



# Jewels of the Arctic



4 – 17 August 2019 | Polar Pioneer



# About Us

Aurora Expeditions embodies the spirit of adventure, travelling to some of the most wild and remote places on our planet. With over 27 years’ experience, our small group voyages allow for a truly intimate experience with nature.

Our expeditions push the boundaries with flexible and innovative itineraries, exciting wildlife experiences and fascinating lectures. You’ll share your adventure with a group of like-minded souls in a relaxed, casual atmosphere while making the most of every opportunity for

adventure and discovery. Our highly experienced expedition team of naturalists, historians and destination specialists are passionate and knowledgeable – they are the secret to a fulfilling and successful voyage.

Whilst we are dedicated to providing a ‘trip of a lifetime’, we are also deeply committed to education and preservation of the environment. Our aim is to travel respectfully, creating lifelong ambassadors for the protection of our destinations.





# Longyearbyen

Position:	22:00 hours	Course:	265°	Wind Speed:	6 knots	Barometer:	1017.3 hPa & steady
Latitude:	78°01'N	Speed:	12.6 knots	Wind Direction:	SSW	Air Temp:	8° C
Longitude:	12° 57'E					Sea Temp:	4° C

When the SAS flight flew in over Longyearbyen this afternoon, those of us looking up from below could imagine the marvelous view our incoming passengers were enjoying as they flew north along the east coast of Svalbard and turned down into Isfjorden.

By Arctic summer standards it was a brilliantly warm day, and at 1700, beneath a cloudless blue sky, we congregated at the pier to embark on *Polar Pioneer*.

Onboard we total 53 passengers, 24 of whom have been aboard since the previous 11-day voyage exploring Spitsbergen. All up we represent Australia, Canada, Ireland, Netherlands, New Zealand, Switzerland, UK and USA, along with our 21 Russian and 1 Ukraine crew men and women, and our 11-strong Aurora team from Australia, New Zealand and the Philippines.

Expedition Leader Gary Miller called us together in the bar for an introductory briefing where he talked about our plans for the coming days, and introduced the Aurora team.

After a mandatory safety briefing it was time to don bulky orange life vests and pile into the two lifeboats for a drill. With the hatches closed, we started up the engines to gain the experience of a polar class lifeboat.

Soon after we cast off lines and eased away from the wharf. We left behind the frontier town of Longyearbyen and in a light breeze made our way past the famed Seed Vault. Right on cue before dinner a whale blow was sighted, and then the blow from a calf! Gary identified the tall blows as those from blue whales—at nearly 30 metres in length, the largest animal to have ever lived on earth. Hunted to near extinction in the 20th century, they are making a slow recovery since their complete protection. We occasionally see these leviathans in the Greenland Sea and the waters around Svalbard. Look for tall blows, a long, mottled back and a tiny dorsal fin well back on the body.

Just as exciting was a pair of puffins skimming past the ship.

We sat down in the dining rooms for a first dinner together, and met our two hard-working chefs Al and Bert, and stewardesses Natasha and Iliana. A spot of jacket and gumboot exchanging took place soon after, and our kayakers took the opportunity to get together for a briefing and fit out with kayaking guide Daniel.

We felt the first bit of roll under our hull as we made our way west out of Isfjorden and headed up the west coast of Spitsbergen.

## Svalbard ‘Doomsday’ Seed Vault

Opened:	2008	Seed sample capacity:	4.5 million seed samples with each sample containing ~500 seeds
Vault temperature:	−18° C	Total capacity of vault:	2.25 billion seeds
Structure:	1-metre steel reinforced concrete with 2 airlocks and blast-proof doors	Ownership:	Depositors retain ownership rights over seeds sent to the facility. When fully stocked, the Seed Vault will contain all the known varieties of the world’s agricultural crops
Design:	120-metre long tunnel into the mountain that leads to 3 chambers	Frozen seeds storage span:	up to 200 years
Entrance:	Outer half of entrance tunnel is a 5-metre diameter steel pipe designed to withstand nuclear explosion		
Storage:	Seeds are packaged in special 4-ply heat-sealed packets		







Day 2 | Monday, 5 August 2019

# Kongsbreen, Ossian Sarsfjellet

**Position:** 20:45 hours  
**Latitude:** 79°08'N  
**Longitude:** 10° 58'E

**Course:** 350°  
**Speed:** 11 knots

Fog hung low, but by the time preparatory briefings were squared away it had raised its curtain to reveal spectacular Kongsbreen (King's Glacier). On a still, balmy morning we headed out in Zodiacs to explore this dynamic glacier divided into north and south sections by the area of land known as Ossian Sarsfjellet. Each section of the glacier is about 4 kms wide.

Dan and his kayakers launched off for their maiden paddle, crunching through brash ice, and stopping to admire some incredible icebergs, their clear ice often indicative of age, having come from the lower part of the glacier which, under tremendous pressure from the volume of weight above, has most of the air bubbles squeezed out of the ice. Light penetrates deep into clear ice and reflects back only blue light waves, giving the clear ice an often piercing blue, almost luminescent appearance. Some bergs were literally dripping mud from moraine picked up by the glacier and ferried great distances. The 'Old Red' as Devonian Sandstone is called, marks the sedimentary layers in the surrounding mountains, along with fine suspended particles in the water that give the bay its chocolate milk colouring in striking contrast to the blues of the glacier.

We observed an impressive volume of birdlife at the glacier front: black guillemots, glaucous gulls, Northern fulmars, and hundreds of black-legged kittiwakes congregated at areas where meltwater flows out from beneath the glacier, causing turbulence and upwelling and bringing to the surface fish and small crustaceans on which the birds feed.

Throughout the morning small pieces of ice plopped from the glacier front into the water, and though its surface, eroded into seracs, looked ready for a mega calving, we instead were rewarded with warm sunshine, a visit from a bearded seal, the tinkling of brash ice, rumblings from the glacier, and a spectacular vista of ice, rock and mountain.



**Wind Speed:** 2 knots  
**Wind Direction:** ENE

**Barometer:** 1022.6 hPa & steady  
**Air Temp:** 6° C (max 10°C)  
**Sea Temp:** 2° C

The morning vanished and once kayaks and Zodiacs were onboard we devoured a tasty lunch, thank you, chefs Al and Bert.

Captain moved our ship a short distance to Ossian Sarsfjellet where we went ashore for afternoon activities. The long walk, led by Gary and Chris, explored the higher reaches, where the group enjoyed spectacular views, and were visited by an inquisitive reindeer calf and its mother. Roger, Ben and Tarn led the medium walk, with their group so keen that they just kept going and going! Robyn and Justine led a shore walk and their group was treated to a reindeer stag stroll-by, plus three energetic foxes patrolling the base of the kittiwake cliffs. Two of the foxes wore radio trackers, likely part of scientific research from across the bay at Ny-Ålesund research station. The reindeer stags, both sporting impressive antlers, were unfazed by mere humans, intent on grazing and fattening up before the short summer ends. The foxes showed just how agile and nimble they are, scampering up steep rock faces and along precarious ledges as they foraged for kittiwake snacks.

Our colourful kayaking team were also treated to great views of the fox. The kayakers paddled the coastline and took in the serenity and beauty of the landscape.

It came time to return to our trusty ship and enjoy Captain's Welcome Drinks with Captain Aleksandr 'Sasha' Evgenov, who has been working on *Polar Pioneer* since its maiden season with Aurora in 2001.

A tremendous first day of outings with another big day to come as we venture to the north-west corner of Spitsbergen.





# Raudfjorden, Smeerenburg

**Position:** 21:30 hours  
**Latitude:** 79°23' N  
**Longitude:** 9° 05' E

**Course:** 221°  
**Speed:** 12.7 knots

We were on the lookout for polar bears and Raudfjorden (Red Fjord) certainly delivered. At the far end of the fjord, adjacent to a glacier, a likely looking object was sighted which turned out to be a bear slumbering on the tundra. Ashore we went to beach the Zodiacs and watch. Then came the realisation that there was not one, but THREE bears. A pair of bears were sleeping side by side higher up amongst the rocky slopes. We surmised that the sleeping pair were siblings, possibly young adults in their first year of living independently from their mother.

We watched the bears for quite some time, with the lower bear waking long enough for a half roll and back rub on the tundra before going back to sleep. The shoreline also invited our 'Clean Up Svalbard' program with an enticing plastic bucket retrieved from the beach, and later a sizeable bundle of fishing net. Aurora has been proactive in the clean-up since the program's inception in the early 2000s.

We made our way around to the next bay for a walk on the glacier. Getting into the bay was tricky with moraine rocks dotting the entryway, ready to snag an outboard motor. Not so for our mighty kayakers who powered in, reveling in their crafts' virtually non existent draft. The glacier approach proved slick and muddy, but the actual glacier was easy walking, and we viewed two striking crevasses. Despite a couple of boot-sucking calamities and a spot of mud wrestling, it was a fantastic experience to walk on a river of ice.

Back onboard we made our way north in Raudfjorden and sighted a FOURTH polar bear, again taking a snooze on the tundra, likely having had a satisfying meal in the past few days. We opted for our own hour of foraging and enjoyed delicious soup and wraps.

**Wind Speed:** 25 knots  
**Wind Direction:** N

**Barometer:** 1017.3 hPa & steady  
**Air Temp:** 6° C  
**Sea Temp:** 4° C

Smeerenburg was our afternoon highlight and even from the ship we could see a group of walrus hauled out on the sandy spit. Walrus onshore love to pile up on one another and the term for this highly social practice is *thigmotactic*, as we will no doubt hear from Senior Naturalist Roger in our upcoming educational program.

Smeerenburg is also an important cultural and historic site for it was here, on Amsterdamøya (Amsterdam Island) that the Dutch set up a summer whaling station in the early 1600s, where they caught and processed bowhead whales. As naturalist Chris explained onshore, back then the water was reported to be boiling with whales, which were towed ashore and their blubber boiled down to oil in large iron trypots. Evidence of these blubber ovens is still apparent where blubber once overflowed and congealed with sand and gravel to form a cemented mould, now 400 years old. We also saw the rubble from red bricks shipped up here to create the foundations for the ovens. Smeerenburg translates to Grease Town, and we could only imagine the physical state of the 200 men who worked here each summer, who lived in primitive tents, subsisting on poor diets and the threat of scurvy. Within thirty years the bowheads were decimated, and the shore station moved to ship-based whaling.

