

The background of the slide features a deep blue underwater scene with two whales. A large, semi-transparent watermark consisting of the Roman numerals 'IX' is positioned on the left side of the image. The text 'Science & Education Report' is centered horizontally across the middle of the image.

Science & Education Report

2026 Solar Eclipse Expedition — Svalbard, Greenland and Iceland

MS Spitsbergen

5 – 19 August 2026





Science & Education Programme

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

You had the opportunity to explore our destination's natural beauty, exceptional wildlife, and rich history and culture. We organized lectures and interactive activities onboard and you explored our destinations during landings and from the water.

The Total Solar Eclipse of August 12, 2026

The eclipse unfolds from first contact through totality—and back into Arctic daylight.

Photo: Rahul J. Venkatraman



Eclipse Experts

Your journey to totality was supported by former astronomer Dr Hans W. Zekl, Space.com Skywatching Editor Dr Daisy Dobrijevic and NASA aerospace engineer Rahul Venkatraman. Through talks and hands-on workshops, you explored eclipse science, safe observing and photography; Daisy also reported live from MS Spitsbergen throughout eclipse day.

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



Cloud types

Cumulus

Puffy fair weather clouds

- May improve as temperatures fall

High thin cloud

- Sun still visible
- Can still large portion of the eclipse

Thick overcast

- Most challenging
- BUT offers a unique experience





First contact

First contact marks the instant the Moon begins to cross the Sun. A small notch appears at the solar edge—the first visible sign that the long-awaited eclipse is underway over Scoresby Sound.

