



Quttinirpaaq  
National Park

# Kettle Lake Walking Tour From Tanquary Fiord



Photo: Fred Lemire



Parks  
Canada

Parcs  
Canada

Canada





Photo: Parks Canada

## What to Expect

Along this five-kilometre Kettle Lake – Tanquary Fiord hiking route, you will encounter remnants from the lives of the most ancient people we have yet discovered in the Canadian Arctic. This self-guided interpretive route provides a glimpse into a culture that survived in this challenging High Arctic environment over 3000 years ago.

The route climbs two ancient beach ridges with an elevation gain of approximately 70 metres, then circumnavigates Kettle Lake and returns to Tanquary Fiord. Each of these “ridges” were formed as beaches at different times and sea levels.

Like all hiking in Quttinirpaaq National Park, this route is unmarked and covers uneven terrain with loose rocks and tundra vegetation. Hikers may spend as little as 90 minutes or as much as a day exploring the area.

## Before Leaving Tanquary Fiord

Talk to Quttinirpaaq National Park staff to obtain route information and a GPS device with the way points for this guide. We recommend you consider the following gear when leaving camp: sturdy footwear, clothing that is adequate for the changeable weather, a camera, binoculars, water and a snack.

## Special Protection

This landscape and the cultural features found here are protected and managed by Parks Canada. Zoned for special archaeological protection, camping is not permitted within 1.5 kilometres of Kettle Lake.

**When in the national park, we count on you to travel with respect and caution:**

- **Do not move, touch or remove any objects or rocks;**
- **Stay 3 metres away from all cultural sites: you should never be close enough to touch the cultural features.** Cultural features can vary widely including tent rings, caches, blades, arrow heads and alignments of rocks. Be aware of where you are walking and standing to avoid inadvertently stepping on, or disturbing cultural features – what may look like a ‘pile of rocks’ or a simple pebble may be so much more!
- **If you happen to notice something you think may be a cultural feature, please leave it where you find it.** Record the location, with the GPS device if possible, and take a photo of it so you can share your discovery with Quttinirpaaq National Park staff.
- **As visitors, we are counting on you** to leave the legacy of the people who passed before you untouched for others to discover, learn from, and enjoy.

### Did you know?

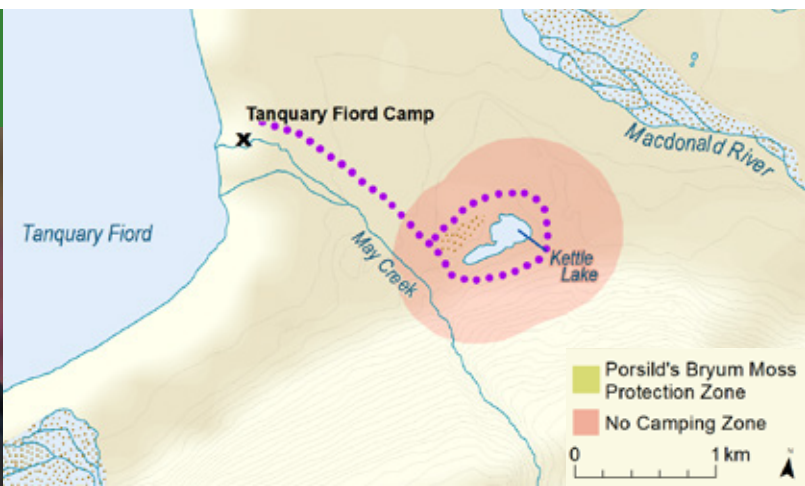
1 kilometre = 0.62 miles

1 metre = 1.09 yards

10 millimetres = 0.39 inches



Photo: Fred Lemire



## Stop 1



To Kettle Lake from Tanquary Fiord  
Photo: Barb Brittain

## Welcome To the Kettle Lake Interpretive Hike

Like much of the world, Canada's far north was populated in waves of migration. While the landscape before you may look wild and barren, it holds physical traces of lives lived long ago.

Today, Nunavut is the home of Inuit, descendants of the Thule (TOO-lee) people. Originating in eastern Asia, the Thule moved east into the area we now call Alaska. About 1000 years ago the Thule continued their eastward migration by spreading into the High Arctic. However, they were not the first to make the High Arctic their home.

Scientists have dated the remains of human cultures in the High Arctic to approximately 4000 years ago, long before the arrival of the Thule.