Several Zodiacs zoomed over to Danskøya (Danish Island) to view friendly Harbor seals and to see Virgohamna where Solomon Andrée launched a hydrogen balloon in an unsuccessful attempt to reach the North Pole. It was 33 years before the bodies of André and his men were found after crashing in Svalbard's north-east. Soon after dinner, in glorious evening light, we farewelled the beautiful archipelago of Svalbard and ventured sou'west across the Greenland Sea.



## First aircraft quests from Svalbard to North Pole

<b>Andrée</b>	(Sweden, 1896–97), hydrogen balloon launched from Virgohamna; crashed on the ice, eventually died on Kvitøya
<b>Wellman</b>	(USA, 1906, 1907, 1909), airship, failed with technical problems;
<b>Amundsen</b>	(Norway, 1925), sea plane from Ny Ålesund. Experienced technical failure at 88° north, returned safely;
<b>Byrd</b>	(USA, 1926), plane from Ny Ålesund to North Pole. Made it safely back but claim disputed;

<b>Amundsen</b>	(1926), airship over the North Pole, crash landed in Alaska and survived;
<b>Wilkins/Eielson</b>	(USA, 1928), flew in a Vega plane from Barrow, Alaska to Spitsbergen. Landed in snowstorm at entrance of Isfjord;
<b>Nobile</b>	(Italy, 1928), successfully flew to the Pole, surveyed large areas of Arctic Ocean. On return, Nobile crashed on the ice, resulting in a large rescue operation in which Amundsen and his pilot were killed.



# Greenland Sea

<b>Position:</b>	21:30 hours	<b>Course:</b>	225°	<b>Wind Speed:</b>	Calm	<b>Air Temp:</b>	4° C
<b>Latitude:</b>	75°39'N	<b>Speed:</b>	12.5 knots	<b>Barometer:</b>	1017.3 hPa & steady	<b>Sea Temp:</b>	7° C
<b>Longitude:</b>	5° 08'W						

A sea day is time to kick back, catch up, and hear from our experts about the polar environment. A leisurely breakfast led into Chris’s presentation on polar bears. We learned about the life cycle of these iconic creatures which, other than to breed and raise cubs, live solitary lives. It is easy to think of the polar bear as a land mammal, but as its name *Ursus maritimus* suggests, its home is on or in the ocean where it roams and hunts. Polar bears are powerful swimmers and have been recorded as swimming several hundred kilometres. Male bears weigh between 300–700 kgs, while females weigh 150–350 kgs.

Polar bears mate in Spring and a male may track the smell of a female over many kilometres. A large male can mate with several females, and once impregnated, the egg delays implantation until September or October. At that time the female builds her birthing den and goes into hibernation, giving birth in the New Year. Polar bear milk is rich in fat, and the cubs, often two, sometimes three, grow from a birth weight of 500 grams to 10 kgs by the time the new family emerges from the den in March/April. A family unit stays together for around two and a half years, though mortality is high, with only one in three cubs reaching two years of ages. Adults have a high survival rate, living to 15–25 years of age.

The symbolism of the bear has evolved through the ages, as an icon of strength, of spiritual power, as a constellation in the northern sky, in modern times as an icon for fire safety, and as a child’s cuddly toy, alluding to American president and avid bear hunter Teddy Roosevelt. Now it stands as a poignant symbol of climate change, with the diminishing ice.

A sea day is also a perfect opportunity for a little retail therapy, with a flurry of shoppers snagging a bargain when petite Justine opened our petite ship’s shop.



The ship grew quiet after lunch but when the call came for Roger’s talk on Arctic wildlife, the lecture room soon filled to capacity. Roger took us through the land mammals, then the seals and whales, interleaved with some light relief. We learned how many of the Arctic whales are long living, with blue whales living around 90 years, and bowhead whales living a phenomenal 200 years. Within the last twenty years a bowhead whale was harvested which had survived a hunting episode. The harpoon head, dated as 180 years old, was still lodged in the whale’s flesh, confirming the animal’s great age.

Not to be outdone, the Greenland shark lasts 600 years. Just imagine your 100th birthday being equivalent to turning 15 years of age! We also learned about the various mammals that call North-East Greenland home: polar bear, musk ox derived from the goat family and sporting a shaggy coat of guard hair, the all-white Arctic hare which stands knee high and which, in far north Greenland, congregate into large herds, bounding across the tundra at speeds of up to 60 kms per hour.

Fin whales were the wildlife highlight of the day, with three of these huge mammals at close quarters to the ship, offering remarkable views. The fin is the second largest but fastest of the whales, cruising at 15 kms per hour with sprints of 28 kms per hour. The unique characteristic of the fin whale is that the lower jaw on the right-hand side only is white—an unusual asymmetry in the animal kingdom.

Early evening saw time for a recap, where, with Roger’s encouragement, we recounted diverse experiences in Spitsbergen, from encountering a polar bear from a kayak, to walking on a glacier, to having reindeers saunter by, to agile foxes and blubber-laden walrus, to bouncing across the ocean in Zodiacs showered by near-frozen lashings of spray.







Day 5 | Thursday, 8 August 2019

## Greenland Sea

**Position:** 21:00 hours  
**Latitude:** 73°45'N  
**Longitude:** 17° 29'W

**Course:** 260°  
**Speed:** 7 knots

Onward we forged, cleaving an oily calm sea toward the Greenland coast. Mist waxed and waned. During the morning we were treated to a brilliant fog bow ahead of the ship, with the sun shining upon it from behind us. Fog bows are a polar phenomenon, made from minute ice crystals which act as mirrors, reflecting the sun's light back toward us.

Dr Roger had a full house for his presentation on Arctic seabirds, with a few land birds thrown in for good measure. During our days in East Greenland we hope to hear the haunting calls from Red-throated and Great Northern divers, birds commonly known as loons, which often nest by fresh water. Rare prizes for any keen birders in Greenland are sightings of the Gyrfalcon and the Snowy Owl.

During the day we motored around bands of loose pack ice, among them Arctic skua and long-tailed skua, along with Northern fulmars working hard to make lift and speed with the calm conditions. A group of four harp seals swam by, as those of us on the bridge kept a sharp lookout for bears.

A little about the workings of our stout little ice-strengthened ship. Along with its vital statistics (see text box) six Russian and one Ukrainian crew men work in the engine room: four engineers, two motormen and an electrical engineer. Like the bridge officers, our engineers work shifts of 4 hours on, 8 hours off.

*Polar Pioneer* has two 1,590 HP engines which use a total of 8,000 litres of fuel per day when cruising at 11–12 knots. This equates to approximately 335 litres per hour or 14 litres per engine per nautical mile. Two of the three 150-kilowatt diesel generators function continually



**Wind:** calm  
**Barometer:** 1018.6hPa & falling

**Air Temp:** 3°C  
**Sea Temp:** 4°C

to generate 300 kilowatts of power. The ship's boiler holds 5,000 litres of working water used to maintain a cosy ship, to heat water for our use and to heat the main engines.

The ship's 8 ballast tanks comprise 6 tanks of waste water (140 tons each) and 2 tanks of drinking water (128 tons each); plus 10 tanks of fuel (320 tons each) and 3 tanks of oil (22 tons each). On a voyage with conservative water use, *Polar Pioneer* uses 12.5 tons of water per day.

Dr Gary offered an afternoon presentation on Arctic ecology where he spoke about glaciers and icebergs, and the U-shaped glacial valleys that are a hallmark of Greenland's vast landscape. We learned about permafrost and how it affects large scale and even small-scale features such as patterned ground polygons and frost boils, string bogs and hummocky bogs.

Next, the *Blue Planet* DVD series' episode on frozen oceans offered tremendous examples of Arctic whales and walrus in the water. We saw beluga corralled by a tight surround of drift ice, conditions which make it possible for a bear to successfully hunt a beluga. Being four times the size of a bearded seal, a beluga whale would sustain a bear for weeks.

Afternoon drifted into evening as the bar drew a crowd, and games of 500s and Scrabble were set aside for predinner drinks in the lead up to another tasty dinner. When the Great Arctic Quiz got underway, with stiff competition among the teams, the fog closed in as we motored sou'west for a morning arrival in mighty Greenland.



## Polar Pioneer Statistics

<b>Ranking</b>	ice-strengthened	<b>Draught:</b>	5.0 metres
<b>Built:</b>	1982 in Turku, Finland	<b>Type of engine:</b>	two diesels
<b>Call sign:</b>	UBST	<b>Bow thruster:</b>	one
<b>Gross register tonnage:</b>	1,753 t	<b>Maximum power:</b>	2 x 1,147 kW
<b>Nett register tonnage:</b>	526 t	<b>Cruising speed:</b>	10 knots
<b>Length overall:</b>	71.6 metres	<b>Anchor chain port:</b>	8 shackles
<b>Breadth:</b>	12.8 metres	<b>Anchor chain starboard:</b>	9 shackles



### Schuleykin Class Ships

<b>1982</b>	Akademik Schuleykin (renamed <i>Polar Pioneer</i> in 2001)	<b>1983</b>	Akademik Gamburtsev (renamed Nordsyssel)
<b>1982</b>	Akademik Shokalskiy	<b>1984</b>	Arnold Veymer
<b>1982</b>	Professor Molchanov	<b>1984</b>	Akademik Golitsyn
<b>1983</b>	Professor Khromov (renamed Spirit of Enderby)	<b>1984</b>	Professor Polshkov (scrapped 2013)
<b>1983</b>	Professor Multanovskiy	<b>1985</b>	Geolog Dmitriy Nalivkin



DAY 6 | Friday, 9 August 2019

# Eskimonaes, Dødemandsbugten

<b>Position:</b>	20:30 hours	<b>Course:</b>	192°	<b>Wind Speed:</b>	8 knots	<b>Barometer:</b>	1021.3hPa & steady
<b>Latitude:</b>	73°37'N	<b>Speed:</b>	12.3 knots	<b>Wind Direction:</b>	ENE	<b>Air Temp:</b>	6° C
<b>Longitude:</b>	20° 00'W					<b>Sea Temp:</b>	7° C

Our first steps on Greenland took us to Eskimonaes with its soft sandy beach, tranquil water, rounded hills, clusters of vegetation, the burnt remains of a hut from World War II conflict, and derelict belongings—a stove, kettle, cooking pans and pieces of iron that once belonged to something useful—and a rebuilt cabin.

Our greeting party were muskox, five in all including calves, which stood on the skyline above the cabin surveying we strange humans in their domain. Around us were hoofprints and droppings from these large grazing animals. Musk ox eke out a living on grasses and leafy plants. The first winter is hard on calves, but they are well adapted to extreme conditions and typically live 20--25 years. Muskox males, larger than females, grow to 200-400 kg and rut during August and September, the males butting heads to determine dominance. Dominant bulls can maintain a harem of females to mate with, each giving birth to a single calf in May or June.

We were ready to explore the terrain. Gary led the long walkers around to views of a beach and surround of gneiss on the opposite side of the headland, then tracked across the undulating landscape. The tundra was lushier than it first suggested, with carpets of bell heather, fungi, Arctic cotton grass, blueberries, and polar willows a toe-height high, their leaves turning gold and russet with the change in season like any full standing willow tree. We had our first sighting of the brilliant magenta flowers of broad-leaved willow herb, also called Fireweed, Greenland's national flower.

The long walkers happened upon an aged fox trap resting on an exposed rocky headland where many years ago it would last have been baited and set.

Some encountered their first pesky mosquito, while all of us out and about peeled off layers on a balmy morning as warm as any summer's day at home.



Roger and Chris's so-called medium walkers traversed the landscape for most of the morning, taking in views of the magnificent fjord and surrounding landscape, and finding scrapings of muskox wool along the way. Tarn and Ben's group explored the local surrounds then opted for a lovely Zodiac cruise around a coastline which feels so different in nature to our experience of Svalbard.

Daniel's kayakers relished their first appreciative taste of the beauty and grandeur of Greenland from water level, paddling in magical conditions and simply soaking in that vast natural arena.

Our ship moved a whisker east for an afternoon landing at Dødemandsbugten. Here we encountered the remains of paleo eskimo winter houses, around 1,000 years old, positioned on the rise above the beach, with views across the fjord in an area where hunting on land and water sustained a community. The site also sports a newly constructed cabin. 'Nanok' is a Danish volunteer group who have taken on repairing or rebuilding some of the old trapper's huts in Greenland's north-east. We admired the pride and effort they had put into this inviting construction. Adopting the etiquette of a good trapper, a pot of water had been filled and the stove set for the next visitor, with match sticks protruding from an open packet laid upon the stovetop.

Some took a leisurely walk with Tarn and Ben to explore the hinterland, while others opted for a ride across the fjord to a stately iceberg that has sailed a vast distance down the fjord from its glacier front to the west, fed by Greenland's Ice Cap.

With a night of motoring ahead, we set off across a smooth ocean dotted with bergs reflecting the wash of Greenland's evening light.







DAY 7 | Saturday, 10 August 2019

## Blomsterbugten, Nanortalik

**Position:** 21:50 hours  
**Latitude:** 72°51'N  
**Longitude:** 25° 23'W

**Course:** 198°  
**Speed:** 8.6 knots

Even before Gary made the wake-up call, many were out on the bow to marvel at the remarkable geology that makes traveling through Keyser Franz Josef Fjord so gobsmacking. Massive cliffs striped with colourful sedimentary layers were folded into angles and swirling shapes. One of these lofty heights, the famous Teufelsschloss (Devil's Castle) opposite Blomsterbugten, has been represented in art through the ages (see example above).

After breakfast our mighty kayakers launched off for an epic paddle up the fjord, while the rest of us zoomed ashore at Blomsterbugten where a walk to beautiful Lake Noah awaited. The walkers followed a musk ox track, apparent by the tufts of qiviut deposited along the way, or snagged on rocks. Beneath the guard hair of the muskox grows this superfine, light and extremely warm qiviut wool.

Long tailed skuas performed acrobatic displays above, while the call of loons emanated from the lake. The walkers also saw wheatears and snow buntings, but the highlight along the way was a pair of bunnies at fairly close quarters! Arctic hare is the largest hare species, though they have relatively small ears. In Greenland they are white all year, but in other parts of their range, the southern populations turn grey-brown in the summer. Because of their size and fighting ability, adults have few enemies, but the young may be taken by gyrfalcons, foxes, snowy owls and stoats. In southern areas, they live in pairs or small groups, but farther north in their range, Arctic hare live in large groups. When startled, they will run off leaping on their hind legs alone.

Those who took the short walk had time to take a Zodiac cruise to see some stunning icebergs, crisscrossed with blue lines where meltwater has run into crevices in the glacier then refrozen into clear ice, reflecting back a brilliant luminescent blue.



**Wind Speed:** 7 knots  
**Wind Direction:** S

**Barometer:** 1021.3hPa & steady  
**Air Temp:** 11°C  
**Sea Temp:** 7°C

While we sat down to a delicious lunch of fish and chips, thanks to our wonderful chefs and stewardesses, SIRIUS Patrol came aboard to conduct a routine inspection of our permit and firearms. At the same time we collected our kayakers who, after a vigorous paddle, made it to the dining rooms in good time.

The afternoon saw us at Nanortalik, the site of paleoeskimo winter houses overlooking the fjord. These well-constructed dwellings that date from 1,000 to 200 years old, made use of the local slate to build lintels and walls, while the bones from hunting were worked into tools.

Our walkers set off and had marvelous views of muskox, where they got to see the family dynamics of a group with young male adults trying out some head butting, a female with a calf giving an amorous young bull the cold shoulder, and an older female who held the status as the group matriarch.

Our mountain climbers managed a shakedown hike up a nearby mountain, making it to 600 metres elevation and enjoying fantastic views of the surrounds.

After dinner we passed by the SIRIUS headquarters on our way to Narwhalsund where we were wowed by a 1,367-metre high headland keeping guard over the ocean.

**Credit:** Teufelsschloss. By an unknown artist after drawings and descriptions made by members of the German North Polar expedition. Reproduction from <https://commons.wikimedia.org/w/index.php?curid=3322716>





DAY 8 | Sunday, 11 August 2019

# Alpefjord, Gateau Point

<b>Position:</b>	21:00 hours	<b>Course:</b>	126°
<b>Latitude:</b>	72°07'N	<b>Speed:</b>	11.9 knots
<b>Longitude:</b>	23° 02'W		

By Chris Todd

We awoke to find the ship deep into Alpefjord, which is the southern branch of Segelsällskapet Fjord, which runs off Kong Oscar Fjord on the deeply incised North-east Coast of Greenland. From the bow we could see the tongue of Sefstrom Glacier protruding halfway across the channel near the head of Alpefjord. A suite of 2,000–2,700-metre fairy-tale peaks and spires disappeared into the mist above the glacier, freshly dusted with snow.

They must have remained as nunataks (island peaks within a sea of ice) during the last ice age, as they showed no signs of the glacial weathering and rounding typical of lower mountain ranges.

After breakfast we set off on a Zodiac cruise to explore the uncharted waters of the glacier tongue, which like glaciers world-wide, has retreated drastically in recent decades. As it was relatively low and stable, we were able to get quite close in places; seeing rocks embedded deep in the ice and giant boulders which had fallen onto the glacier high in the mountains, being carried down towards the sea. When these isolated boulders are eventually dropped off in a setting completely removed from their original location, they become known as 'glacial erratics'.

After cruising the glacier front we landed on moraine heaps, one a little tongue of rock and wind-blown sand where we could go for a wander; beautiful little prostrate willow trees and purple fireweed were colonising the bare ground, with the tracks of Arctic foxes and geese evident in the sand. We crossed to the other side of the fjord, to a gravel fan overlooked by waterfalls cascading from a hanging glacier.

Wind Speed:	14 knots	Barometer:	1019.9hPa & steady
Wind Direction:	SSE	Air Temp:	6° C
		Sea Temp:	6° C

On the water's edge a little family of eider ducks scooted off; a flock of long-tailed ducks dived and swam across our path, and glaucous gulls circled us warily until we were well past their large well-camouflaged chicks. The sun came out as we worked our way back to the ship under massive cliffs; their damp ledges perfect flowering rock gardens.

Meanwhile the kayakers, who had taken a little longer to reach the glacier, stopped off for a cup of tea on a freshly exposed island of moraine, which they christened 'Birthday Island' in honour of kayaker Max.

After a tasty Filipino-themed lunch we landed on the southern side of Segelsällskapet Fjord, where the star of the show was geology: layer after layer of multicoloured sandstone; deformed by faulting and folding, worn smooth by glaciers, and more recently 'quarried' by the action of water seeping between the sedimentary layers, freezing, expanding and cracking pieces off.

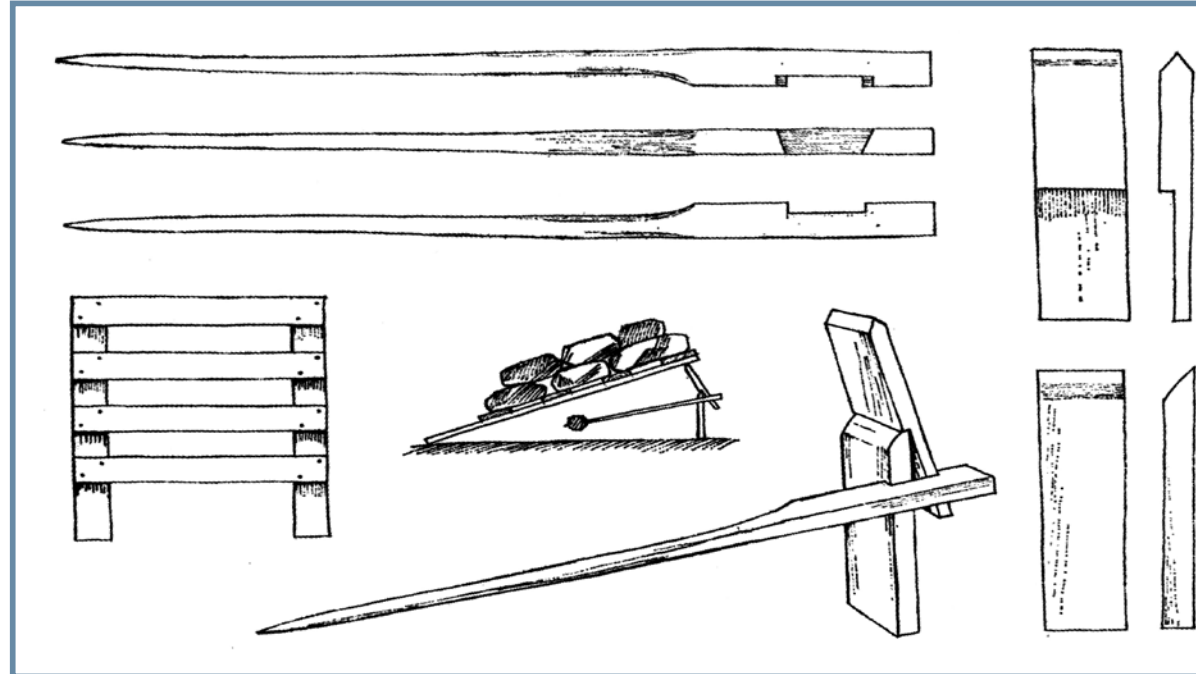
The endless combinations of colour, texture and form (some looking like upturned wooden ships) kept all our cameras clicking, whether we kayaked, stayed around the beach, or set off further afield for 'long' and 'medium' length walks.