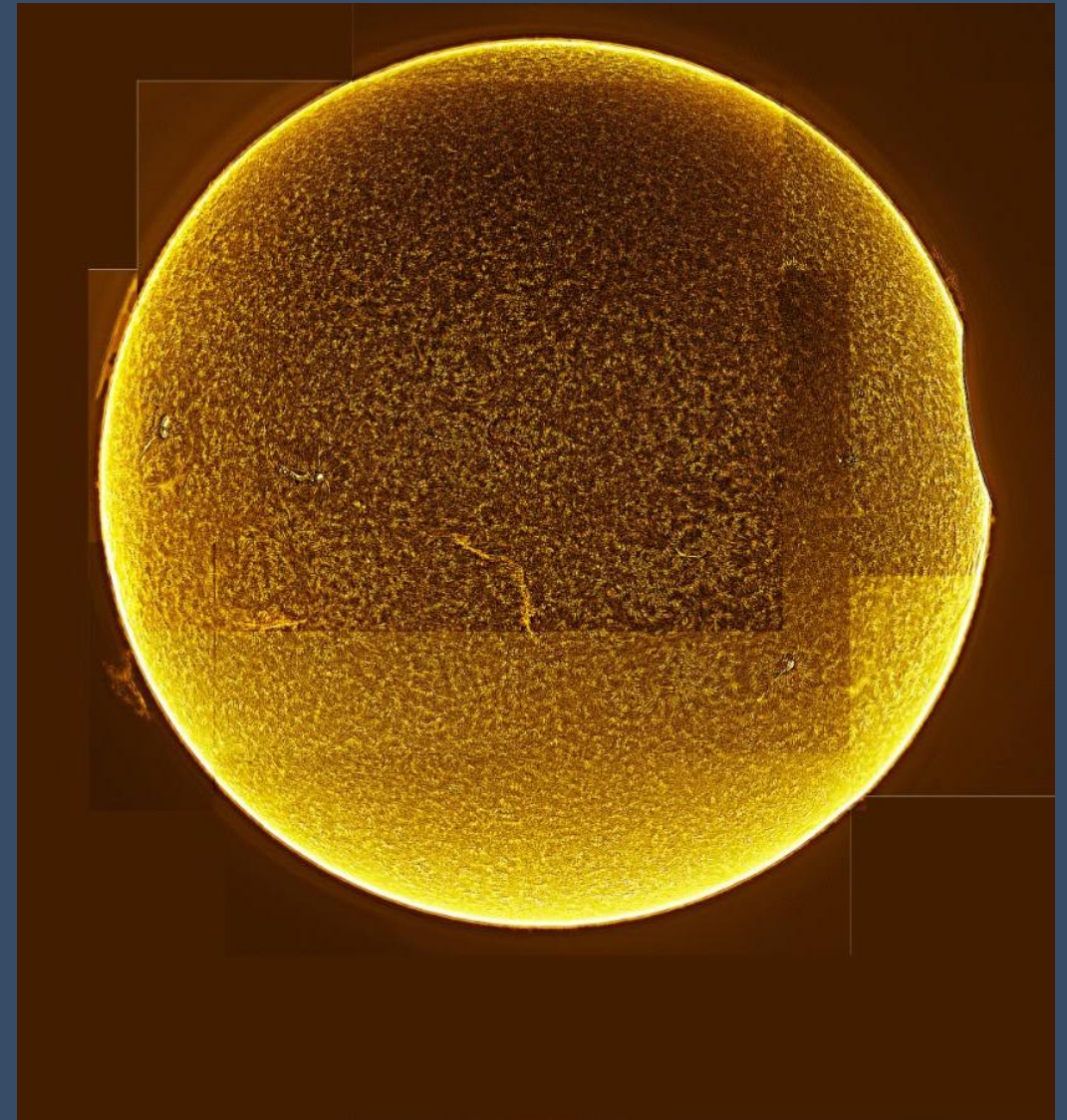


Photo: Rahul J. Venkatraman

Diamond Rings

Seconds from totality, the last point of sunlight blazes beside the Moon's silhouette—the fleeting “diamond ring.”



Photo: Rahul J. Venkatraman

Corona during Totality

At totality, the Moon completely covers the Sun's bright surface, revealing the delicate corona streaming into the darkened sky. From MS Spitsbergen, Daisy also reported a large solar prominence, with Jupiter, Mercury and Venus visible nearby.

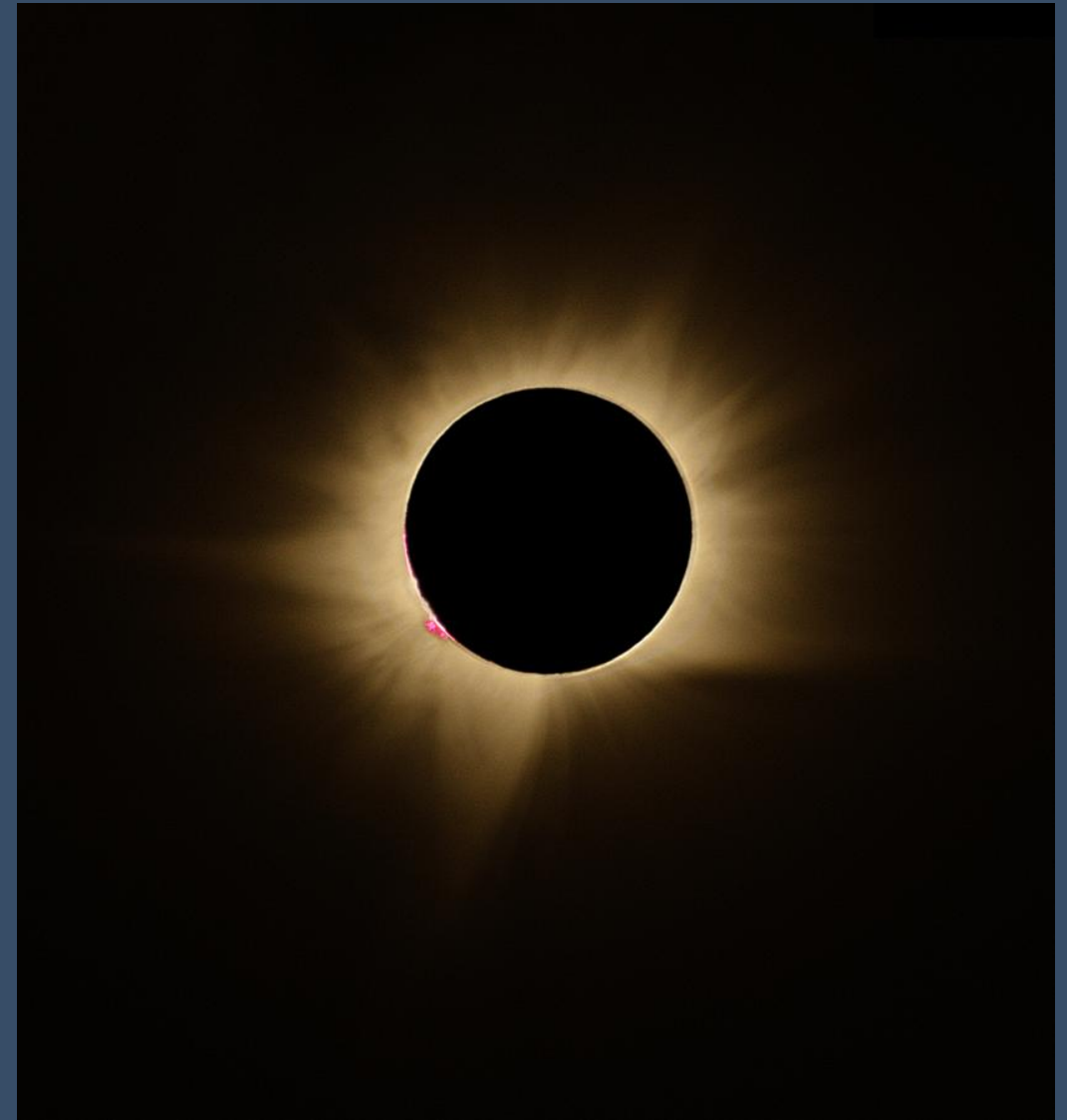


Photo: Rahul J. Venkatraman

History & Culture

East Greenland has historically been less populated than the west, but it has still been populated since the Saqqaq-Kultur, the first to come to Greenland (2.500 BCE)

In Myggbugta we saw the weather station and trappers hut build by Norwegians in 1922. This building and other in the area justified Norwegians claims for the Erik the red Land many years latter.

In Ittoqqortoormiit we visited a community of 300, a best example of small community, how they live and survive in this sometimes harsh environment



Flavours of Greenland

During your voyage you had the possibility to experience our destination with all senses, including taste!

During the Greenlandic dinners hosted by local chefs Inunnguaq Hegelund and Heidi Andersen you had the chance to explore the ingenuity of local flavours and craftsmanship.





Natural History

East Greenland is among the wildest, most untouched areas of the planet, with a population of zero in the National Park. Monumental landscapes, made of rocks that are three billion years old, home to beautiful if dangerous wildlife, are dwarfing all human structures (like our ship).

The younger Earth History, namely the ice ages, is responsible for the omnipresence of vast and deep fjords, with Scoresby Sound being by far the largest fjord system in the world.

Geology

Hardly anywhere else on our planet are the various periods of Earth's History so obviously on display as they are in East Greenland. From the 2-billion-year-old baserock in Scoresby Sound to the nearly undamaged layers of Eleanor Sound to the seemingly fresh, but nearly 400 million years old conglomerates of the famous Old Red Continent — the country's development becomes clear to the eye. The stark contrast between the very old processes and the very young events — namely the ice ages which are responsible for the fjords, glaciers, moraines and the present shape of the Arctic land masses — is nothing short of overwhelming.





Ice

On this voyage we encountered practically no sea ice at all, but glacier ice in all its varieties: Depending on the size, the density and the characteristics of the calving process we can look at immense blocks of glacier surfaces that have merely detached from the glacier front, being of medium density, or marvel at deep-blue, translucent pieces of high-density blocks of ice, sitting deep in the water.



NASA Globe Cloud Observer

Together with our Environmental Scientist Steffen you observed the clouds and submitted your observations to NASA GLOBE Observer on 5 occasions, collecting 40 observations, all in sync with the satellite flyover. All participants have received positive feedback from NASA in all cases

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

Arctic Tundra

East Greenland surpassed many of your expectations when it came what could be found on Arctic tundra landscapes. Summer had melted the snow and revealed landscapes both green with grass, and with a surprising amount and variety of flora. Between cracks in the rocks and over the rolling hills, Arctic plants flourished in places often unexpected.

Memorable moments included your landing at Terrassevig, where the nodding saxifrage plant crept out from underneath boulders, and at Frydendal where the dwarf fireweed covered the valley in a blanket of purple.



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 490 observations of 115 different species. This effort contributes to the creation of 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](#)





Science Boat

82 eager participants joined our 11 science boats in Myggbukta, