



adventure  
associates

# Svalbard Explorer & Wildlife Adventure

A BOUTIQUE VOYAGE TO THE HIGH ARCTIC ON M/S SJØVEIEN

## EXPEDITION MANUAL



# Welcome

We are thrilled that you will be joining us on this wondrous expedition to the High Arctic, at the top of the world. Svalbard is one of the world's greatest polar bear denning areas. During a few precious months of the Arctic summer it is teeming with life.

Millions of migrating birds arrive to feed and breed, walrus haul out on remote beaches to rest between foraging trips and the polar bears roam the coastline and sea ice in search of prey. Over the last decade we have seen a noticeable increase in the whale population.

Armed with our "secret weapon", the charming little ship *M/S Sjøveien*, and twenty four hours of daylight, we can go to places and see things that bigger ships will never do! Her compact size, shallow draft and with only twelve guests on board, gives us the advantage of great flexibility. The perfect recipe for an adventure.

We have been organising voyages to the polar regions since 1990 and have long dreamed of having a small vessel like *M/S Sjøveien* at our fingertips. This is a dream come true!

Our voyage will focus on the spectacular fjords and the islands of Svalbard, which offer abundant bird life and the chance to encounter walrus, reindeer, ringed and bearded seals and with luck, the mighty polar bear. Ice conditions permitting, our aim is to reach the Hinlopen Strait and Nordaustlandet, the second largest island in the group – covered in parts by vast ice sheets.

## WHAT TO EXPECT ON THE EXPEDITION

It goes without saying that polar travel is more unpredictable than a common cruise, so we encourage you to board the ship with a sense of adventure. Embracing the unexpected is part of the legacy, and excitement, of the expedition.

## PROPOSED ITINERARY

Our primary aim is to spend as much time as possible of each and every day in the Zodiacs or onshore, in a safe and environmentally sound way. While sailing, the Captain and Expedition Leader will constantly monitor weather and ice conditions to create as many opportunities as possible for you to enjoy landings and Zodiac cruises at the places we visit.

It is worth keeping in mind that wildlife sightings are not guaranteed, especially for the elusive polar bear. However, our guides' many years of experience certainly makes a difference and we have never had a voyage where we have not seen a bear!

Our secondary aim is to teach you, and share with you, the secret treasures of the high Arctic. Using formal presentations and informal chats by expedition staff we may cover a range of topics such as ornithology, marine biology, glaciology, geography, geology, history and the environment.



## FAR EAST

### PROPOSED ITINERARY *continued*

Regular, informal briefings and updates throughout the voyage allow your Expedition Leader and team to provide information about upcoming landings and plans for the foreseeable future. During evening recap sessions you are encouraged to share your experience and wildlife sightings or ask questions about the places you have just visited.

We are sure you will enjoy the enthusiasm that our team have for expedition travel! It is, after all, our life.

### Ex Longyearbyen: 11 days / 10 nights on board *M/S Sjøveien*

When it comes time to board our vessel, *M/S Sjøveien* will be docked at Bykaia (the town pier) in Longyearbyen, located between the town centre and the airport. If we have not organised transport for you, you can certainly make your own way to the pier. It is walking distance from the town centre, a couple of kilometres along a flat road. With a heavy pack or case it is advisable to go by taxi.

Please don't come to board earlier than 16.00 because the ship will be in the process of being cleaned, serviced,

refuelled and readied for our departure.

We strongly advise you to arrive in Longyearbyen the day prior to the voyage start in case of flight delay or cancellation. If you plan arriving on the day of departure and the flight is cancelled or delayed more than a few hours we will not be able to hold the ship and wait for a possible arrival. Any way it is nice to have a day in Longyearbyen to acclimatise, relax, do some sightseeing or last minute shopping.

Longyearbyen is the administrative capital of the Svalbard archipelago of which Spitsbergen is the largest island. Please take the opportunity to stroll around this former mining town before embarkation. The Parish Church, Airship Museum and Svalbard Polar Museum are well worth a visit. Take a walk out to the area around the Villmarkssenter dog yard. Here we often see many nesting eider ducks, geese and if lucky an Ivory gull.

The voyage finishes at approximately 09.00 in Longyearbyen on day 11.

If you plan to fly out of Longyearbyen that day we recommend you book a flight for the afternoon.

### WHAT'S INCLUDED

- Voyage aboard *M/S Sjøveien* as indicated in the itinerary
- All meals throughout the voyage aboard the ship including snacks, coffee and tea
- All shore excursions and activities throughout the voyage
- Informative lectures and leadership by experienced staff
- All miscellaneous service taxes and port charges
- Pre-departure material

### WHAT'S NOT INCLUDED

- Any airfares, whether on scheduled or charter flights
- Pre and post land arrangements
- Transfers to/from the vessel/airport
- Excess baggage charges
- Passport and visa expenses
- Government arrival and departure taxes; baggage; cancellation and travel insurance



## ITINERARY

The itinerary below is just a sample of what we may encounter once we cast-off at Longyearbyen. The real joy of being on *M/S Sjøveien* is the prospect of unforeseen wildlife encounters or of chance visits to rarely seen corners of the archipelago.

### Day 1

#### Longyearbyen

A day of leisure in Longyearbyen then at 16.00 we will all meet at the pier and board the ship. In the early evening we will head out into the magnificent Isfjorden, probably escorted by northern fulmar and Atlantic puffins. During the night we sail northwards through Forlandsundet, a narrow body of water between Prins Karls Forland and Spitsbergen.

### Days 2 to 9

#### Northwest Spitsbergen

In the morning we will make our first excursion in the north west corner of Spitsbergen. We will navigate the narrows of Fuglefjorden and explore the labyrinth of tiny islands set amongst towering peaks and glaciers. We can expect to see little auks and Atlantic puffins flying around the vessel as we cruise these tranquil waters. Later we sail to Raudfjord on the North

coast of West Spitsbergen, a beautiful fjord dominated by spectacular glaciers and favoured by ringed and bearded seals. The cliffs and shoreline of Raudfjord also support thriving seabird colonies and surprisingly rich vegetation flourishes in some sheltered places.

#### Woodfjorden – Liefdefjorden

Over night we sail into the photogenic Woodfjorden and towards the mouth of Liefdefjorden to explore the islands of Andøyane. Many common eiders, pink-footed and barnacle geese nest here along with the rare king eider. We hope to sail into Liefdefjorden, cruising along the 5km-long face of the impressive Monaco Glacier. The waters of the glacier front are a favourite feeding spot for thousands of kittiwakes, northern fulmar, ivory gulls, Arctic terns and on previous voyages we have seen polar bears in this area.

#### Alkefjellet – Lomfjord

Today we hope to be in the Hinlopen Strait, keeping an ever-watchful eye out for whales, seals, walrus and polar bears. We plan to cruise the towering dolerite bird cliffs of Alkefjellet, home to hundreds of thousands of Brünnich's guillemots and a place that provides a free meal of eggs



to cunning Arctic fox families! On the western side of Hinlopen Strait, we will attempt a landing in Lomfjorden. This is a good place to stretch the legs and explore the beautiful surroundings. We might see reindeer, Arctic fox and ptarmigan and walk across an exquisite tundra garden of many floral species, including varieties of saxifrages, Arctic bell-heather, moss campions and hairy lousewort.

### Sjuøyane – Phippsøya

In the morning we hope to sail via Lågøya, a known haul-out place for walrus. Encountering a walrus haul-out is a moment you won't forget! These lumbering giants of the Arctic create a chaotic scene, as each walrus vies for the best spot on the beach. Later we will reach our northernmost point at Phippsøya, in the Seven Islands (Sjuøyane) north of Nordaustlandet. Here we will be above 81 degrees north, just 540 miles from the geographic North Pole. Polar bears inhabit this region, along with the walrus. We love to cruise through the pack-ice for several hours looking for polar bear and other wildlife.

### Nordaustlandet

Depending on the ice situation, we will try to head south-east to explore one of the deep fjords at the top of Nordaustlandet. It is the second largest island in the

Svalbard archipelago and is covered by the world's third largest ice sheet. Around the fringe of the ice cap there is a remarkable polar desert. This freshly eroded landscape, carved by severe frost and glacial activity over several ice ages is a geologists paradise, rich in fossils.

### Pack-Ice cruising

Retracing our route westwards, we plan to sail through and along the pack-ice edge, always on the watch for the mighty polar bear, seals and other wildlife such as the rare Greenland (bowhead) whale.

### Day 10

#### West Spitsbergen

We sail into St. Johns Fjord, or head further south to the mouth of Isfjorden and land at Alkhorneret. Here there are seabirds nesting on cliffs with Arctic foxes searching the base for fallen eggs and chicks. Meanwhile we hope to see Svalbard reindeer grazing on the relatively luxuriant vegetation.

### Day 11

#### Longyearbyen

We arrive in Longyearbyen and disembark in the morning to join our flight south to Oslo and thence home or perhaps spend a little more time around Longyearbyen.



## SHIP DETAILS

### *M/S SJØVEIEN* Expedition Vessel

The *M/S Sjøveien* ("The Seaway" in Norwegian) is a classic vessel, built in Bergen in 1964 for the Norwegian government. She is a former training ship used to train mariners. After being a hotel ship for the last few years, she is now being refurbished into a classic and exclusive passenger ship to sail in Svalbard in the summer of 2017. She is a true beauty with wooden decks and vintage details. There is a lot of deck space on the main deck and there is also an excellent area on top of the bridge, from where you have wonderful views of the magical Svalbard scenery.

The *M/S Sjøveien* carries a maximum of 12 passengers and is a marvelous piece of maritime history. With a party of 12 on board it is like travelling on a charming private yacht, which is an entirely different experience and perspective to that of a larger, more conventional vessel.

Our voyage is primarily designed to offer passengers a quality exploratory wildlife program, trying to spend as much time ashore as possible. *M/S Sjøveien* carries 2 Zodiacs, each Zodiac can comfortably carry 6-10 passengers and 12 passengers on short runs from ship to shore.

The vessel offers eight comfortable outside cabins, all with private facilities. On the lower deck there are four twin cabins with portholes. On the main deck there are two larger twin cabins with windows and one large suite with double bed and windows. The eighth cabin is located on the upper deck and is a large suite with a double bed and windows.

In the dining area on the main deck you are served breakfast, lunch and dinner. Here is also a lounge area where you can relax with a cup of tea or coffee and listen to interesting talks by the guides. There is an international crew on board who speaks English and there is an open bridge policy.



Ship's Bridge

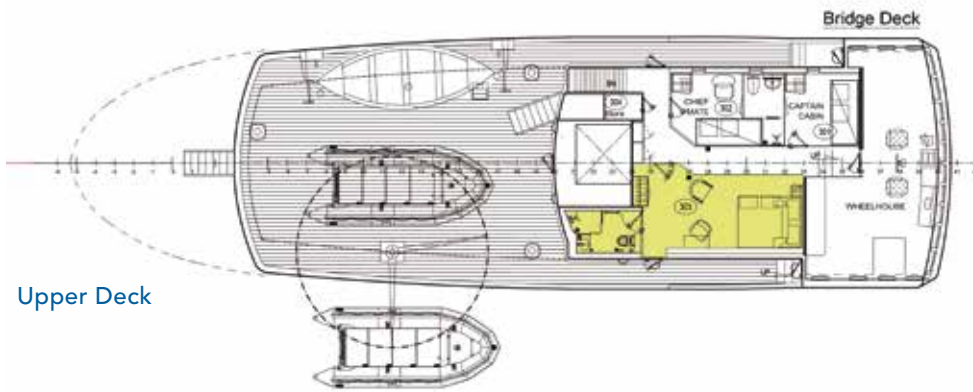
### *M/S SJØVEIEN*

FLAG: Panama  
BUILT: 1964  
PLACE BUILT: Norway  
REFURBISHED: 2016-2017  
ICE CLASS: DNV, ICE-C

LENGTH OVERALL: 40.66 m  
BEAM: 8 m  
MAXIMUM DRAFT: 3.4 m  
CRUISING SPEED OPEN WATER: 11 knots



M/S SJØVEIEN DECK PLAN



Upper Deck

- DOUBLE SUITE: double bed with windows. Upper and Main decks
- TWIN CABIN PLUS: two twin beds with windows. Main deck
- TWIN CABIN: two twin beds with portholes. Lower deck
- SALOON & LOUNGE: Main deck



Main Deck



Lower Deck



Twin Cabin (lower deck)



Saloon & Lounge (main deck)



Twin Plus Cabin (main deck)



A Breakfast Banquet

## GENERAL INFORMATION AND FACILITIES ON BOARD

**BRIDGE:** You are welcome to visit the bridge at any time, unless notified otherwise. This is an important working area and we ask you to respect the Captain's and Navigator's instructions. They may ask us to leave during times of difficult navigation.

The ship is certified to the highest safety standards and is equipped with all survival gear such as life jackets and survival suits for all on board.

**CABINS:** There are eight outside cabins, all with private facilities. All cabins are equipped with heaters, hooks, wardrobes and electrical outlets. In the bathrooms you'll find shower, mirror, hair dryer, towel hangers, hooks and shower curtain. There is ample storage space in each cabin.

Cabins will be cleaned and straightened daily and sheets will be changed mid voyage.

There is an "open-door" policy on board the ship and no cabin keys will be distributed.

**DINING ROOM/SALOON:** The dining area on the main deck is where you are served breakfast, lunch and dinner. The two tables are spacious enough to accommodate all passengers and expedition staff, all in one single seating and the windows offer magnificent views.

Breakfast & lunch are buffet style and dinner is a la carte.

The crew will do their utmost to cater for special requirements in terms of allergies and vegetarian meals. Please specify your requirements in the personal details form and ask us if you have any questions.

The water on board is drinkable and of high quality. All fresh water is bunkered in port and stored in large buffer tanks on board.

Briefings, lectures and talks will be conducted in the dining room / Saloon.

**ELECTRICAL:** Electrical power is 220V and requires a 2-pin, round, European-style plug.

**LAUNDRY:** There is no laundry service onboard – Except in case of an emergency where items may have been spoiled due to an unforeseen circumstance.

**MEDICAL:** There is no doctor on board but the crew and guides have first aid and medical training. The ship has basic medical supplies. During this voyage we will always be within range of a helicopter from Longyearbyen where there is a hospital.

People dependent upon regular medication should ensure they bring enough for the duration of the voyage.

For emergencies the ship can be contacted on Iridium Satellite Phone.

**PAYMENTS:** On board purchases will be added to your account and settled on the last day. Payments can be paid with Master or Visa Card, Euro or Norwegian Kroner.

**SMOKING:** There is no smoking inside the ship or on landings/excursions. Smoking will be allowed only in a designated area outside on the open deck. Please do not throw cigarette-butts in the water.

**TIPPING/GRATUITIES:** The ship's crew work very hard for us, there is no expectation for gratuities, However they would be very grateful.



## THE NATURE OF SVALBARD

### GEOLOGY

Anyone who is interested in geology will find Svalbard very exciting. The archipelago was formed on the northeast coast of Greenland a long, long time ago, and has since moved via continental drift to the other side of the equator where it turned and headed north. Just wait for another 50 million years and Svalbard will probably be at the North Pole!

For much of its geological history the islands of Svalbard were under sea level, and the sedimentation has been going on almost continuously. Parts of western Svalbard folded around the same time as the Norwegian-Swedish mountains about 400 million years ago. The archipelago has been exposed to nearly all geological processes in the earth's crust and there are also many fault lines in Svalbard. A great number of different rock types are represented as well as a variety of fossils from different time periods, such as plant remains, shells, corals and early fish.

### GLACIERS AND PACK ICE

Svalbard is still in the ice age. Glaciers cover 60% of the land and the ice can be up to 600 metres thick. There are more than 2100 large and small glaciers in Svalbard. Some of the most well known are mighty glaciers and include Monacobreen, Lilliehöökreen, Bråsvellbreen and Austfonna. Austfonna on Nordaustlandet in the northeast part of the archipelago is the largest, with an ice cap that is the third largest in the world. Its ice front reaching into the sea is 130 km long.

During winter the sea ice spreads across the Polar Basin,

and eastern Svalbard becomes part of the ice cover.

The sea west of Spitsbergen remains largely ice-free under the influence of the Gulf Stream, but all the smaller fjords are covered by solid ice. The northernmost parts of the archipelago (Sjuøyane) and eastern parts (Storøya and Kvitøya/White Island) are usually only accessible with an expedition ship in the latter part of summer. In recent decades, the summer ice has decreased significantly in the Polar Basin.

### ECOLOGY

The close links between land and marine ecology are very obvious on Svalbard. Svalbard's ecology is partly determined by its climate, the bright summers and the dark winters. The ice plays a dominant role, and the land is young in the sense that it was completely covered by ice not so long ago. The sparse vegetation has to cope with very limited access to essential nutrients, and the marine life – in one of the world's most productive seas – is predominant.

Seabirds dominate, but they play a very important role in the land ecology, as they bring a lot of nutrients from the sea onto land. Under the bird cliffs is where you find Svalbard's richest flower meadows, almost overflowing with guano.

Glacial melt water provides the ocean with necessary minerals for alga and plankton. Ocean food chains begin with single-celled plants, phytoplankton and ice algae, which feed zooplankton like copepods and other crustaceans. Some birds – as well as the minke whales –

PHOTO HENRIK LØVENDAHL



feed on these zooplankton, other birds feed on the fish that have crustaceans as their food source. Fish, in turn, is the main food for many species of seals, even if molluscs are also part of their diet. The polar bear is at the top of the food chain, and seal is the bear's favourite food.

## SEASONS IN SVALBARD

Simply put, you can divide the year in Svalbard into two parts: the dark and the light season. In mid-February the first rays of the sun appear over the mountain peaks, and the midnight sun period in Longyearbyen is between 20 April and 22 August. The daylight completely disappears again in early November. The number of snowmobiles that are parked everywhere in Longyearbyen testify that the bare ground of the summer is only a brief interruption in an otherwise long winter.

## CLIMATE

Svalbard is only some 1000 kilometres from the North Pole, but in spite of its' northerly location the climate is milder here than in the corresponding northern regions of Russia, Canada and Greenland. The average temperature is +6°C in summer and -14°C in winter, but a record low of -46°C has been measured in Longyearbyen. The Svalbard inland is considered an Arctic desert and the average rainfall is low, but varies between different areas.

The ice plays a central role in the Arctic ecosystem, which is both unique and vulnerable. In many ways, the mammals are Svalbard's very soul. Half of the 22 species of mammals that live on land and ice in the sea around Svalbard are whales. Svalbard reindeer and Arctic fox are the only mammals that live entirely on land.

## SVALBARD'S MAMMALS

### POLAR BEAR (*Ursus maritimus*)

The King of the Arctic is probably the animal most of us associate with Svalbard – and also the one most of us hope to see. The polar bear is constantly on the move along the Arctic coasts and on the ice, where seals are its favourite meal.

The polar bear is considered the world's largest terrestrial predator; an adult male in Svalbard can weigh up to 800 kg. The record in Canada is 1030 kg! Females are smaller, and weigh about 350 kg. Under its white fur the skin of the polar bear is black, just like the skin of the brown bear.

The polar bear lives in solitude, except during the few weeks of the mating season in spring, and the period of up to two and a half years when the females take care of her cubs. The female usually gives birth to two cubs in December, and remains in her snow cave until the end of March when she will have lost some 100 kg in weight during a fast of seven months. She does not hibernate, but the metabolism is lowered. When the cubs are rejected, she is ready to mate again.

The male polar bear remains active on the ice all



winter, and only buries himself under the snow during heavy snowstorms. Biting winter cold and long periods of starvation are also a natural part of life of the polar bear.

The polar bear in Svalbard is protected, and the population is now between 2500 and 3000 individuals. Yet the future of the polar bear is uncertain. Melting sea ice is an obvious threat, as are the large amounts of toxic pollutants transported from afar, since the polar bear is at the top of the food chain.

### SVALBARD REINDEER (*Rangifer tarandus platyrhynchus*)

With its remarkably short legs and sturdy body the Svalbard reindeer differs from other reindeer. It has a thick, insulating fur, helping it to stand the long, cold winters. It has no natural enemies and is never seen in large herds, but usually stays within a radius of one square kilometre. During the



summer, the Svalbard reindeer grazes primarily on moss, heather and lichens that are more nutritious here than in other, southerly parts of the Arctic. When winter arrives, the Svalbard reindeer has built up a decent reservoir of fat, which at the end of the long dark period is substantially depleted. During the winter, the animal can lose almost half of its body weight without endangering its life.

### ARCTIC FOX (*Alopex lagopus*)

The Arctic fox is Svalbard's second largest predator but it

is smaller than the Scandinavian Arctic fox. Both the white (white in winter, brown back and lighter belly during the summer) and the blue (brown throughout the year) Arctic fox is to be found on Svalbard. Its compact body and insulating fur are cleverly adapted for life in the extreme Arctic climate. The coat is dense and the Arctic fox only has trouble keeping warm with temperatures creeping below minus 50°C. Its summer diet consists of birds and bird eggs, which the fox also stores in burrows and rock crevices. During the winter it follows the polar bear on the ice and feeds on the remains of the bear's seal feasts.



### WALRUS (*Odobenus rosmarus*)

The walrus is one of the most charismatic mammals in Svalbard. It is very social and you often see walruses lying close together in large groups on land. A walrus bull can be up to four metres long and weigh 1.5 tons, while cows weigh no more than one ton. Walruses have few enemies and feed on snails, clams, fish and crustaceans. Some, mostly elderly individuals have been noted to feed on seals. It seems to happen only occasionally, but still makes the walrus the largest predator in the Arctic!

When Svalbard was discovered, walruses were here in tens of thousands. The fearless walrus was hunted intensively for several hundred years, mainly for its valuable tusks, and the population decreased dramatically. In 1952 it was declared a protected species in Svalbard, and the walrus population is now some 2000 individuals.



## WHALES

It is not uncommon to spot a whale or two in the waters around Svalbard. Belugas are in the area all year round, while the minke whale, humpback whale and fin whale migrate into these nutrient waters during the summer months. Blue whale is rare but has been observed, especially in recent years.

**BELUGA** (*Delphinapterus leucas*) is a toothed whale that is between three and five metres long. It has no true dorsal fin, which has given it its scientific name *Delphinapterus*: dolphin without wing. However, it has a ridge along the spine, darker pigmented than the body and often scarred by contact with the ice. Beluga fins are highly variable and apparently have an important function when the whale moves in narrow places or swims slowly backwards.

**MINKE WHALE** (*Balaenoptera acutorostrata*) is the smallest baleen whale. Instead of teeth it has some 300 yellowish-white baleen plates on each side of its upper jaw. These plates work like a sieve when they catch their food, small zooplankton. Minke whales can be up to 10 metres long and weigh nearly 10 tons. Its body is slender and streamlined, dark grey on top with white or pale bands on the pectoral fins.

**HUMPBACK WHALE** (*Megaptera novaeangliae*) also belongs to the baleen family. It is black, with a white underside, and has longer pectoral fins than any other whale. An adult humpback whale is about 15 metres long, its pectoral fins are about 3.5 meters long and it weighs up to 40 tons. Humpbacks are known worldwide for their breaching (lifting whole body above the water) and for its unique singing.



**FIN WHALE** (*Balaenoptera physalus*) are closely related to the blue whale and is the world's second largest animal species. It can be up to 26 metres long and weigh between 30 and 80 tons. It is brown-grey on top with a white belly. The lower left side lip is white, while the right is greyish-black like the rest of the head. Fin whales have a lighter

V-mark behind the head, and its dorsal fin is folded back.

**BLUE WHALE** (*Balaenoptera musculus*) is one of the largest animals ever to have existed on earth and it feeds on one of the smallest (krill). The blue whale has a long streamlined body with a pale blue to grey back with mottled blotches. The belly is usually paler and sometimes whitish. These baleen whales can grow up to 30 metres long and weigh an incredible 150 tons or more. The blue whale is rare, but observed in the waters surrounding Svalbard, especially along the northern coasts and on the west coast of Spitsbergen.

## SEALS

The most common seal species in the coastal waters of Svalbard is the bearded seal, followed by the ringed seal. There is a harbour seal colony on the west coast and walrus occur in the northern and eastern parts of the archipelago. Harp seals are quite common at the ice edge.

**BEARDED SEAL** (*Erignathus barbatus*) is a loner who often appears resting on an ice floe. Its size and distinctive moustache makes it easy to recognise.

**HARP SEAL** (*Phoca groenlandica*) is an active seal and during the summer it is often observed swimming in groups. It swims rapidly, and if it feels disturbed will sometimes swim on its back. Only occasionally do you see it on the ice.

**RINGED SEAL** (*Pusa hispida*) is the smallest among the seals of Svalbard, and is the most common. Despite its small size (up to 100 kg), it dives to depths of 500 metres, and spends most of its time during the summer in the water. The ringed seal is the polar bear's favourite meal.

**HARBOUR SEAL** (*Phoca vitulina*) is occasionally observed on the west side of Spitsbergen. There is a small colony here, which is the northernmost in the world.



## BIRDS

Svalbard has a rich bird life, particularly sea birds that nest in large colonies. 126 different bird species have been observed in Svalbard and its surrounding waters, but only a few species nest here. Four species account for 95% of Svalbard's abundant bird life: Brünnich's guillemot, the northern fulmar, the little auk and the kittiwake. Nowhere else on Earth do you find birds in such impressive numbers this far north.

**NORTHERN FULMAR** (*Fulmarus glacialis*) is a faithful companion to most ships in Arctic waters. It nests on steep cliffs along the coasts of Svalbard and often returns to the same nesting sites year after year. No less than 125 colonies of northern fulmar have been observed on Svalbard, with a total of more than two million birds!

**PINK-FOOTED GOOSE** (*Anser brachyrhynchus*) is both the largest and the most common goose species on Svalbard. Despite the fact that it exists in large numbers all over Svalbard it is relatively shy and difficult to detect. In late August the geese gather in flocks and by the last week of September, they will have gone south to their winter habitats in Denmark, Germany, Belgium and Holland. They return to Svalbard in early May each year.



**BARNACLE GOOSE** (*Branta leucopsis*) is smaller and nests in small colonies or in single pairs both on the tundra and the cliff walls, mostly along the west coast of Spitsbergen. Thanks to successful protection of their migratory routes to Holland

and their winter quarters there, the number of individuals is now almost 30 000 – compared to only a few hundred geese fifty years ago. In recent years, some barnacle geese have chosen not to make the long migration northward, and nesting sites have been seen in Stockholm!

**BRENT GOOSE** (*Branta bernicla*) is approximately the size of a duck and it is the smallest goose on Svalbard. It arrives in Svalbard from its winter quarters in western Denmark and the British Isles in late May/early June. Brent geese almost always nest on tiny islands in the sea, where the Arctic fox cannot reach them. The majority of the Brent goose population on Svalbard nest on Tusenøyane south of Edgeøya.

**GREAT SKUA** (*Stercorarius skua*) is the largest and is mainly found along the west coast of Spitsbergen. It likes to put its nest near bird cliffs and sometimes acts as a predator not only pursuing gulls and auks to scrounge on their catch, but also attacking them in flight and killing their prey by drowning it.

**ARCTIC SKUA** (*Stercorarius parasiticus*) is the northern hemisphere's most common skua. Apart from the Arctic it is found along the coasts of both Sweden and the UK. In Svalbard it gets food in one single way: by stealing it from the kittiwake.

**LONG-TAILED SKUA** (*Stercorarius longicaudus*) nests sporadically on Svalbard, and is actually more common in the Scandinavian mountain areas than in Svalbard. Since there are no lemmings on Svalbard, it feeds on ptarmigan chicks and snow buntings.

**BLACK-LEGGED KITTIWAKE** (*Rissa tridactyla*) numbers hundreds of thousands of kittiwakes on Svalbard. They are typical bird cliff dwellers and nest in close-knit colonies. You



can hardly hear your own thoughts when in the vicinity of a kittiwake colony, their characteristic three-toned sound shrieks among the cliffs. Its loud cry has produced its English name – Kittiwake.



**IVORY GULL** (*Pagophila eburnea*) is an Arctic beauty that never leaves the Arctic Ocean, not even during the dark season. It is a true survival expert eating everything from eggs, chicks and leftovers from polar bear dinners to

seals' faeces and krill in the sea. Its entirely white plumage makes it easily recognizable. The population in Svalbard is only about 2000 pairs, and it is an endangered species throughout its circumpolar distribution area except for Alaska.

**GLAUCOUS GULL** (*Larus hyperboreus*) is a large and powerful gull which nests in scattered colonies near the large bird cliffs. Several thousands of pairs nest on Svalbard. Glaucous gulls like to eat all kinds of eggs and chicks, and find many other things edible. It leaves Svalbard in

September-October and will return in March or April. Winters are spent in the north Atlantic along the coasts of Norway, Iceland and Great Britain.

In addition to the three most common gulls, we may encounter the rare Sabine's gull (*Larus sabini*) and even the more rarely seen Ross's gull (*Rhodostethia rosea*). A small population of great black-backed gull (*Larus marinus*) also nest on the islands.



**ARCTIC TERN** (*Sterna paradisaea*) holds the world record of long flights! Some Arctic Terns annually migrate from the Arctic to Antarctica. On Svalbard close to 10,000 pairs are

nesting, mainly in colonies along the western and northern coast.

**ATLANTIC PUFFIN** (*Fratercula arctica*) you need not be a great expert on birds to recognise this charming "sea parrot" with its colourful beak, orange-red feet and bulging breast. The Atlantic puffin is not particularly numerous on Svalbard, but nests in small colonies mostly on the west coast, and at the northernmost islands, Sjuøyane. The



Atlantic puffin in Svalbard is slightly larger than its relatives on the Norwegian mainland.

**LITTLE AUK** (*Alle alle*) a high Arctic specie that nests in huge colonies. The world population is estimated to an incredible 15 million pairs. On Svalbard, the number of Little Auks is said to be about one million pairs, with the largest concentration along the west coast of Spitsbergen. The fact that the snow is red in many places in Spitsbergen may be due to algae, but often the cause is from the red coloured droppings of the Little Auks. The droppings are red because of the crustacean that they eat.



**BRÜNNICH'S GUILLEMOT** (*Uria lomvia*) second to the little auk, Brünnich's guillemot is the most numerous among the auks. There are a hundred colonies in Svalbard, with a total of almost one million nesting pairs. The birds spend the winter in large flocks in the Barents Sea and around Iceland, Greenland and Newfoundland.

**BLACK GUILLEMOT** (*Cepphus grylle*) does not form such a large colony as other auks do, but prefers to nest together in groups of around 50 other individuals. They often nest in caves and recesses, and as close to the sea as possible. During September-October the black guillemot heads south to the Barents Sea. Many of them remain near the breeding grounds all year round.

**COMMON EIDER** (*Somateria mollissima*) nests in colonies on low-lying grass or moss-covered islands and islets, mainly along the west coast of Spitsbergen. It returns in April after having spent the winter along the northern coast of Norway.



It is shy and easily disturbed duck and it is forbidden to go ashore on islands with eiders during the nesting season.

**KING EIDER** (*Somateria spectabilis*) is smaller than the common eider. The beautiful cock, as its Latin name implies is spectacular and unmistakable with its black body, white breast and beautifully coloured head. The female resembles the common eider but has a finer pattern and has a shimmer of



red on her costume. A small number of king eiders nest on Svalbard. King eiders are only seen early in the season often accompanied by common eiders.

**PURPLE SANDPIPER** (*Calidris maritima*) is most common among the wading birds on Svalbard. The purple sandpiper is a well-camouflaged wading bird that blends well into the surrounding terrain, providing protection from gulls, skuas and Arctic foxes. They nest on the ground, often in the same place year after year.

**GREY PHALAROPE** (*Phalaropus fulicarius*) is a high Arctic wading bird and a rare, specie that will visit land only during the short nesting season. In them we find an



inverse breeding pattern: when the female has laid her eggs the male will take over the responsibility for them and the chicks. Once the chicks are strong enough they journey south to the sea far off the West African coast where they spend the rest of the year.

**RED-THROATED DIVER** (*Gavia stellata*) during the latter part of May arrive from their winter quarters along the North Atlantic coasts to their breeding grounds in Svalbard. The nest is usually placed on little islands in inland lakes. Divers feed on fish that is often caught away from the nest, usually in the sea.

**SNOW BUNTING** (*Plectrophenax nivalis*) is a songbird and a spring messenger! Several thousand pairs of Snow Buntings nest on Svalbard – in everything from rock crevices and nooks to a secluded corner of an old mine. In August, families of snow buntings gather for their flight over the open sea to the Russian steppes in the southeast where they spend the winter.

**SVALBARD PTARMIGAN** (*Lagopus muta hyperboreus*) looks very much like the ptarmigan on the Norwegian mainland, but is somewhat larger. It has probably come to Svalbard from northeast Greenland. Since it cannot fly long distances it stays all year on Svalbard. Its dense plumage helps it survive the harsh Arctic winter. In the winter, it feeds on seeds and plant parts that it finds under the snow.

## PLANTS

Svalbard is not exactly a hothouse; the fact is that plants can only live on some 7% of the land area. There are approximately 164 species of native flowering plants growing on Svalbard, plus 6 to 7 species that were introduced by man. A particular phenomenon of the Arctic is the permafrost, which means that the ground stays frozen, down to a depth of some 150 and 300 metres. The frozen ground is actually an advantage for plants, because there is very little precipitation throughout the year and the permafrost prevents surface water from draining downward. When the upper layer of the frozen ground melts in the summer, the plants actually wallow in moisture.

The flora is astonishingly rich for being this far north and most species are naturally found on the milder west side. The slopes underneath the bird cliffs offer good conditions for plants to grow and the floral displays in summer are very impressive. Trees and shrubs are limited to willow and in a few sheltered places dwarf birch, but both tend to crawl on the ground and do not reach many centimetres in height. On the north and east sides of Spitsbergen, and the islands further east, the climate is much harsher and the vegetation far more sparse.

*Below, clockwise from top left: Moss Campion; Spider Plant; Purple Saxifrage; Nodding Lychnis; Arctic Cotton Grass.*



## LONGYEARBYEN INFORMATION

Longyearbyen is the largest populated area on the territory of Svalbard, located in the high Norwegian Arctic. The settlement is popular as the most easily accessed frontier in the Arctic, and is an ideal base for the greater exploration of Svalbard.

The settlement is named after American entrepreneur John Munro Longyear (1860-1922), who in 1906, as head of the Arctic Coal Company, founded the town and the neighbouring coal mine, the first large mine on Svalbard. Mining is still a big business here, with the roadsides and mountainsides littered with mines and their equipment, but tourism is catching up fast.

12 countries signed the Svalbard Treaty in 1920, and Norway was granted sovereignty in 1925. In 2002, the responsibility for community services and public authority tasks were transferred from the Norwegian Government to Longyearbyen Community Council. This Council is an extended local democracy based on a unique model adapted to the local circumstances. With around 2200 inhabitants, the town is the de facto "capital" of the islands, featuring the airport, a school, a shopping centre, hotels, restaurants, and more.

Longyearbyen lies at the southern side of Adventfjorden, stretched out along the Longyearelva River. The centre of town lies near the coast on the east side of the river. Adventdalen, the valley housing Longyearbyen's only currently operational mine (#7), stretches out to the east about 10 km from the town centre.

Be sure to pick up the free Longyearbyen information pamphlet (available at the airport and most hotels), which has a detailed map of the city and listings of all its facilities.

When exploring Longyearbyen on your own please keep in mind that you must stay within the town limits. On the road towards the airport and Mine 7 this is indicated by a polar bear warning sign. Outside the town limits there is always a risk of encountering polar bears. Around the village you may spot snow bunting, Svalbard's only songbird, ptarmigan, geese, eider duck, reindeer or if lucky an Arctic fox.

The local currency is Norwegian kroner but most shops and hotels accept most major credit cards and Euro. Longyearbyen has a bank with ATM facility.

### USEFUL LINKS:

General Info, Hotels, Dining, Attractions, Shopping:

<http://www.svalbard.net/en/Svalbard>

Norwegian Polar Institute: <http://www.npolar.no/en/>

Norwegian Polar Institute Cruise Handbook:

<http://cruise-handbook.npolar.no/en/>

The Governor of Svalbard: [www.syssemmannen.no/en/](http://www.syssemmannen.no/en/)

Ice chart: <http://wms.met.no/icechart/>

Weather Longyearbyen:

<http://www.yr.no/place/Norway/Svalbard/Longyearbyen/>

Polar Bears International:

<http://www.polarbearsinternational.org>

Svalbard Villmarkssemter:

<http://www.svalbardvillmarkssenter.no/?!lang=en>

National Snow & Ice Data Center: <http://nsidc.org>



## EXPEDITION STAFF



### EXPEDITION LEADER – HENRIK LØVENDAHL

Henrik has worked as an expedition leader and guide in both the Arctic and Antarctic since 1998. He has lead numerous voyages to Northeast Greenland, Svalbard, the Antarctic Peninsula, Papua New Guinea, along the Norwegian Coast and Scotland. He has travelled extensively to far and remote corners of the world, scaled Andean peaks, trekked in the Himalayas and dived in many exotic locations; but his greatest passion is the Polar region.

Henrik and Sue spent three months living and working on the remote Sub-Antarctic island of South Georgia and ten months as dog-sled drivers on Svalbard during the Arctic winter. Most recently Henrik spent 6 month living in the mountains of Norway working as a dog-sled driver. He is truly at home in the world's wild places.

### NATURALIST AND GUIDE – SUE WERNER

Sue graduated as a veterinary nurse before embarking on a more

adventurous life as a professional outdoor guide mainly specialising in the Polar regions. Sue first ventured to the Arctic in 1997 on the *Kapitan Klebnikov*, completing the Northwest passage, High Canadian Arctic and was part of the first-ever circumnavigation of Baffin Island. Since then Sue has returned to the high Arctic latitudes every year and has spent a winter working in Svalbard as a dog handler and dog sled guide. Sue has a great passion for the Polar regions with a keen interest in the flora and fauna of the High Arctic. Sue will introduce you to some of the best places the Arctic has to offer.



## TRAVEL AND SHIP DOCUMENTS

### TRAVEL INSURANCE

Our expedition travels to a remote corner of the globe where medical evacuation may be difficult and very expensive.

**We strongly advise you purchase travel insurance** that covers you for emergency evacuation, full medical cover, trip cancellation and lost luggage.

Where a passenger requires hospitalisation or medical treatment including evacuation, all costs associated with this are the full responsibility of that passenger.

If you are arranging your own travel insurance please check that your policy (particularly if it is issued by your credit card provider) covers you for the destination that you are visiting and covers any pre-existing medical conditions.

Adventure Associates can provide you a quote with our recommended travel insurance partners.

### MEDICAL CHECK

Given the remote areas we are travelling to, we ask you to visit your doctor for a medical clearance. We will send our medical form with our pre-departure information.

### ZODIACS

During the expedition we will visit remote and isolated sites that are accessible only by Zodiac landing craft. These large, heavy-duty inflatable vessels are extremely safe and were specially designed for expedition work. Zodiacs are the workhorses of polar expeditions. They are used for transferring you ashore, transporting your luggage when necessary and for taking you ocean-level cruising among pack-ice, exploring small fiords or below seabird colonies.

Before your first landing we will brief you about Zodiac use. We use mark V HD (heavy duty) Zodiacs for landings and cruising, each has a maximum capacity of 15 people; however, for your comfort we generally cruise with only 6 guests in a Zodiac.

## THE SVALBARD PACKAGE OFFER

What sets Adventure Associates apart is the leisurely way in which we conduct our tours and cruises. This is your holiday, and it should be just that – a relaxing, stress-free experience. With that in mind, our pre & post voyage group arrangements will give you the freedom to relax and travel with the confidence of knowing that all your needs have been taken care of.

The Svalbard package offer includes:

- 1 night at the Radisson Blu Airport Hotel Oslo before the voyage
- Flights with Scandinavian Airways in Premium Economy or Economy from Oslo to Longyearbyen return.
- 1 night at Hotel in Longyearbyen before the voyage
- All Airport/Hotel/Port transfers in Longyearbyen

**We are happy to help with any other travel needs before or after your voyage.**  
**Please contact our office.**



## CLOTHING

The choice of clothing for cold climates is a very personal matter. It depends on your individual experience with cold conditions and can even depend on whether you feel you are more susceptible to the cold than other people. The following tips should help you to be comfortable and healthily warm in cold weather. We have found over the years that there can be considerable variation from summer to summer and people often say to us that they didn't use all their cold weather clothing. But it is certainly better to have more than not enough warm clothing.

In summer the average outside air temperatures in the areas we will visit are between +5°C and -2°C. Big storms are rare, but if one comes through, the temperature might drop dramatically. As we travel north east it will be colder than on the west coast.

Those who complain, 'It's not the cold, it's the wind,' are right. Wind removes the layer of warm air your body has heated around you to keep itself warm. A mere 6 k.p.h wind can carry away eight times more body heat than still air. The so-called wind-chill factor measures the increased cooling power of moving air, whether it's wind that is blowing over you, or your movement through the air. Being wet accelerates the loss of body heat. Air is a very poor conductor of heat, but water is an excellent one. If your skin or clothing gets wet, your body will lose heat much more rapidly. Even at 10°C, you can suffer ill effects of cold if you are wet.

Avoid overdressing as this leads to perspiration; and in wet weather, wear WATER REPELLENT OUTER GARMENTS that will keep you dry on the outside but still "breathe" enough that moisture from your body can escape. Body heat is most likely to be lost from the hands and feet and the head. Keep them warm and dry. If the rest of your body

is covered, as much as 80% of the heat you lose can come from your head; so be sure to wear a WARM CAP or BEANIE. For anyone out in the cold, it's far better to wear LAYERS of relatively LIGHT, LOOSE, CLOTHING than one thick, heavy item. Between each layer there is trapped air which, when heated by your body, acts as an excellent insulator. Avoid tight clothing, since it leaves no room for trapped air. WOOL and SILK are superior to cotton; because they can trap warm air. SYNTHETIC FABRICS that spring back into shape after compression are also good (i.e. polypropylene). When damp or wet, polyester is a better insulator than goose or duck down. The temperature on board the ship is between 17°C and 25°C, so there is a big drop when we venture outside to get onto the Zodiacs and travel ashore. The most important layer is the waterproof outer garment. Underneath that you will need 2 and in some instances 3 layers depending on the day – thermal underwear; thick, long sleeve shirt; jumper or fibre pile jacket. Your legs are generally not so susceptible to the cold but on most days you would also need thermal long johns. The most important footwear is gumboots or Sorrels if you already own them.

Dress onboard ship is informal and comfortable. Normal clothing on board is jeans; casual slacks or trousers; light, long sleeve shirts or t-shirts but a warm jacket should never be far away in case the call of "Bear" comes and you have to dash outside. A light pair of sports shoes with non-slip soles are handy to wear on the ship. A pair of sturdy WATERPROOF walking boots with high ankle can be used on some landings with longer walks. You will wear the rubber boots to shore then change to the walking boots on the beach.



### WATERPROOF JACKET

A well fitting garment with attached hood that can be worn over your under layers with reasonable comfort. It is most important that this garment is thoroughly waterproof. The waterproof jacket is the most important layer of clothing. There is nothing worse than wind on wet clothes at near zero degrees.



### WATERPROOF TROUSERS

Exactly the same requirements apply to the trousers as for your waterproof jacket.

### FIBRE-PILE JACKET (POLAR FLEECE)

There are multi-choices of fibre-pile jackets available these days, but a 200 weight would be ideal. A woolen jumper of a similar weight is also appropriate



### WARM TROUSERS

Fleecy tracksuit, or fibre-pile pants are suitable.

### THERMAL UNDERWEAR

You should select reasonably thick thermal underwear. Long sleeve thermal top and trousers. You can also buy thermal socks. Wool is highly recommended.

### WARM WOOLLEN OR DOWN SWEATER

Personal choice – thin ones are a good layer over your polypropylene underwear.

### CALF TO KNEE-HIGH RUBBER BOOTS

These are your most important item of footwear and will be used on all of our shore landings with Zodiacs. Stepping out of the Zodiac to shore almost always involves stepping into water. The ground we walk over can also be wet and boggy due to melt water sitting on top of the permafrost. Buy them large enough to fit with thick socks, not too tight around the calf but not too sloppy. They need to be sturdy but comfortable for extended wear and walking. It may also be a good idea to purchase a thermal innersole or inner liner.

They will keep your feet warmer for longer periods, when cruising in the Zodiacs. In Australia these can be purchased at most army surplus, farm or hardware shops. Choose a pair with strongly patterned soles – they will give you better grip; avoid sailing boots with flat non-skid soles.

### SOCKS

Two pairs of socks and inner soles in your gumboots are more than enough to keep your feet snug. It is advisable to take thick and thin socks, as thick ones are too warm on board. You can also work out the best combination for your gumboots ashore if you have thick and thin socks. One pair of calf-length thick socks is very cosy.

### GLOVES

It is advisable to take two to three pair of gloves. A pair of windproof/waterproof ski gloves is very good. A pair of lighter windproof fingered gloves for handling a camera. Some people find a large pair of rubber washing up gloves over thin polypropylene or wool gloves are a good combination for keeping hands dry in the Zodiac. These are another very important item of clothing, as cold, wet hands make you feel miserable. A spare pair of gloves should always be carried in case your first pair gets wet.



### HEADGEAR

You will need a warm woolen cap or beanie that can be pulled down to protect your ears, forehead, neck and chin. The neck also needs protection with a woolen or synthetic scarf that can be wrapped around the face, when travelling against the wind.



### USEFUL SUNDRIES

A camera with plenty of storage. Experience has taught us that it is advisable to bring an extra camera just in case of malfunction or accident. Be prepared with a standard European two round pin socket. The electrical supply on board ship is 220 volts, 50 Herz, for Australian appliances – there is no need for a converter.



## CHECK LIST

The average summer temperature is about +5° C. Weather conditions can change very quickly any time of the year and temperatures can drop below zero. It is not uncommon to experience strong wind with snow or light rain. The temperature inside the ship is warm so dress relaxed and comfortable.

Here is a check list with a few of the most important items to bring.

- Windproof/waterproof outer jacket and trousers
- Windproof and waterproof warm gloves
- Lighter windproof gloves
- Sturdy rubber boots suitable for walking
- Waterproof and warm walking boots (optional)
- Non slip shoes for walking around the ship
- Warm socks (liner and thick wool socks)
- Fleece or wool jumper/jacket (thick and thin)
- Fleece pants
- Warm hat
- Neck warmer or scarf

- Thermal underwear: long johns, preferably in wool; long sleeved top, preferably in wool
- Binoculars for wildlife viewing (good quality, very important)
- Small water resistant backpack for carrying stuff during excursions
- Waterproof bags for camera/electronic equipment
- Sun glasses, sun hat and sun screen
- Adaptor plug for European style power points (2 round pin)
- Personal prescription medications, seasickness prophylactic, headache medication
- Swimwear (if you intend taking a polar plunge)
- Collapsible walking poles



## PHOTOGRAPHIC TIPS AND SUGGESTIONS

We expect that everyone will bring some kind of camera be it a mobile phone camera or a professional type SLR camera with all the bells and whistles. Photographing in the Arctic can be very challenging. Bright light reflecting off water, snow or ice with dark rocky backgrounds, grey, overcast sky, flat light and moisture in the air are all part of the High Arctic cocktail of light. But one of the greatest delights of being in the High Arctic is the mysterious light of full summer. Care is needed when photographing from a moving Zodiac because of the risk of salt water spray.

Below are a few simple tips and suggestions that may help you get sorted before you go. What ever camera you bring it is possible to get good images – just don't expect to get close-up pictures of a polar bear with your iPhone.

- Get to know your camera, make sure it is working correctly and that you understand all its main functions.
- Read and bring the instructions manual. Download an electronic version onto your PC.
- Bring extra memory cards and spare batteries and remember the battery charger...
- Have some way of keeping your camera equipment dry and safe during landings and Zodiac excursions. Lightweight nylon dry bags work well and are available in many sizes.
- Consider bringing a rain-sleeve to keep moisture off your camera equipment when out in the weather. Zip-lock

bags are good for smaller cameras. A transparent plastic bag with a rubber band around the lens works for SLR type cameras.

- Tripods, Monopods and Beanbags: A good quality tripod is invaluable for the serious photographer. However they can be big, heavy and cumbersome to carry during landings. A monopod is lighter and can be used as a walking stick for support. A beanbag can be placed on the railing of the ship to support bigger lenses and dampens any vibrations.
- If you bring an SLR type camera a good zoom lens for wildlife photography will be handy. 200mm – 300mm is a good focal length. Keep in mind that on an SLR camera with a 1.5 crop-factor sensor a 200mm lens is equivalent to a 300mm lens on full frame sensor.
- There is no dedicated camera store in Longyearbyen. The supermarket has a few cameras and some accessories available for sale. Bring what you need from home.
- We recommend that you carry all photography equipment, cords and chargers and storage devices in your carry-on luggage in case your main luggage is left behind somewhere.



## ENVIRONMENTAL GUIDELINES

### OUR RESPONSIBILITIES

Tourism and cruise activities in the Arctic operate within a comprehensive framework of international and national laws and regulations to ensure safety and preservation of the environment. Comprehensive guidelines have been developed for expedition cruise operations in the Arctic.

### YOUR RESPONSIBILITIES

From these set of guidelines we have picked out a few basic rules that we ask you to read carefully. Further information will be provided on board.

#### 1. Leave no lasting signs of your visit

You must not leave any litter behind, including small items such as cigarette butts. Do not engrave on rocks or buildings and do not build cairns, rearrange stones or in any other way leave visible signs of your visit. Avoid stepping on flowers or plant beds if at all possible.

#### 2. Do not pick flowers

In some parts of the Arctic flora is protected by law, in others not. But we regard all flora as protected and ask you to not pick flowers or other plants.

#### 3. Do not take anything with you

We encourage you to leave the Arctic as it is. Cultural remains are protected. We ask you to leave stones, bones, antlers, driftwood and other items where they are.

#### 4. Do not disturb animals and birds

We regard all fauna in the Arctic as protected and will avoid disturbing animals and birds as far as possible. When close to animals and nesting birds, avoid making loud noises and keep conversation low and calm.

#### 5. Leave cultural remains alone

Cultural remains are protected by law and a zone of 100 meters around the remains is also considered a protected zone. Watch where you are walking and standing. Walk around and not in between objects. Do not take anything with you and do not attempt to touch or rearrange objects.

#### 6. Take the polar bear danger seriously

Polar bears are potentially dangerous animals, but also vulnerable. It is of the utmost importance that you follow your guide's instructions. Important rules for behavior in polar bear areas are listed below.

#### 7. Be safe

Travel in Arctic areas may involve various risks. Rule number one is that you must always pay attention to and follow the instructions given by your expedition leader or guide. Never stray from your group.

#### Polar bears and firearm safety

Polar bears can be encountered anywhere, anytime! Although bears normally will try to avoid encounters with humans, they are potentially extremely dangerous to humans. But polar bears are also vulnerable. We will make every effort to ensure both your and the animal's safety and therefore the following rules are non-negotiable.

Staff members will be carrying firearms and other bear deterrents in areas where polar bears could be encountered. The staff is trained in firearm handling. But firearms can be dangerous. Do not make any attempt to touch or hold firearms.

#### POLAR BEARS

- Never stray from your group and the leaders carrying equipment to protect you.
- If you catch sight of polar bears, stay calm and immediately inform your guide.
- Never approach a bear if you catch sight of it.
- Never leave food anywhere in an attempt to lure polar bears.
- Follow your leader's instruction.
- Svalbard Environmental Protection Act states that it is prohibited to seek out polar bear in such a way as to disturb them or expose either bears or humans to danger.

#### RABIES

Rabies has been detected in Arctic regions. Some animals, such as the Arctic fox, Arctic dogs and Arctic wolves are potential carriers of rabies.

- Never touch live or dead wild animals.

**Thank you for helping us conduct respectful, environmentally-friendly and safe tourism in the Arctic.**

PHOTO HENRIK LØVENDAHL



## SVALBARD'S HISTORY IN A NUTSHELL

There are alternative hypotheses about the discovery of Svalbard, but Willem Barentsz visit in 1596 is a well-documented starting point of cultural history. From a largely economic perspective the history of Svalbard can be divided into a few main phases, which to some degree overlap:

- Whaling 1610–1850: an international summer activity. Land based, coastal whaling until the end of the 17th century; thereafter open sea hunting in the North Atlantic.
- Russian (Pomor) hunting and trapping 1700–1850: Both summer and winter expeditions. Initially walrus was the main prey, later also other bio-resources were exploited.
- Norwegian hunting, trapping and sealing, from 1800: At first overlapping the Russian activity, the Norwegians gradually took over. After World War II only few wintering trappers remain.
- Scientific research, from 1760: an international activity that expanded greatly from the last part of the 19th century. Today, one of the significant factors in Svalbard economy.
- Polar exploration: In the late 19th and early 20th centuries, a series of explorers attempted to reach the North Pole using airships and balloons, and most met with failure. Roald Amundsen and Umberto Nobile were successful in 1926, but two years later Amundsen and his crew died while on a rescue mission to find Nobile, who had disappeared on a similar expedition and was later rescued.

- Coal mining, from 1900: initially an international activity, but from the 1930's only Russian (Soviet) and Norwegian coal mines remain year-round.
- Local settlements and community development, from 1905: some of the coal mines developed into permanent or semi-permanent local communities such as Longyearbyen and Barentsburg. Consequently, there is a social history connected to these "towns".
- Tourism, from 1850: Large scale organised tourism (cruise ships) started in the 1890s. Particularly in the last two decades tourism has become a major factor in Svalbard's economy.

In the economic history of Svalbard 1900 is a watershed: this marks the start of the industrial, modern age. In the political history, however, 1920 is a turning point. The Svalbard Treaty of 9 February, 1920, gave Norway sovereignty, which was formally assumed on 14 August, 1925. From then on Svalbard was no longer *terra nullius* – no man's land.



PHOTO SUE WERNER



## THE MIDNIGHT SUN

As the earth revolves around the sun, the tilt of its axis creates our progression of seasons. We see the sun higher in the sky in the summer because the earth's axis "leans" toward the sun. When the northern hemisphere tilts towards the sun in summer, the entire area within the Arctic Circle remains in light for the entire day. If you live on the Arctic Circle, there is only one day during the year when the sun does not set – the summer solstice (June 21). As one travels towards the pole the number of days with 24-hour sun increase until, at the pole, there are six months of day and six months of night. In Longyearbyen, Svalbard, at 78° north, the midnight sun lasts from 17 April until 24 August (130 days) The Sun stays above the horizon during part of the summer and circles around the observer. It rises higher in the sky at noon and lower towards the horizon at midnight. Despite the continuous light, there is a marked variation in temperature during the day because of the changing angle of the sun.



Key sun stats		Sun indexes	
<small>This table shows the most important sun facts for Longyearbyen, Svalbard. By sun hrs lost we mean the number of hours that the sun is shaded by the terrain. Hover over each row for more info.</small>			
Midnight sun days	130	Total	78 %
First midnight sun date	17 April	Morning	77 %
Last midnight sun date	24 August	Afternoon	79 %
Days with no sun	156	Winter	0 %
Sun goes away	4 October	Spring	75 %
Sun returns	8 March	Summer	95 %
Average cloud cover	85 %	Autumn	35 %
Average sun hours per day	09:49		
Avg PM sun hrs lost	01:23		
Avg AM sun hrs lost	01:24		

## SUGGESTED READING

The museums, supermarket and other shops in Longyearbyen have a great selection of books available for sale. Natural and human history, guide books, coffee-table style books and maps. We will also have a small selection of reference books available in the ship's library.

*Svalbard: The Bradt Travel Guide (2013)*  
Author: Andreas Umbreit

*Spitsbergen – Svalbard: A Complete Guide Around the Arctic Archipelago (2012)*  
Author: Rolf Stange

*Svalbard and Life in Polar Oceans (2004)*  
Author: Bjorn Gulliksen & Erling Svensen

*Rocks and Ice: Landscapes of the North (2005)*  
Author: Rolf Stange

*The Geology of Svalbard (1998)*  
Author: W.B. Harland

## HISTORY

*A History of Arctic Exploration (2010)*  
Author: Juha Nurminen

*The Ice Balloon (2013)*  
Author: Alec Wilkinson

*Farthest North (1999)* – The great Norwegian polar explorer Fridtjof Nansen's classic account of the voyage of the Fram, originally published in 1897

*The Last Viking: The Life of Roald Amundsen (2013)*  
Author: Stephen R. Bown

*From Pole to Pole: Roald Amundsen's Journey in Flight (2014)*  
Author: Garth James Cameron

*Ice Ship, The Epic Voyage of the Polar Adventurer Fram (2014)*  
Author: Charles W. Johnson

## WILDLIFE

*A Complete Guide to Arctic Wildlife (2006)*  
Author: Richard Sale

*The Arctic: A Guide to Coastal Wildlife (2012)*  
Author: Tony Soper

*Polar Bears on the Edge: Heading for Extinction while Management Fails (2015)*  
Author: Morten Jørgensen

*Polar Bears (2011)*  
Author: Ian Stirling

*Polar Bears, A Complete Guide to their Biology and Behavior (2012)*  
Author: Andrew E. Derocher, Wayne Lynch (Photographer)

*Birds and Mammals of Svalbard (2006)*  
Author: Kit Kovacs

## FLORA

*Seeds on Ice, Svalbard and the Global Seed Vault (2016)*  
Author: Cary Fowler

*Flowers of Svalbard (1999)*  
Author: Olav Gjaerevoll

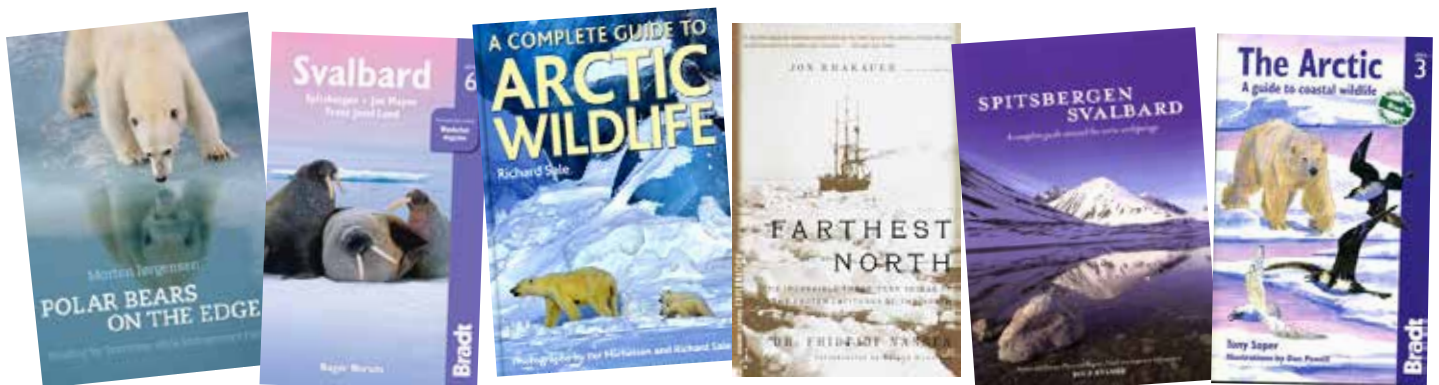
*Svalbard, A Guide to Plants of the High Arctic (2010)*  
Author: Stephen MacLean

**A selection of these books can be bought online from the following online bookstores:**

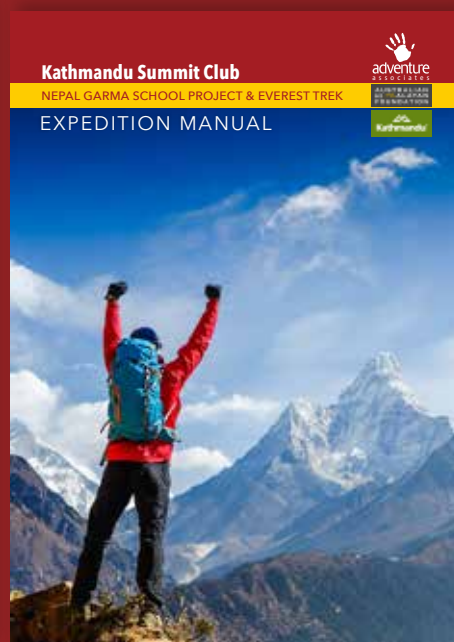
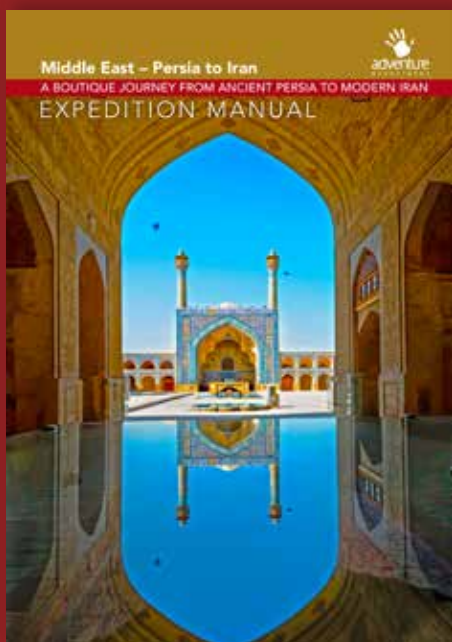
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