Paleo-Inuit / Paleo-Eskimo cultures, or "people before the Eskimo," were genetically and culturally distinct from the Thule and their Inuit descendants. Paleo-Inuit are divided by archaeologists into sub-groups based on cultural distinctions and the time they were present in the area. The Paleo-Inuit group that lived at Kettle Lake and elsewhere in

Quttinirpaaq National Park are known as the Independence I (Independence one) culture.

Like the Thule, the Independence I people came from eastern Asia, through the western Arctic and continued their eastward migration into the High Arctic. Remnants of the Independence I culture have been found as far east as Greenland. In fact, they are named after Independence Fiord in Greenland where evidence of their culture was first documented by Danish Archaeologist, Eigil Knuth, the same archaeologist who investigated some of the sites along Kettle Lake.

Much of what we know about the Independence I culture has been gleaned from the rocky hillsides of Kettle Lake, sites elsewhere on Ellesmere Island, and in northern Greenland.

To date, archaeological evidence indicates that the Independence I people were the very first people to inhabit the High Arctic. We know they survived for approximately 2000 years in this environment before they abruptly disappeared from the archaeological record.

### Did you know?

#### **Paleo-Inuit / Palaeo-Eskimo**

**The Indigenous people of Canada's eastern Arctic call themselves Inuit, meaning "the people."**

**In Canada, we no longer use the term Eskimo.**

**"Palae-Eskimo" is still in use as an archaeological term that refers to the non-Inuit cultures that**

**lived in the North, prior to the arrival of the Thule, ancestors of the Inuit. The Inuit Circumpolar Council has recommended that the term Palaeo-Eskimo be replaced by the term Paleo-Inuit.**



## Stop 2



Independence I camp remnants  
Photo: Barb Brittain

## Arctic Pioneers

The ancient camp you see in front of you is evidence that Independence I people found enough of what they needed to stay here for a time. What do you think they would have been seeking when they decided to camp at Kettle Lake?

From the cultural remains found in the Macdonald River Valley – Kettle Lake area and elsewhere on Ellesmere Island and Greenland, archaeologists have deduced that the

Independence I people built camps, collected water, hunted muskoxen, fished for char, gathered willow for fires, and crafted tools here.

When the Independence I people arrived after the last ice age, the area would have been ice-free for a relatively short time. Sea levels would have been higher and vegetation was sparser than today, but the climate may have been slightly warmer.

### Did you know?

In 2008, archaeologists were able to take advantage of a remarkable discovery: human hair. Dating back almost 4000 years, the hair was discovered at a Paleo-Inuit site in western Greenland. From that hair, scientists were able to complete a DNA genome. They learned that the hair belonged to a man whose body mass and metabolism were well-suited to living in a cold

climate, and his genes show him to be related to people of northeast Asia.

The DNA also indicated that the Paleo-Inuit cultures were genetically related, but that modern Inuit are not closely related to any of the Paleo-Inuit cultures.



## 📍 Stop 3



Kettle Lake Overview  
Photo: Barb Brittain

## Clear and Fresh

The small body of water in front of you, Kettle Lake, provided a source of clear, fresh water. This is unlike fast flowing glacial rivers – like the Macdonald River – which carry a lot of sediment. In addition, the banks of the lake likely provided some shelter against harsh north winds.



Uneven terrain  
Photo: Barb Brittain

## 📍 Did you know?

**Kettle lakes form when large blocks of ice break off from retreating glaciers, are subsequently buried by glacial sediments, and then melt leaving depressions in the landscape that fill with water over time.**



## 📍 Stop 4



MacDonald Valley Overlook  
Photo: Barb Brittain

## What Brought these Arctic Travellers Here?

Danish geographer and anthropologist Hans P. Steensby (1916) proposed that the Independence I people came here following the “Muskox Way.” The Muskox Way concept suggests that the animals were once concentrated in the western Arctic, and as the climate warmed and the ice retreated, they expanded their range east and north. Once muskoxen were established, the Independence I people may have followed the route of the muskoxen on foot and by watercraft all the way to Greenland.

Steensby believed muskoxen were a very important resource for the Independent I people. Muskoxen would have provided food, very warm hides for clothing and bedding, and possibly even a source of heat if the bones or droppings were burned.

The Macdonald River Valley in front of you is believed to be one of the routes of the Muskox Way. As you look out over this valley and walk the Kettle Lake loop, watch for signs of muskoxen. If you do not see the animals themselves, you may see their tracks, droppings or shed hair.

### **i** Did you know?

**The Inuit name for the fine grey-brown undercoat of muskoxen is called qiviut (kiv-ee-ute). It makes one of the warmest and most luxuriously soft wools in the world. Highly prized qiviut knitting such as hats and scarves can sometimes be found for sale in Nunavut communities.**



Muskoxen shedding qiviut  
Photo: Fred Lemire



## Stop 5



Independence I tent ring with mid-passage  
Photo: Barb Brittain



Close-up of mid-passage  
Photo: Barb Brittain

## Home is Where the Hearth and Hides Are

Archaeological evidence suggests that Independence I people lived in animal-hide tents year round. While the Independence I people lived in a slightly warmer climate than we have today, winter temperatures would still have dipped below  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ). A home made of millimetres-thick animal skin may seem a poor defence against freezing High Arctic winters, so how did they survive?

Firstly, they built their homes in sheltered areas, close to good sources of water, food and fuel. It's no coincidence that a number of tent sites are concentrated at this end of Kettle Lake. Secondly, we know they had fires inside their tents. Fires would have been used for warmth, light, and to cook food. Ash from Arctic willow and heather has been identified in their hearths.

Imagine what it might have been like to live in one of these animal hide tents. In 2003, Danish archaeologist, Ulla Odgaard, decided to try it out for herself. She built a comparable structure, four metres across by two metres tall, and heated it with wood and animal bones. She discovered that she could maintain adequate light and humidity for six people with an indoor temperature of about  $8^{\circ}\text{C}$  ( $46^{\circ}\text{F}$ ), despite outdoor temperatures of  $-31^{\circ}\text{C}$  ( $-23.8^{\circ}\text{F}$ ).

Independence I tents had a signature floor plan that was unique to their culture. An oval ring of rocks would anchor the

walls of the tent, and inside that ring were two parallel lines of stone, marking a kind of central divider down the middle. Archaeologists call them mid-passage features.

The mid-passage feature itself was further divided into sections. In the centre was a hearth, or fireplace, lined with stone slabs. Other sections were likely used for fuel storage, sleeping and food preparation.

As you look at this site, how many stone tent rings can you see? Can you find the two parallel lines of the mid-passage features?



Illustration: 18th century Sami tent

**While we don't know exactly how the inside of an Independence I tent looked, we can turn to other northern cultures for clues. This 1767 drawing shows how the Sami (formerly known as Laplander) people of northern Europe lived in skin tents laid out in a similar way.**

Illustration Source: Leem, K et al. 1767 (Figure XVI). (Copyright Creative Commons / Public Domain <https://wellcomelibrary.org/item/b21231643#c=0&m=0&s=0&cv=0>.)



## Stop 6



Light Grey Chert Projectile Point  
Photo: Parks Canada

## Small Tool People

Daily life for Independence I people was a lot of work. There was fuel to gather, tents to maintain, clothing to make or mend, game to hunt, and food to prepare. Just feeding and clothing your family in High Arctic conditions required a suite of specialized equipment: you needed weapons to hunt with such as lances, arrows, harpoons; cutting tools to butcher with; ways to trap and to fish; implements to cook with; scrapers to prepare hides; blades to cut skins for clothing, needles to sew with, and so on.

Independence I people fashioned all of these tools themselves, and their unique craftsmanship is one of the remarkable features of their culture. Their knives, arrowheads, and blades are surprisingly small and exquisitely crafted with minutely serrated, chipped edges. Their delicate workmanship is so fine that individual chips or flakes can

be as small as one square millimetre. Archaeologist Peter Schledermann remarked in his book *Voices in Stone* that these “brilliantly shaped flint implements can be considered works of art.” Creating these tiny, finely-worked tools required skill and practice, and Independence I people undoubtedly began honing these skills in childhood. Locating and recognizing the right stone types to use was a skill in itself — very few of the rocks around Kettle Lake are appropriate for tool making. People may have traded for the quartz or chert, or travelled a considerable distance to known stone outcrops.

Producing a fine microblade from one of the rocks around you would require locating the right material, understanding exactly how it is likely to fracture and flake, and knowing how much pressure to exert with a strike to produce the edge you need. Shaping the tool may generate thousands of tiny chips.

### Did you know?

**Based on the exquisite micro tools that have become one of their signature artifacts, Independence I people are part of a larger group of people known as the Arctic Small Tools Tradition.**



## Stop 7



Food cache above Kettle Lake  
Photo: Barb Brittain

## Living Off the Land

Food caches, like the one in front of you, were key to survival in the High Arctic. They were used for storing food, thus providing nourishment when game was scarce or conditions were poor for hunting. They could mean the difference between survival and death.

Muskoxen were not the only wildlife around Kettle Lake. The Independence I people likely took advantage of the array of animals they found here to add diversity to their diet. Arctic char, Arctic hare, caribou, and waterfowl would have lived in this area as they do now.

At some coastal Independence I sites elsewhere on Ellesmere Island, many sea mammal bones have been found, indicating Independence I people also looked to the sea for food. They likely took advantage of areas that were naturally free of sea ice, called “polynyas”, where seals, walrus and whales concentrated in winter and waterfowl gathered in spring. A number of polynyas are found along the east coast of Ellesmere Island.

### Did you know?

**The relationship between inland Independence I sites, like Kettle Lake, and those found along the coast of Ellesmere Island remains unclear. Did the people travel seasonally between the two environments, lingering for a long time or stopping only briefly at Kettle Lake? We do not know.**



Ancient hearth  
Photo: Parks Canada



## 📍 Stop 8



Three Thule food caches  
Photo: Barb Brittain

## Time and Space

Long after the Independence I people disappeared from this region, the Thule people moved into the area around Kettle Lake. Archaeologists believe the Thule and Independence I people never occupied the same region at the same time. Radio-Carbon dates indicate that there was an approximately 2000 year time gap between Independence I and Thule occupation in this area.

There is evidence of Thule camps found throughout Quttinirpaaq National Park. It appears that all the things that made Kettle Lake attractive as an area to live for the Independence I people also appealed to the Thule. There

was one difference, however: sea level was lower at the time when the Thule were in this area. This may explain why the Thule remains at Kettle Lake, such as these three food caches, are found at a lower elevation than the Independence I features.

Paleo-Inuit, including the Independence I people and the cultures that followed them lived in the High Arctic of this area for a very long time. Their cultures spanned over 3000 years of history and eventually disappeared, leaving no genetic legacy that we know of.



Photo: Barb Brittain



Recent muskox skeleton  
Photo: Barb Brittain



## Stop 9



Thule fox trap  
Photo: Barb Brittain

## Innovation and Skill

Like the Independence I people, the Thule developed their own suite of specialized technologies and tools that allowed them to thrive in the High Arctic. Remnants of dog sledding culture, the qulliq (oil lamp), snow knives to build igloos, houses partially built into the ground and fox traps do not appear at cultural sites in the High Arctic until after the arrival of the Thule. The Thule ingeniously designed fox

traps, like the one you see before you, so that it was easy for a fox to hop into. Lured by the smell of some tasty treat, once the fox was inside, it was nearly impossible for it to get out. Once it was trapped, the fox was easily harvested by the hunter.

### Did you know?

While qulliq (oil lamps) are often associated with arctic living, they have not been found at Independence I sites. The qulliq appeared in the High Arctic with the coming of the Thule. It was the oil lamp technology that allowed the Thule to camp on sea ice, where an open fire would not have been possible. Today the qulliq remains an important part of Inuit culture, symbolizing the light and warmth that it provided to Inuit families.



Photo: ©Scott Forsyth / Adventure Canada





A wide view looking down on Kettle Lake, the Macdonald and Air Force Rivers and Tanquary Fiord  
Photo: Ryan Bray

## The End of the Independence I Era

On this tour of Kettle Lake, you have seen remnants of the most ancient people yet discovered in the Canadian Arctic: the Independent I people and the Thule (ancestors of Inuit). Both the Thule and the Independence I were skilled hunters, resilient and ingenious people who honed skills to match the landscape in which they camped and travelled.

We may never know what happened to the Independence I people. Their mysterious disappearance shouldn't overshadow their remarkable success: surviving for up to 3000 years in some of the world's most extreme conditions. They had highly specialized food gathering systems, tools,

equipment, clothing and shelters. All of these afforded them a remarkable cultural longevity.

Remnants of the Independence I and the Thule cultures remain as a testament to their ingenuity and skill for survival in the harsh and windy High Arctic. Perhaps one day their stories will be better understood. Until then, the stories of their time remain undisturbed in this place. Those stories are found in the artifacts and stones, and along the river valleys, lakes and ancient shorelines that shaped their lives. Their cultures will continue to be protected for future generations to learn from in Quttinirpaaq National Park.

### Contact Information

#### Contact Quttinirpaaq National

Park staff or visit our website:


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