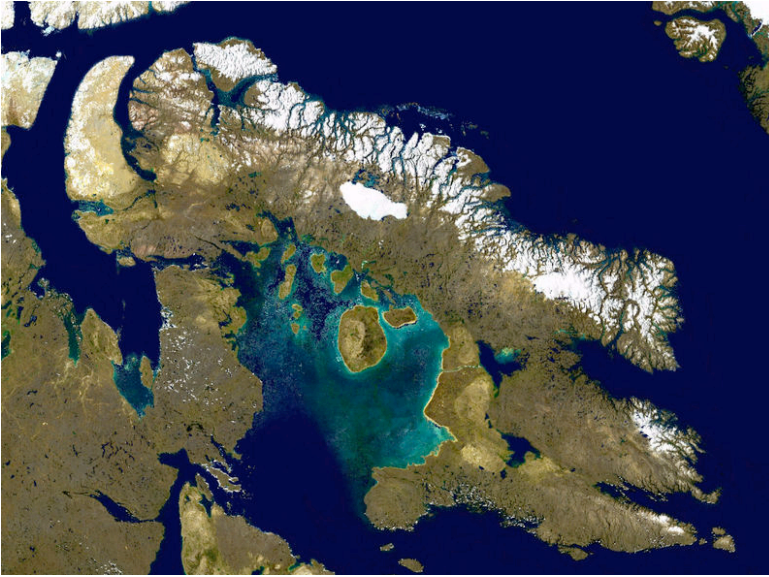


Figure 1: Baffin Island. The Baffin Mountain chain is seen in white, and ends on the right in the Cumberland Peninsula. The Akshayuk Pass is a thin green line across the Peninsula (image courtesy of Google Earth).

to the north and the south, deep fiords stretch out into the ocean. There are communities at either side of the Pass nestled on the edge of the ocean; Qikiqtarjuaq to the north and Pangnirtung to the south.

The Pass is studded by famous peaks such as Mount Thor (that possesses the Earth's biggest cliff - see photo above), and Mount As-

gard, whose iconic twin peaks were featured in the 1976 James Bond film 'The Spy Who Loved Me'.

But long before James Bond visited - or Ray Zahab and the i2P team for that matter - the Akshayuk Pass was used relatively little by the local people. There are two great Passes across the Cumberland Peninsula, the Akshayuk and the Kingait. Traditionally the Inuit preferentially used the Kingait Pass to traverse the Peninsula because it is wider and easier to travel. Akshayuk Pass on the other hand tends to be very windy and areas are swept free of snow in the winter making it a difficult route for dog-teams to traverse. In the summer there are glaciers, swift rivers and massive deposits of glacial till that block the route making passage equally challenging.



Video Link:

See James Bond Skiing off Mount Asgard:

[James Bond in Akshayuk](#)

Figure 2: The famous twin peaks of Mount Asgard (photo: Ansgar Walk)

Did You Know?

Mount Thor has the world's biggest cliff with the greatest purely vertical drop.

It falls 1,250 meters (4,101 ft) with an average angle of 105 degrees.

THE MAN & HIS PASS

In more recent years the Akshayuk Pass was used as a route for the local doctor to cross from Pangnirtung to the Inuit communities to the north. The man who frequently served as a guide for the doctor was named Akshayuk Etooangat. He was a respected elder in his community and lived a long life, passing away at the age of 95 in 1996. After his death the Pass was renamed in his honour (it was formerly called the Pangnirtung Pass).

WHAT MADE THE PASS

When the i2P team enters the Akshayuk Pass today, looking up at the walls of rock on either side the question will inevitably be asked, "How was this dramatic landscape created?"

The Akshayuk Pass is a product of a series of geological events that date back many millions of years. The land that forms Baffin Island's Cumberland Peninsula was once located not far from the equator. Over the course of billions of years Baffin Island drifted to its current location as a product of plate tectonics. Plate tectonics is the process whereby the land that forms the crust of the Earth drifts very slowly over the underlying core (for more on plate tectonics please click on the i2P South Pole Quest Education Module: [Plate Tectonics](#)).

About 120 million years ago Baffin Island had reached its approximate location in the northern hemisphere. At that time a bridge of land attached the Cumberland Peninsula and Greenland. As these landmasses were gradually pulled apart the eastern side of Baffin Island was lifted up, creating the high elevations of the Baffin Mountains. However there were no dramatic cliffs and jagged mountains that now characterize the region. Rather the Cumberland Peninsula was a high plateau of rolling hills and valleys traversed by rivers. If not for the coming of the ice, the dramatic landscape for which the Akshayuk Pass

Did You Know?

That the grandfather of current i2P expedition team member Nansen Weber (Hans Weber) was on the mountaineering team that was the first to climb both mount Asgard (1953) and Mount Thor.

and the Baffin region is now recognized would not have occurred.

GLACIERS

The last 2.6 million years mark the time during which ‘recognizable’ humans have existed on Earth. This period (called the Quaternary period), although very short relative to the history of the Earth, has had a very profound effect on the appearance of the landscape of the Baffin region, and indeed a significant portion of the globe. This is because the Quaternary period, a time of cooler climate on Earth, has witnessed the recurrent build up and decay of massive glaciers known as ice sheets that have reached almost as far south as St. Louis, Missouri. The most recent advance of the great ice sheet in North America, called the Laurentide Ice Sheet, occurred between 25,000 and 7,000 years ago. There are still a few remnants of the Laurentide Ice Sheet left in North America, and one, which borders, and in fact spills into the Akshayuk Pass is the Penny Ice Cap, a field of ice up to two kilometers thick that covers 6,000 square kilometers of land on Baffin Island.

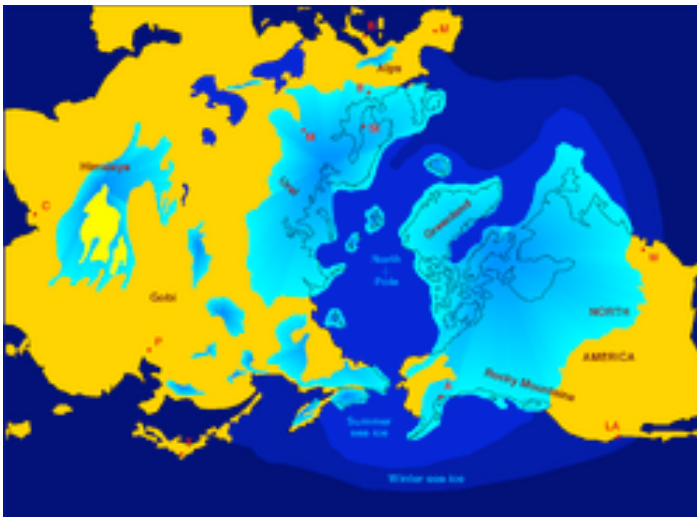


Figure 3: The maximum extension of the ice sheet (in blue) during the last ice age. In North America the ice sheet reached almost as far south as St. Louis Missouri (image courtesy: Hannes Grobe).

Glaciers are great sheets of ice that move downhill under the force of their own weight (for more on Glaciers please click on the South Pole Quest Module: [Glaciers](#)). The glaciers of the Cumberland Peninsula flowed by gravitation through the pre-existing river valleys that existed on the high plateau of

eastern Baffin Island. One of

these early river valleys would have been what is now the

Akshayuk Pass. By virtue of their massive weight, glaciers scour the valley floor over which they flow, creating deep u-shaped valleys and fiords. The successive growth and decay of glaciers through the Akshayuk Pass have carved it into the deep U-shaped valley it is today.

School Exercise

Using maps, books and Internet resources establish whether your school is located in a spot that was covered by ice during the last ice age. How thick was the ice over your school?

The route through the Akshayuk Pass has been well traveled for millennia, less so by human beings than by massive rivers of frozen ice that have cut deep into the valley floor. Although the glaciers have receded from the Akshayuk Pass itself, they still feed into the Pass, and continue to erode and reshape the high valleys that feed into the Pass creating more dramatic landscape.

Ray insisted that the team travel lightly for the expedition. Ironically it was he who packed a poorly disguised toboggan that he intends to use to slide down one of the glaciers. Stay tuned.

STEPS IN THE CREATION OF THE FORMATION OF THE AKSHAYUK PASS

- 1 Original location of Baffin Island near the equator
 - 2 Drift of Baffin Island and Greenland near to their current locations in the Arctic
 - 3 Baffin Island and Greenland pull apart
 - 4 Rise of the land of eastern Baffin creating the highlands of the Baffin Mountains
 - 5 Arrival of the Ice age and the great North American Ice sheet
 - 6 Scouring of the river valleys by outflow glaciers cutting deep valleys between mountains
 - 7 Withdrawal of the glaciers leaving deep valleys like the Akshayuk Pass
-