

The background of the slide features a deep blue underwater scene with two whales. A large, semi-transparent watermark of the Roman numeral 'IX' is positioned on the left side, spanning most of the vertical height. The text 'Science & Education Report' is centered horizontally and partially overlaps the 'IX' watermark.

Science & Education Report

Circumnavigating Spitsbergen — In the Realm of the Polar Bear

MS Spitsbergen

26 July — 4 August 2026





Science & Education Programme

Our Science and Education Team accompanied you during your expedition to the remote nature of the Svalbard archipelago.

We explored the destination's natural beauty, exceptional wildlife, and rich history together. We organised lectures and interactive activities onboard, and you discovered our destinations during landings, nature walks, and from the water.

History & Culture

We cruised to remote areas with a relatively short, but complex, history.

You learned about the unique international and political situation of Svalbard thanks to the Svalbard Treaty, signed in 1920.

Whalers, trappers, miners, researchers, and explorers shaped the culture of this Arctic archipelago.



Polar Exploration

For over four centuries, Svalbard has drawn explorers into the Arctic ice. It has been a proving ground for human endurance, a place where whalers, trappers, and scientists tested themselves against the polar wilderness, and where many expeditions were launched in the drive to conquer the unknown.

Roald Amundsen used Svalbard as a starting point for his own polar ambitions, cementing the archipelago's place at the centre of the Heroic Age of exploration.





Trapping & Whaling

During our landings in Svalbard, you encountered traces of the region's early whaling era, as well as the more recent period of trapping.

Scattered across the landscape were huts, some still maintained and in use, along with abandoned traps and the crumbling remains of old whaling ovens. These artefacts offered vivid glimpses into the human history that once shaped these remote shores.



Natural History

The natural history of Svalbard is a centrepiece of the high Arctic, with a close connection to the cryosphere.

During our lectures and workshops, you gained insights into the adaptations plants and animals need to survive in this harsh landscape. During landings, small boat cruising, and hikes in a variety of locations, you could see and experience this highly unique ecosystem.

Geology

Svalbard has a varied geological history that spans more than a billion years, from the formation of the highly metamorphic 'Pointy Mountains' (Spitsbergen) to the still ongoing post-glacial phenomena that bring whale bones far inland due to isostatic rebound.

Invertebrate fossils can be found in the sedimentary rocks, and in places like Bellsund a large part of the tectonic events can be seen as a cross-section from west to east.





Glaciers

Svalbard's landscape has been overformed by glaciers, some of which you were able to experience up close from the ship, our small boats, or from land.

An outstanding experience was seeing parts of the glacier front of Bråsvellbreen, part of the Nordaustlandet ice cap, a tidewater glacier front that spans 200 km wide (pictured above).

Ice Edge

At 80°40' North, you experienced the beauty and vastness of the Arctic pack ice.

This ever-shifting boundary between sea ice and open ocean harbours a rich community of life, from the smallest ice algae to the largest whales, some of which you were able to experience during the small boat and ship cruising along the ice.





NASA's GLOBE Cloud Observer

Together with our Environmental Scientist Steffen, you observed the clouds and submitted your observations to NASA GLOBE Observer on five occasions.

These cloud observations can help NASA improve our understanding of Earth's atmosphere and climate by providing valuable data for scientific research and climate modelling.

[View our data](#) on the global map

iNaturalist

Throughout our expedition, you and the team documented the flora and fauna of Svalbard and uploaded all findings to the biodiversity platform iNaturalist.

During our voyage, we submitted 115 observations of 53 different species. This effort contributes to a comprehensive understanding of the current distribution of species in the archipelago and can aid researchers in their ongoing studies and conservation efforts to protect these species.

View our data submitted on our [iNaturalist project](#)





Flora

Many of you were keen to explore the beauty and wonders of the Arctic tundra in bloom.

So close to the North Pole, many flowering plants develop fascinating adaptations, so that you could encounter minuscule trees no higher than a couple of centimetres, such as the Arctic willow, colourful saxifrages, and even Svalbard's national flower: the polar poppy.

Guest Scientists

Jildou Dijkstra & Doreen Kohlbach

Alfred Wegener Institute Helmholtz Centre
for Polar and Marine Research



[Visit our Science & Education Hub online](#)
to find out more





Science Boat

Sixty-two eager participants joined our eight Science Boat sessions in Magdalenefjorden, Jotunkjeldene, Mushamna, Sundneset, Gnålodden, Van Keulenfjorden, Calypsobyen, Hornsund, and Bamsebu to help our Guest Scientists Jildou and Doreen take samples to study the environmental fate of anthropogenic pollutants.

You helped sample surface water, sediment, macroalgae, glacier ice, sea ice, snow, and zooplankton, and collected water profiles for the marine database EMODnet.



Plankton Samples

You explored the microscopic world of plankton, the tiny organisms that drift in our ocean.

In the plankton samples collected during our Science Boat sessions, we found a large number of copepods, a keystone species of the Arctic Ocean. During our microscope sessions, you also observed various types of other zooplankton.

Selection of zooplankton species: sea angel *Clione limacina* (top right), young polar cod *Boreogadus saida* (bottom).



Top right: jelly *Bougainvillia superciliaris*

Bottom: keystone copepod *Calanus glacialis*

All the samples taken during our Science Boat sessions will be analysed by our Guest Researchers for the presence of 45 different PFAS (Per- and Polyfluoroalkyl Substances; 'forever chemicals') compounds to gain a better understanding of the pollution levels in the Arctic.



Wildlife List — Birds





Wildlife List — Seabirds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Fulmarus glacialis</i>	northern fulmar	Eissturmvogel	fulmar boreal
<i>Stercorarius skua</i>	great skua	Große Raubmöwe	grand labbe
<i>Stercorarius pomarinus</i>	pomarine skua	Spatelraubmöwe	labbe pomarine
<i>Stercorarius parasiticus</i>	Arctic skua (parasitic jaeger)	Schmarotzerraubmöwe	labbe parasite
<i>Stercorarius longicaudus</i>	long-tailed skua (long-tailed jaeger)	Falkenraubmöwe	labbe à longue queue
<i>Rissa tridactyla</i>	black-legged kittiwake	Dreizehenmöwe	mouette tridactyle
<i>Xema sabini</i>	Sabine's gull	Schwalbenmöwe	mouette de Sabine
<i>Larus hyperboreus</i>	glaucous gull	Eismöwe	goéland bourgmestre
<i>Pagophila eburnea</i>	ivory gull	Elfenbeinmöwe	mouette blanche
<i>Sterna paradisaea</i>	Arctic tern	Küstenseeschwalbe	sterne arctique
<i>Alle alle</i>	little auk (dovekie)	Krabbentaucher	mergule nain
<i>Fratercula arctica</i>	Atlantic puffin	Papageitaucher	macareux moine
<i>Cepphus grille</i>	black guillemot	Gryllteiste	guillemot à miroir
<i>Uria lomvia</i>	Brünnich's guillemot (thick-billed murre)	Dickschnabellumme	guillemot de Brünnich

Auks

The auks are the members of the family Alcidae, which include puffins, murres, guillemots, and their relatives. They spend most of their lives at sea, only going to land for breeding, so they are considered seabirds.

They dive, propelling themselves with their wings to catch fish and crustaceans such as krill or plankton, reaching outstanding depths of over 200 m in the most extreme cases.

Auks nest in massive colonies of thousands of breeding pairs, or join other seabird colonies, as you saw at Gnålodden.



Wildlife List — Shore birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Charadrius hiaticula</i>	common ringed plover	Sandregenpfeifer	pluvier grand-gravelot
<i>Calidris maritima</i>	purple sandpiper	Meerstrandläufer	bécasseau violet
<i>Arenaria interpres</i>	ruddy turnstone	Steinwälzer	tournepierre à collier