Roger's dry humour had us all in stitches in the bar before dinner, as he led a recap of our first three days exploring the dramatic mountains, glaciers and fjords of NE Greenland.



## Early Fox Traps

Early methods of fox trapping included foot traps and poisoned bait. After 1930, Norwegian and Danish trappers almost exclusively used the fall trap, which kills the fox instantly without damaging the valuable pelt. The frame consists of two wooden boards onto which four cross-boards of driftwood or untreated wood are nailed. The framework is loaded with a weight of stones and suspended at one end at an angle of  $\sim 30^\circ$  from the ground. The pressure from the weight of stones on the trap holds two notched planks in the notch of the third locking stick, which is also the bait stick. When the fox tugs at the bait on the locking stick, the trap collapses.







Day 9 | Monday, 12 August 2019

## Ittoqqortoormiit, Hall Bredning

**Position:** 21:45 hours  
**Latitude:** 71°08'N  
**Longitude:** 25° 10'W

**Course:** 1°  
**Speed:** 8.4 knots



**Wind Speed:** 10 knots  
**Wind Direction:** SSW

**Barometer:** 1022.6hPa & steady  
**Air Temp:** 10° C  
**Sea Temp:** 3° C

At the mouth of Scoresbysund the coastal village of Ittoqqortoormiit sits on a hillside stud-  
ded with small, colourful Danish-style houses, home to ~370 East Greenlanders and 50–70  
sledging dogs.

In 1924, due to the driving force of Ejnar Mikkelsen Miki, a ship left Copenhagen for  
Scoresbysund, laden with building materials and provisions. A wintering party of seven was  
left to begin work on the construction. The following year 85 Greenlanders arrived from  
Ammasalik, a village 800 kilometres south. These pioneers formed the basis of today's large  
settlement.

We wiled away a delightful morning, berthing Zodiacs at the newly constructed pontoon  
with an easy walk up to the dock. Robyn handed out town maps and we set off exploring  
town, the small museum with its array of artefacts and kayaking memorabilia. Nearly every-  
one took part in a spot of souvenir shopping, some followed the high road up to the soccer  
field where locals shared in some practice with Gavin and Grant.

Our medicos wandered over to the hospital to say Hello, some met a group of small children  
at the playschool, we congregated to see one of the locals feeding his team of sledging dogs,  
had our passports stamped by the local constabulary which consists of a Danish senior officer  
posted up here for a year or two, and a local inuit officer.

Many made the hike up the wooden steps and winding gravel road to the Met station to  
watch the release of the weather balloon, an event shared by more than 800 stations around  
the globe which do routine releases, twice daily, usually at 0000 UTC and 1200 UTC.

Ittoqqortoormiit's structure is based on the Danish social model, with free health care and  
schooling. The government owns the main supermarket and other facilities. The tax rate in

Ittoqqortoormiit is 42% and the cost of living, evidenced by the supermarket prices, is high.  
But many choose to live here because of their strong affinity with the natural environment,  
and an aversion to city life. Back in 1925 nearly all the village men were hunters. In the year  
2001 when Aurora Expeditions was the first tourist vessel to visit the township, there were 50  
licensed hunters. In 2019 there are 10.

Hunting restrictions are rigid with the annual quota of 35 polar bears already met this season.  
Two bear skins were stretched and hanging in the dry open air, along with muskox pelts from  
a quota of 70 muskox. Winter ice broke out of the bay in June at which time 25 of the 50  
narwhal quota was caught. All food caught is sold or shared locally, while income is gained  
from commercial exports of polar bear pelts, seal skin and qiviut.

We returned to our good ship for a late lunch and set off along the mighty waterway of  
Scoresbysund, leading in to Hall Bredning. A never-ending fleet of enormous icebergs sailed  
by, having travelled down the fjord from a large glacier in inner Nordvest Fjord, one of the  
most active in east Greenland.

Sun gleamed upon these behemoths and enticed a number of us out onto the bow and fly-  
ing bridge to enjoy the sheer spectacle of ice as we motored toward Bjørneøer, Bear islands.  
Soon after dinner Tarn, Geoff and Ben donned lifejackets and loaded up their Zodiac with  
enough camping gear and provisions for a 3-day excursion scaling slopes around Bjørneøer  
and adjacent Ø Fjord (Island Fjord). In low evening light, amid gleaming icebergs and a pro-  
file of mountains iconically 'Greenland', we farewelled our three adventurers as their Zodiac  
spirited them away.









Day 10 | Tuesday, 13 August 2019

# Nordvest Fjord, Eskimobugt

<b>Position:</b>	21:45 hours	<b>Course:</b>	81°	<b>Wind Speed:</b>	Calm	<b>Barometer:</b>	1018.6 hPa & steady
<b>Latitude:</b>	71°30'N	<b>Speed:</b>	6 knots			<b>Air Temp:</b>	11° C
<b>Longitude:</b>	26° 20'W					<b>Sea Temp:</b>	4° C

Our morning began in Nordvestfjord on another still and balmy Greenland day. Ahead and around us was a maze of ice, ranging from immense bergs dwarfing the ship to interesting little bergy bits. These bergs calve from the huge Daugaard-Jensen Glacier way up at the head of the fjord fed by the Greenland ice cap. Straight after breakfast we were out in the thick of it for Zodiac cruises and kayak paddles.

For the kayakers it was a super sensory morning with the snap, crackle and pop of the icebergs, along with several dramatic calvings. Down at water level, away from ships and engines, the occupants of these little plastic toothpicks were entirely attuned to the dynamic surrounds.

The massive scale of the surrounds, with large icebergs dwarfed by a monolith of 1,200-metre-high slabs of ancient rock, was mind bending. These vertical cliffs of the Ingmiðkórtilaq Peninsula on Hinks Land dominate the fjord and are amongst the earth’s oldest known rocks. They consist of gneiss and granitoid. The peninsula, and the surrounding mountains (some measuring well over 2,000 metres in height), are polished by thousands of years of glacier activity and tell an interesting story of Earth’s history. Originally deposited well south of the equator as layered ocean sediments, these rocks experienced incredible pressure and contortions 2.8 billion years ago as they were forced deep underground. (The earth itself is 4.5 billion years old!) Sandstone melted into gneiss and molten granite flowed into cracks, providing the intrusions we see today.

Hundreds of millions of years later, tectonic movements brought these rocks to the north and back to the surface. Finally, the opening of the Atlantic Ocean, 400 million years ago, brought them crashing into Greenland. Today we see evidence of ancient sedimentary layers and granitic intrusions, twisted and broken like a marble cake.



While we were zooming around gigantic bergs and along the rock face of the cliffs, our thoughts went to our three climbers at Bjørneøer who would have woken to a magnificent sunrise, and a full day of climbing. We will discover for ourselves the wonders of Bjørneøer in days to come.

What better place, what better day to throw ourselves off a ship into +2° Celsius water. At midday, 24 certifiable plungers bounced down the gangway, leapt into icy waters, then made a hasty return to the ship. Freda’s performance dramatico was abbreviated with a helping hand from Dan, while Janice, inspired by plunge 1, came back for plunge 2, this time from the lofty heights of Deck 4. It proved to be a great spectator sport with plenty of encouraging cheers and shots of Sambucco for the plungers.

After a tasty lunch we arrived at Eskimobugt for an afternoon of exploring paleo eskimo winter houses, and taking walks whereby we all encountered muskox. They seemed to find plenty to graze on in what appeared to be sparse vegetation. Our kayakers joined the beach-combers ashore to soak up the blistering afternoon heat and gaze out at the fjord studded with massive icebergs. Those in higher reaches had panoramic views of the fjord and up to Nordvest Fjord and Ingmiðkórtilaq Peninsula where we had spent our morning.

Back on board, dinner was alfresco, on the back deck, the BBQ fired up with chefs Al and Bert barbecuing all manner of delicious fare, our stewardesses Natasha, Sasha and Iliana handing out party hats and taking care of catering, Justine pouring delicious gluwain, and later an action-packed dance floor squeezed between Zodiacs, kayaks and a shipping container. Around us, lofty mountains, glaciers and icebergs sailing by. What finer ingredients for the makings of a FAB night out!











DAY 11 | Wednesday, 14 August 2019

# Harefjord, Røde Ø

**Position:** 10:15 hours  
**Latitude:** 70°48'N  
**Longitude:** 27° 50'W

**Course:** 14°  
**Speed:** 7.7 knots

**Wind Speed:** 4 knots  
**Wind Direction:** Variable

**Barometer:** 1013.3 hPa & steady  
**Air Temp:** 12°C  
**Sea Temp:** 4°C

What a big, blistering bonanza of a day! Through the night our good ship had travelled through spectacular Ø Fjord, though most of us were blissfully oblivious, sleeping soundly in our bunks. We woke to pink reflections cast across the waters of Harefjord from its mountains and hills of ‘Old Red’ Devonian sandstone that had the Australians atwitter with likenesses to the Olgas and Australia’s ‘Red Centre’. In total contrast, brilliant icebergs sailed down the fjord while mountain tops were iced with snow, offering views through to the edge of Greenland’s Ice Cap.

Onshore we viewed a paleoeskimo dwelling, and lush tundra covering the hillsides, the greens and russets giving way to red sandstone canyons and gravel outwashes.

Chris guided the long walkers who were treated to beautiful walking, magnificent views and a spot of canyoning. Roger and Gary’s medium walkers enjoyed much of the same. Our beach combers joined Robyn and Justine for a leisurely cruise along the coast, viewing this tranquil while mighty landscape. Robyn felt a bit miffed that a two-masted yacht had taken up residence in her secret muskox cove, with no muskox in the vicinity. Nevertheless, eider families were on the water everywhere we looked. Lindsay kept a tally throughout the morning with a total of 74 eiders! The two Zodiacs enjoyed a session photographing one another through the arches of an exquisite iceberg.

Being a sweltering Greenland summer’s day, our chefs pronounced that lunch would be outdoors on the bow: pizza, salads, baked turkey and pork, along with refreshing beverages and icecream to finish. Thank you, Al, Bert, Iliana, Natasha and Justine – it was wonderful to sit back and soak up the magnificence of the surrounds as we made our way south down Røde Fjord to Røde Ø (Red Island).

Here our paddlers and Zodiacers vanished into a maze of icebergs which originate from two large nearby glaciers: Døde Brae in Vestfjord off Røde Fjord, and Rolige Brae off Røde Fjord. Interestingly, many of these icebergs had fairly smooth tops, unlike the large icebergs from Nordvest Fjord with their tops carved with sharp seracs.

While Røde Ø is something of a resting place for icebergs, there was no shortage of might with some bergs reaching up to 90 metres in height. Meltwater streamed down the sides of the bergs, turning the ice into gleaming meringue.

There was also plenty of ‘heavy artillery’ going off in the form of calvings, with some lucky enough to see these events. While the western side of Røde Ø is largely covered by tundra, the eastern side of the island is red sandstone cliffs with sparse vegetation and pairs of glaucous gulls perched on lofty nests, raising their young.

Daniel’s kayakers went ashore at their own private bay and walked up to a high point to gaze down mesmerized by the labyrinth of ice. Zodiacs followed suit, landing on the western side of the island and hiking through ankle-high birch and willow forest to a low headland. Here we were treated to several visually and audibly spectacular calvings, reminding us that while many of these bergs are grounded or have drifted into the shallows, it remains a dynamic place.

The beachcombers discovered several vacated eider nests filled with fluffy down, and enjoyed finding sprigs of roseroot, a new Arctic species for us amongst familiar beech, willow, crowberry and bear berry turning gold and russet with Fall. Just in time for a hearty dinner, we wended our way back to our fine ship, happy in the knowledge that Greenland is a true gem to behold.







Day 12 | Thursday, 15 August 2019

# Bjørneøer, Hall Bredning

**Position:** 21:15 hours  
**Latitude:** 69°47' N  
**Longitude:** 22° 08' W

**Course:** 194°  
**Speed:** 12 knots

**Wind Speed:** 5 knots  
**Wind Direction:** ESE

**Barometer:** 1007.9 hPa & falling  
**Air Temp:** 4°C  
**Sea Temp:** 4°C

Our final Greenland “hurrah” coincided with a superb locale. Into Zodiacs we piled, our regime of dressing and tag turning honed to perfection, to explore Bjørneøer, Bear Islands, a collection of low-lying islands at the junction of Ø Fjord and Hall Bredning in Scoresby Sund.

The weather gods delivered yet another still, warm, blue-sky Greenland day, which turned water to glass, reflecting the sharp, snowy peaks of Ø Fjord. Added to that were perfect reflections from icebergs which drift in to Bjørneøer’s quiet bays from surrounding fjords. Geese and eiders were resident around these quiet, tranquil shores, along with a lone little auk in the water and glimpses of land birds such as wheat ears and snow buntings.

We reunited at the entry of a lagoon at the base of the Devil’s Teeth where outboards were tilted high to clear the shallow entry against a strong current pouring out of the lagoon. Finally we were all across the shallows where we came ashore for a brief stop. We ambled over rolling undulations thick with tundra: Arctic bell heather with lemony-white flowers, beds of crowberry and blueberry amongst forest patches of birch and polar willow. And what a view.

Back in the boats, this time with the current rushing back in to the lagoon, we joined Gary one island across to marvel at a collection of enormous stately bergs, one shaped with a large arch, another sporting four 90-metre towers of gleaming, sun-kissed ice. We spent leisurely time at the ‘arch’—a perfect place for Justine to set up a group photo in her Zodiac. Suddenly an almighty crack and an explosion of calving ice issued from the iceberg behind, sending a wave of water towards the Zodiacs and a shower of spray over Justine’s passengers who dived to the floor. Other Zodiacs were out of the firing line and looked on at this heart-pattering spectacle as Justine sped away to safety.

Time to turn to home, wending our way through the chain of islands and out to Hall Bredning to meet our ship.

For the kayakers’ final paddle, the team relished the quiet of the islands, golden seaweed lining the rocks’ low tide line, the call of birds, and majesty of the surrounds.

Excitingly, it was time to welcome back our wild mountaineers. Geoff, Tarn, and Ben climbed several Bjørneøer peaks and came home exhilarated, with stories aplenty. At their campsite they had muskox sashay past their tent within thirty metres, and sightings of Arctic hare. At the bay adjacent to their campsite, collections of geese, eiders and loons fossicked among the mudflats. The three came back fully sated with all they had achieved during their 3-day excursion.

The afternoon had us motoring out through Scoresby Sund with time to hear from Roger on aspects of climate change and how the polar regions are affected.

At 1830 we gathered in the bar for another entertaining recap, hosted by Roger with input from many. Reminiscing over the last few days was a reminder of the diversity of landscapes, icescapes and moments of wonder that have come our way.

With a sluggish swell beneath our hull, and our clocks set back an hour to match UTC /GMT in Iceland, we edged away from Greenland’s coast and set a course south across the Denmark Strait.





Day 13 | Friday, 16 August 2019

# Denmark Strait

**Position:** 21:50 hours  
**Latitude:** 64°52' N  
**Longitude:** 24° 16' W

**Course:** 170°  
**Speed:** 11.4 knots

**Wind Speed:** 25 knots  
**Wind Direction:** NNE

**Barometer:** 999.9 hPa & falling  
**Air Temp:** 7° C  
**Sea Temp:** 4° C

Ours was a lazy day at sea, at least it started that way with an extra hour’s sleep in and a late, leisurely breakfast.

Soon after, we headed down to the lecture room to hear Ben, Tarn and Geoff wax lyrical about their climbing adventures on Bjørneøer. The photos alone made us giddy with wonder, the trio scaling the lofty peaks of the islands and at the top gaining million-dollar views in each direction.

Each day began with a hearty breakfast at their campsite, then a Zodiac ride across to the starting point of their climb, scouting the islands for peaks that offer a range of suitable climbs and rock scrambling for keen passengers on Aurora’s future voyages. Most importantly, they were on the lookout for climbs that would also offer suitable, safe descents.

Tarn and Ben showed us photos of the mammoth icebergs out in the bay beyond their camp-site, and how the collapse of one whopper berg reverberated across the bay and brought a series of waves onto shore that lasted 30 minutes. That berg was the very same mammoth berg we saw on our Zodiac cruise to Bjorneøer, only by the time we visited, post calving, it had transformed into four towering towers, with the ceiling of the berg entirely gone.

The photos of the climbs showed spritely Geoff more often than not in the lead with Tarn and Ben having their work cut out. But at the end of each day, bare-footed and soaking up the evening sun, there was plenty of “ground” time to relax and enjoy a dram or three of Scotch whisky made extra special with the addition of ancient glacial meltwater bottled straight from an iceberg.

We were down to the pointy end of the voyage, with a disembarkation briefing and ship-board accounts to square away. By afternoon the coastline of Iceland finally came into view, though with strong nor’easterly winds we continued to roll our way south.

The day was one for the seabirds with hundreds of Northern fulmars taking advantage of the strong winds, wheeling about the ship and gliding down close to the wave tips. We also had flybys from gannets, a single puffin and a short-tailed shearwater.

Throughout the day our suitcases were aired for the first time in 14 days—even longer for our back-to-backers who have been onboard since late July. Belongings were packed up, and forgotten items retrieved from those long, deep drawers.

A documentary on icebergs was well attended, which led into Captain’s Farewells Drinks in the bar. Our good Captain Sasha made a very nice speech, remarked on the fantastic weather we have enjoyed and wished us safe travels. Likewise, Gary took the opportunity to thank the Aurora team for their contribution to a successful voyage.

Our final supper together for this voyage was the most scrumptious lamb imaginable, and delicious tiramisu—thank you to our wonderful chefs for their hard work and culinary talents.

It was time for the much-anticipated voyage slideshow; some how we all squeezed ourselves into the lecture room for one last thigmotactic haulout. What a fabulous recollection it was—a wondrous snapshot of 14 action-packed days in Svalbard and East Greenland. Thank you to slideshow producers Martha and Matt.





# Reykjavik

**Position:** 08:00 hours  
**Latitude:** 64° 09' N  
**Longitude:** 21° 56' W

**Course:** docked at Faxagardur Pier, Reykjavik

**Wind Speed:** 17 knots  
**Barometer:** 995.9 hPa & falling

**Air Temp:** 8° C  
**Sea Temp:** 6° C

By Chris Todd

From Longyearben to Reykjavik, we'll each tell our own way: an exotic destination for climb-ing, walking and paddling; a geological, botanical and wildlife odyssey; a memorable place to spend time with family and friends; a poignant farewell to the *Polar Pioneer* and to friendships and journeys past.

We'll recall our first glacier cruise amidst the chocolate-stained waters of Kongsbreen, clouds of kittiwakes swooping to snatch fish and crustacea stunned in the chaotic aftermath of ice behemoths crashing into the fjord.

All around us we heard the popping of gas bubbles trapped in glacier ice rejoining the atmosphere after an absence of perhaps 100,000 years, from a time when woolly mammoths roamed the Arctic, humans were dispersing out of Africa and CO2 was well under 300ppm.

At Ossian Sarsfjellet we met Svalbard reindeer; short-legged and rotund with protuberant eyes. Two heavily-antlered stags strolled past those standing on the beach. Arctic foxes patrolled the bird cliffs, lithe and inquisitive, merciless on fallen chicks or any kittiwakes heed-less enough to squabble and tumble from the bird cliffs.

Raudfjord became for us Bear Fjord: High on a tundra shelf we watched one stretch and rub her back on a pile of rocks before going back to sleep. Then we spotted her yearling cubs *tête a tête* on a ledge above her. An hour later we spotted another bear sleeping: The ice had retreated and now was the time to sleep and conserve energy. Between bears we walked on the glacier ice, got our boots stuck in the mud and cleared a moraine of fishing nets and plastic debris.



Our long crossing of the Greenland Sea gave us a chance to attend to the internal life of the self and the ship; playing cards, reading, writing, snoozing, developing photos, having a drink, eating again (too much, again) around the convivial dining room tables. Then came the shout 'Whales ahead!' as three 25-metre fin whales lounged, blew, and dived so close to the bow that we could even see them under water.

Greenland was a geological, glacial and botanical wonderland, with rocks that pre-dated complex life-forms. The singular bulk of Teufelsschloss was a study in reds, with rock strata lit to soft perfection in the early morning light and set off by a low cloud touching its shoul-der. This was ultimately upstaged by the deeply weathered, red-glowing sandstone hills of Harefjord, foregrounded by massive ice-bergs and reflected in the fjord.

Our cameras captured the sculpted forms, textures and azure hues of icebergs. But they couldn't capture the explosive cracks and crashes as bergs disintegrated; the chill of iced air draining glacier fronts, or the sense of enclosure and tension created by towering walls of unstable ice in Rødefjord, Alpefjord, or in our final 'berg gallery' at Bjørneøer ('Bear Island') featuring the 'Triple Tower', the 'Archway' and for a grand finalé, the explosive collapse of and dramatic escape from 'Justine's Nemesis'.

And the people! We saw the ancient evidence of paleo-eskimos who lived on the very edge of the possible and even kicked a soccer ball in the rugged little community of Ittoqqortoormiit.

What a time! What a place!





# Climbing Log

by Ben Maddison

**Head Guide:** Tarn Pilkington  
**Guide:** Ben Maddison  
**Climber:** Geoff Gledhill

**Climb and camp excursion:** 12–15 August 2019  
**Location:** Bjørneøer

At 9 pm *Polar Pioneer* pulled up at Bjørneøer (Bear Islands), and Geoff, Tarn and Ben dropped into a Zodiac laden with camping and climbing gear for a three-day excursion. We sped off into the west, and made camp on a knoll that gave us beautiful views over the Bear Islands, and glimpses of the mountains and glaciers of Øfjord. The highlight of making camp that night was erecting the perimeter anti-bear fence, which kept us up until after 1am. After a deep and untroubled sleep in the profound silence, the morning dawned somewhat cloudy but windless. Breakfasting on muesli, juice, coffee and sausages set us up for our first day of exploring the complex peaks. Our first outing was up the long south-east ridge of Sulugssût, the largest of the island group. Scrambling, with a small section of roped climbing, brought us to a subsidiary summit 300 metres above water level. We ate our lunch, gazing out at the fantastic views of the iceberg field extending way across Hall Bredning to the mouth of Nordvestfjord. Descending the ridge we rejoined our Zodiac and made our way to the south-east tip of the island and ascended a slabby ridge to another appealing summit.

Returning to camp, dinner was enlivened by some nearby iceberg collapses thundering into the water, sending shock waves into our little bay for the next 30 minutes. A group of musk-ox seemingly unconcerned by our presence lowing quietly in the evening, and a visit from an Arctic hare to drink at a nearby creek set off a fabulous day.

Day two we set our sights a little more ambitiously, trying to find a more sustained rock climb. After Zodiac scoping along the south-west face of the apparently unnamed island that contains the highest peak (645m) in the Bjørneøer, we selected a likely looking area, and proceeded to ascend a series of slabs and cracks, sharing the task of leading amongst ourselves. The climb proved to be excellent – good rock and of a moderate standard, and we called it Musk Ox, a climb of 300m. Our only moments of concern came from the tsunami that was created by an iceberg collapse offshore from where we had moored our Zodiac. It tipped a bit of water into the boat, moved it around a bit on its mooring lines. Our climb ended on the broad, slabby ridge of the island. We walked further up the ridge, until our way was blocked by two large rock peaks. We climbed the first, which proved to be a very exciting ascent up a sharp-edged flake, looking straight down 500 metres to the sea. This was a beautiful way to end the day, and we cruised back to camp in the warm sun feeling very happy and contented. As we packed up to rejoin *Polar Pioneer* next morning we felt sad to be leaving but very lucky to have spent time in this sublime and peaceful place.





# Kayaking Log

by Daniel Stavert

**Kayaking Guide:** Daniel Stavert

**Kayakers:**

Freda Ferne	Max Morley	Steve Reid	Donald Smith
Matt Horspool	Rita Morley	Fran Renney	

**DAY 2 (AM): Kongsbreen** – Distance: 7.57 kms

Arriving in Kongsbreen in the early morning, a thick fog blanketed the bay but soon small patches of blue sky peeked through. By the time the kayak team had launched away from the ship there were only shreds of mist remaining and the Arctic sun was pouring its light down onto the shimmering ice. Welcome to tropical Svalbard! The kayakers set off from the ship heading towards the deceptively distant face of the glacier. Pausing to revel in the sunshine and listen to the crackle of the ice, the team was visited by an inquisitive bearded seal. Its huge head and whiskered chin cut a substantial wake through the mirrored water.

The team continued through the increasing brash ice to a close distance from the glacier. Listening to it creak and rumble the team was rewarded by a small calving, the wave clearly discernible as the ice shifted and rolled.

The hours soon fell by and lunch beckoned. The team turned their nose to home after an astonishing first paddle in the Arctic.

**DAY 2 (PM): Ossian Sarsfjellet** – Distance: 6.1 kms

A small crew of dedicated paddlers set out from *Polar Pioneer*. The morning calm had somehow increased and the team moved through mirrored waters in towards the shore. On high alert for wildlife the kayakers moved quietly along the shore line before Rita saw the first reindeer, followed soon after by two more. These true Svalbard locals were unperturbed by the kayakers’ presence, continuing to graze in amongst the rocks of the beach. Continuing along the coast, Robyn radioed in that they had seen an Arctic fox, and sure enough the kayakers were treated to the sight of a fox moving stealthily amongst the grass and gullies beneath the cliffs. Looking constantly for a way up into the kittiwake colony above, or for fallen eggs and birds, the fox moved from rock to rock along the cliffside.

With the sun peeking through the clouds and casting its glow, the kayak team slowly made its way back to the ship. The golden light and gently rocking icebergs offered a serene ending to the day’s adventure.

**DAY 3 (AM): Raudfjorden** – Distance: 6.75 kms

With continuing calm waters the kayakers set out again, this time on the hunt for polar bear. Soon the team was able to park the noses of their kayaks up on the sand and watch one bear up on the hill and another pair a little higher. Accustoming the eye to look for white bears in a landscape of white snow patches was at first challenging. But soon the team could spot the bear without binoculars, and then focus in with cameras and binoculars for a close up experience.

Leaving the bears to enjoy their sleep, the kayakers relaunched themselves and set out east along the shoreline. The silky calm waters radiated a deep glacial green and the glaciers themselves seemed to glow with the blue of old ice. Poised above the ocean the misty mountains loomed; a truly spectacular place for a mornings paddle. A quick landing at a glacier capped off the morning’s experience, with the chance to stand on the glacier itself another highlight to add to a growing list. A brisk paddle in slightly choppy seas and the team was soon aboard *Polar Pioneer* with another great paddle complete in a wonderful setting.

**DAY 6 (AM): Eskimonaes** – Distance: 8.93 kms

Slipping into the calm waters of Eskimonaes, the kayak team was finally paddling in Greenland. Two days of sea time meant everyone was keen to stretch their arms and explore, and quickly covered ground in towards Clavering Island. The twisted folds of rock and the layers of stone in patterns and formations were fascinating to paddle past, with flowering polar willow and shore bird life, all helping to elevate the already serene conditions.

Pausing beyond Clavering Island, the kayaks grouped together to take a moment and appreciate the distance from home, and the wonder of paddling in Greenland. Soon however it was time to turn towards home, with a short stop to investigate the Sirius Patrol hut ashore, and to cross the shimmering waters towards the smell of lunch aboard *Polar Pioneer*.

**DAY 6 (PM): Dødemansbugten** – Distance: 5.75 kms

Greenland continued to smile on the kayakers with another afternoon of calm weather. The glowing green water and the clear crisp air greeted the kayakers as they paddled out into Dødemansbugten. They pulled up onto the beach and took a walk past a small hut. The team spent half an hour admiring the dozens of different species of wildflowers, each tinier and more colourful than the last. That such a barren landscape could be host to such a diversity and abundance of life in miniature is a true marvel.

Re-entering the boats, the kayak family headed further along the shore before the short paddle time came to and end. The paddle home to the ship was a joy in itself in mirrored conditions along with the welcome sight of the ship’s rope ladder and the promise of a restful evening ahead.

**DAY 7 (AM): Blomsterbugten** – Distance: 12.75 kms

The sheer walls of the Kejser Frans Josef Fjord greeted the paddlers as they set out this morning, the broad strips of rock strata rising layer upon layer up into the ceiling of cloud that hung low in the mountains. In this atmospheric setting the team pushed out heading into the south west. A brief radio call from Gary and a reassuring comment from the Captain that he would ‘try and pick you up’ and the paddlers were away. Around every corner a new feature of beauty waited to greet them: a waterfall pouring down the scree slopes and into the dark depths of the sea, a coffee break on perfect flat stones amongst the ice, and the grandeur of an epic landscape. Perhaps the highlight of the paddle for many was the geology itself. The layers and twists of rock, the eons of time written into the land itself, both a testament to the age and many changes of this landscape.

As the wind picked up and the morning drew on the team started looking for the ship and soon it came motoring around the corner. A quick chat with Gary and a pick-up was organised. The paddlers headed out to meet the ship and climb up the ladder to a well deserved lunch

# Kayaking Log

(continued)

**DAY 7 (PM): Nanortalik** – Distance: 8.75 kms

After a big morning of paddling some in the group elected to spend the afternoon ashore, the remaining two set out for a good paddle of the shoreline and ice of Nanortalik.

Following the edge of the sea the group marvelled at the bleak austerity of the landscape, its seeming paucity of wildlife and yet its improbable abundance of vegetation. Wildflowers and mosses grew in every possible crevice and ledge of cliff line.

With a large ice berg as a target the kilometres fell away quickly, and soon the two paddlers reached their turnaround point. The brash ice and shifting bergs provided a welcome chance to rest whilst photos were taken, before turning the kayaks’ noses for home. The ship stayed stubbornly small in the landscape until finally it loomed above and a dynamic re-entry into the Zodiac brought the team home.

**DAY 8 (PM): Alpesfjord** – Distance: 10.75 kms

Leaving the ship behind in Alpefjord, the kayakers felt a chilly morning for the first time this trip. The cold air of the glacier blew down at a gentle five to ten knots as a brisk reminder of the cold temperature high above in the mountains and on the ice cap of Greenland itself. The paddlers headed straight in towards the massive lateral moraines, skirting around brash ice before moving along the glacier face, stopping every now and again to admire the deep blues and listen to the cracks and pops of the very active glacier face.



With the sharp mountains in full view in the clear sky, and the recent snow dusting their peaks, it was a beautiful morning indeed. A brisk paddle across the fjord and the team made landfall on a small unnamed island out in the middle of the fjord. With a celebratory toast of hot chocolate and Baileys to our birthday celebrant Max, it was decided to name the island Birthday Island. Back in the water the rising breeze and strong current whisked the paddlers back towards the ship, arriving just as the Zodiacs came zoomed back home from their own adventures.

**DAY 8 (PM): Gateau Point (Skipperdalen)** – Distance: 3.5 kms

A team of two set out from the ship to explore Gateau Point. A brisk paddle across small whitecapped waves took the team into the shelter of the point. Finding a small beach, the kayakers landed and explored the rich colours and amazing geological strata formations of the area. The many folds and ripples in the rock, in stripes and swirls, all hinted at a history both complex and deep.

Re-entering the kayaks, the small group pushed along the shoreline trying to find shelter from the ever-rising wind. Soon however it became clear that it wasn’t going to get easier and the team saw discretion as the better part of valour and called it a day. Turning into the wind and drifting quickly back to the beach. Chris was there in a Zodiac and kindly gave the team a run home to the security and warmth of *Polar Pioneer*.





# Kayaking Log (continued)

## DAY 9 (AM): Nordvest Fjord – Distance: 6.5 kms

The Kayak family set out this morning into a shimmering dreamscape. Icebergs beyond scale drifted ponderously in unseen currents whilst the mountains reared high above. The team moved quietly through this temporary architecture of ice. The creaks and crackles were portents of sudden explosions as tons of ice came crashing down into the water. Across the huge fjord these startling retorts would echo amongst the other bergs and up into the stony peaks. The paddlers entered into the quiet spirit of the morning, talking occasionally and stopping for photographs. The startling blues and shining whites caused the team to pause as often as they progressed.

A particular feature, a huge archway, drew the team towards it. And, with prompting from Justine in a Zodiac, the team formed up for a family portrait in front of it. Only a few minutes later as they were admiring another berg, a crack and rumble was heard. Over their shoulder the kayakers could see the arch collapse, the remains rocking in the swell.

With cold temperatures and the time flying past, the team set course for the ship, gratefully watching Roger’s Zodiac come flying in to allow them back on board.

## DAY 9 (PM): Eskimobugt – Distance: 3.5 kms

With the day warming up and the sun continuing to shine, the team headed out from the ship to explore Eskimobugt. First, they paddled the shoreline, marvelling at its convoluted geology, paddling into small channels and under overhangs of twisted quartzite and ancient uplifted seabed. On arriving at the beach, the kayakers left behind their boats and headed up the hill past the remains of inuit winter homes. Their heavy stone walls and long sunken tunnel entrances an insight into a people who lived and kayaked in these remarkable fjords in the not very distant past. Hiking up past the ruins, a waterfall thundered down from unseen glaciers and the kayakers took some time to simply sit and listen to the river, watch the sun on the sea and be present in the landscape.

A short walk back to the beach and to the kayaks led to a blissful paddle home in sunshine and glassy waters.

## DAY 10 (AM): Harefjord – Distance: 8.5 kms

A gorgeous still morning greeted a small group of kayakers today. The golden sunshine pushed gently down onto the wide bay of Harefjord. Setting out from the ship the two paddlers soon found that conditions were borderline tropical and a short landing was in order to shed a few layers of warmth before continuing on.

Returning to the kayaks the pair set out to enjoy the bay and explore. The serene calm was interrupted frequently by canon loud retorts of cracking icebergs and the wash of swell that followed. Whilst returning to the ship Daniel decided to investigate the stability of a small flat berg, sliding his kayak up on top. A loud crack was heard and the small iceberg split in two, rising up out of the water before it capsized, startling both kayakers who moved away rapidly. An hilarious and pulse-pattering ending to a beautiful morning.

## DAY 11 (PM): Røde Ø – Distance: 10.5 kms

The paddlers set out in close formation towards the red island, the afternoon sunshine making the island glow in the light. To the north end of the island a colossal wall of ice waited, bergs towering over the island with seemingly no path through. Paused on the edge of the pack the team gathered together and made a plan for engaging in this dynamic landscape. Yet no sooner had they turned to enter into the chilly labyrinth of ice than a loud crack was

heard, echoing through the landscape. A hundred metres of iceberg sheared and dropped off into the water, the wave pooling out away from the berg, causing others to bob and water to crash against the white walls around. The team looked at Daniel with a ‘are we really going in there?’ look. Undeterred, the kayakers moved into the pack. The ice, like frozen sculptures towered above. Every crack and boom could be heard as icebergs rolled and dropped their weight into the glassy seas. The paddlers kept a tight line as they searched through a safe path through this ever-changing landscape of ice and noise.

After an hour of tense but beautiful paddling the team finally found a channel out and a small beach to land on. A short hike to a ridge for a drink of hot chocolate and gaze down at the glowing blue and white landscape. A peaceful reprieve from the drama of the last few hours

## DAY 12 (PM): Bjørneøer – Distance: 13.5 kms

The whole team came out for the last paddle of the trip. Entering into the archipelago of islands that is Bjørneøer, the group found glassy calm conditions. The reflections of icebergs and mountains above gave us a sublime way to finish this incredible paddling trip. The clear waters and yet more giant icebergs, along with the quiet air, provided a moment to reflect on the last few days and appreciate the privilege of paddling with such good people in such an awesome place as Greenland.

Total paddle outings: 14

Total distance paddled: 113.53 km

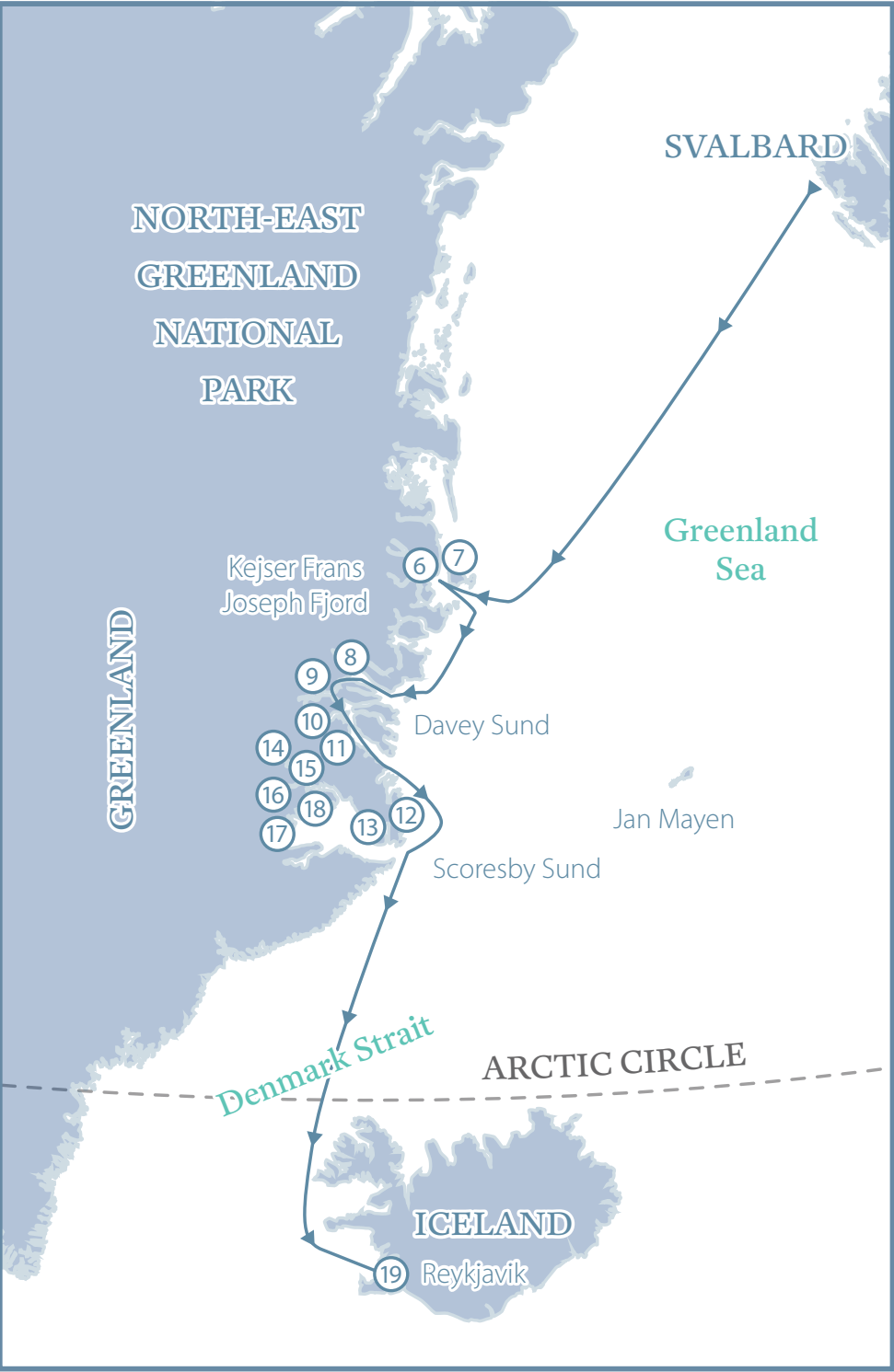
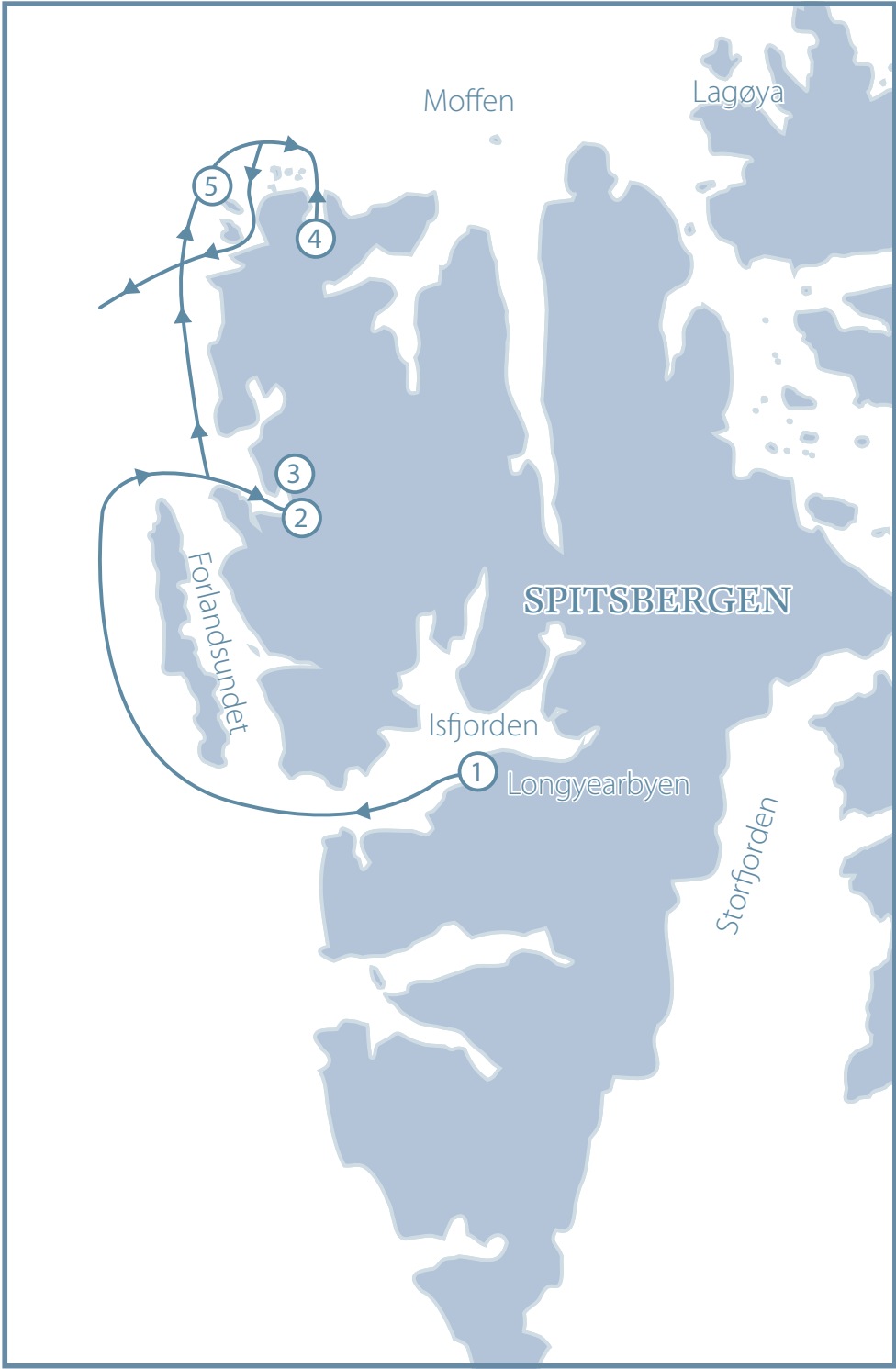




# Jewels of the Arctic

4 – 17 August 2019 | Distance Travelled: 2,319 nautical miles (4,290 kms)

Most northerly point: Svalbard 79°55.6' North



## Destinations

- |                       |                    |                      |               |
|-----------------------|--------------------|----------------------|---------------|
| 01 Longyearbyen       | 06 Eskimonaes      | 11 Gateau Point      | 16 Harefjord  |
| 02 Kongsbreen         | 07 Dødemandsbugten | 12 Ittoqqoortoormiit | 17 Røde Ø     |
| 03 Ossian Sarsfjellet | 08 Blomsterbugten  | 13 Hall Bredning     | 18 Bjørne Øer |
| 04 Raudfjorden        | 09 Nanortalik      | 14 Nordvestfjord     | 19 Reykjavik  |
| 05 Smeerenburg        | 10 Alpefjord       | 15 Eskimobugt        |               |







Blueberry (green berries)



Yellow Mountain Saxifrage



Puffball



Mountain Avens



Mountain Avens in seed



Arctic Mouse-ear Chickweed



Moss Campion



Mountain Avens seed head



Dwarf Birch



Arctic Bell Heather







Bird species log

BIRD SPECIES	AUGUST																
	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
Northern Fulmar	X	X	X	X	X	X			X			X	X	X			
Great shearwater													X				
Sooty shearwater													X				
Northern Gannet													X				
Common Guillemot													X				
Brunnich's Guillemot	X	X	X	X								X	X				
Black Guillemot	X	X	X									X					
Razorbill (ib)													X				
Little Auk	X		X	X	X				X			X					
Atlantic Puffin	X		X	X									X				
Arctic Tern	X	X	X			X	X		X		X	X	X	X			
Kittiwake	X	X	X	X	X	X			X			X	X				
Glaucous Gull	X	X	X			X	X	X	X	X	X	X					
Great Black-backed Gull														X			
Arctic Skua		X	X			X	X		X								
Great Skua		X	X														
Long-tailed Skua (ib)	X			X		X	X		X								
Pomarine Skua (ib)																	
Pink-footed Goose		X	X				X						X				
Barnacle Goose						X	X	X			X	X					
Brent Goose							X										
Common Eider			X			X	X	X		X	X	X					
Long-tailed Duck								X									
Red-throated Diver			X				X	X			X						
Purple Sandpiper			X				X										
Ringed Plover						X	X					X					
Turnstone						X	X				X						
Sanderling						X	X										
Snow Bunting		X				X	X		X		X	X					
Wheatear (ib)						X	X		X	X	X	X					
Arctic Red Poll											X						
Meadow Pipit									X								
Raven						X			X		X	X					



Arctic Tern



Snow Bunting



Eider



Ringed Plover



Baird's Sandpiper

Mammal species log

MAMMAL SPECIES	AUGUST																
	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
Arctic Fox			X														
Arctic Hare							X										
Reindeer		X	X														
Musk Ox						X	X	X		X	X	X					
Polar Bear			X			X											
Ringed Seal							X		X	X	X	X					
Bearded Seal							X	X				X					
Harp Seal				X													
Harbour Seal			X														
Walrus			X														
UNID Seal												X					
Fin Whale				X													
Blue Whale		X															
Humpback Whales													X				
White Beaked Dolphin			X														
UNID Cetacean			X														



Arctic Fox



Bearded Seal



Walrus



Musk Ox



Svalbard Reindeer





Expeditioners

Sue Bartlett	Lindsay Doig	Janice Hinlopen	Diane Lovett	Rita Morley	Steve Reid	Donald Smith
Galvin Bartlett	Freda Ferne	Matt Horspool	Marion Lumb	Max Morley	Fran Renney	Tony Summers
Martha Behan	Sue Fox	Ev Innes	Gail Masters	Peter Morris	Tracey Rodgers	Robert Switzer
Janelle Bond	Louise Gilfedder	Geoff Innes	Gavin Miller	Margaret Morris	Les Rowell	Heather Wheat
Airin Chairuddin	Deryn Gledhill	Martin Knuist	Grant Miller	Michelle Moss	Sandy Rowell	Robin Woodruff
Stephen Cox	Geoff Gledhill	Julia Lewis	Jeff Miller	Jen Parker	Anne Royters	
Wendy Cox	Carina Harding	Sharon Littlejohns	Ellie Miller	Andrew Purdam	Tony Royters	
Madge Davis	Paul Henry	Shirley Lord	Richard Mohr	Helen Purdam	Peter Russell	



Expedition Team   Polar Pioneer Crew

Expedition Leader:	Gary Miller	Master	Aleksandr 'Sasha' Evgenov	Motorman	Vladimir Zhukov	Galvin Bartlett	Peter Morris
Deputy Expedition Leader:	Robyn Mundy	Chief Mate	Vladimir Zimin	Head Stewardess	Svetlana Fedorova	Sue Bartlett	Robyn Mundy
Senior Naturalist	Roger Kirkwood	Second Mate	Evgenii Aleksandrov	Stewardess	Aleksandra 'Sasha' Belusova	Janelle Bond	Tarn Pilkington
Naturalist	Chris Todd	Third Mate	Aleksandr Kiselev		Uliana Koval	Stephen Cox	Sophie Plowman
Kayak Guide	Daniel Stavert	Radio Operator	Ilia Liamzin	Stewardess	Ekaterina Rumiantseva	Wendy Cox	Andrew Purdam
Head Climbing Guide	Tarn Pilkington	Chief Engineer	Evgeny Petukhov	Stewardess	Natalia Trofimova	Lindsay Doig	Helen Purdam
Climbing Guide	Ben Maddison	Second Engineer	Pavel Voronov	Stewardess	Elena Liukshina	Janice Hinlopen	Steve Reid
Doctor:	Sophie Plowman	Third Engineer	Aleksei Moiseev	Stewardess	Denis Zhenchevski	Matt Horspool	Fran Renney
Chef:	Allan Estoque	Fourth Engineer	Yurii Horobets	Russian Crew Chef		Ev Innes	Tracey Rodgers
Second Chef:	Bert Cruz	Electrical Engineer	Valentin Lomachenko			Sharon Littlejohns	Les and Sandy Rowell
Hotel Manager:	Justine Bornholdt	Boatswain	Aleksandr Agafonov			Ben Maddison	Peter Russell
		Able Seaman	Rashit Ganiev			Ellie Miller	Daniel Stavert
		Able Seaman	Igor Popp			Gary Miller	Robert Switzer
		Able Seaman	Vasilii Berlizev			Gavin Miller	Chris Todd
						Grant Miller	





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