Wildlife List — Waterbirds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Anser brachyrhynchus</i>	pink-footed goose	Kurzschnabelgans	oie à bec court
<i>Anser anser</i>	greylag goose	Graugans	oie cendrée
<i>Branta leucopsis</i>	barnacle goose	Weißwangengans	bernache nonnette
<i>Branta bernicla</i>	brent goose	Ringelgans	bernache cravant
<i>Somateria mollissima</i>	common eider	Eiderente	eider à duvet
<i>Somateria spectabilis</i>	king eider	Prachteiderente	eider à tête grise
<i>Clangula hyemalis</i>	long-tailed duck	Eisente	harelde kakawi
<i>Gavia stellata</i>	red-throated diver (red-throated loon)	Sterntaucher	plongeon catmarin
<i>Gavia immer</i>	great northern diver (common loon)	Eistaucher	plongeon huard

Wildlife List — Land birds



SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Plectrophenax nivalis</i>	snow bunting	Schneeammer	bruant des neiges



Snow Bunting

The snow bunting is the only species of land bird you saw on your voyage. It nests in natural rock cavities or artificial cavities in human settlements, feeding mainly on insects during summer and seeds during the winter.

When the grey fledglings leave the nest, it is usual to see them begging for food on the ground.



eBird

During our wildlife watches, our Ornithologist Andres conducted detailed seabird surveys, recording observations for the citizen science platform eBird. We recorded 26 different species of birds in 23 checklists.

This initiative helps contribute valuable data to global bird conservation efforts, enhancing our understanding of seabird populations and their habitats.

View our data on our [e-Bird trip report](#)

Wildlife List — Marine Mammals



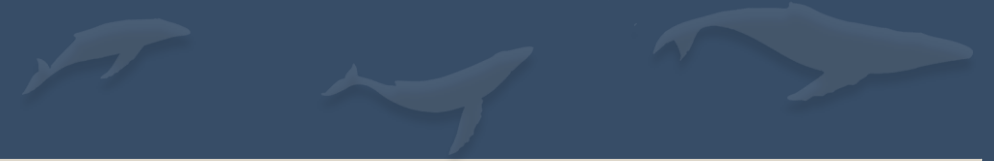


Polar Bear

Polar bears are the one species most of you hoped to see during your time in Svalbard, and you were not disappointed. We did not have to wait long, after spotting the first bear of the trip sleeping on some rocks, near Smeerenburgreen glacier.

The largest of any carnivore that can be found on land, the polar bear is classed as a species of marine mammals due to its dependence and connection with life in and around the sea ice. Seeing this impressive animal in its natural habitat truly was a highlight of the voyage for many of you.

Wildlife List – Marine Mammals



SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Balaenoptera acutorostrata</i>	common Minke whale	Zwergwal	rorqual à museau pointu
<i>Balaenoptera physalus</i>	fin whale	Finnwal	rorqual commun
<i>Megaptera novaeangliae</i>	humpback whale	Buckelwal	baleine à bosse
<i>Delphinapterus leucas</i>	beluga, white whale	Beluga, Weißwal	bélouga
<i>Erignathus barbatus</i>	bearded seal	Bartrobbe	phoque Barbu
<i>Phoca vitulina</i>	harbour seal	Seehund	phoque commun
<i>Pagophilus groenlandicus</i>	harp seal	Sattelrobbe	phoque du Groenland
<i>Cystophora cristata</i>	hooded seal	Klappmütze	phoque à capuchon
<i>Odobenus rosmarus</i>	walrus	Walross	morse
<i>Ursus maritimus</i>	polar bear	Eisbär	ours blanc



Walrus

The walrus is probably one of the species that captures the hearts of most of us visiting the Arctic. With their charismatic whiskers, comical behaviour, and iconic tusks, they never fail to amuse and entertain those lucky enough to spend time watching them.

Some memorable moments with walrus for you on this voyage included viewing the first walrus haul-out of the voyage at Smeerenburg, and our long-awaited landing at Torellneset. Here you were able to see males, females, and for a lucky few, even a calf hiding in the centre of the group.



Wildlife List — Land Mammals



Wildlife List – Land mammals



SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Rangifer tarandus platyrhynchus</i>	Svalbard reindeer	Spitzbergen-Ren	renne de Svalbard
<i>Vulpes lagopus</i>	Arctic fox	Polarfuchs	renard arctique

**Thanks for your
participation!**

THX

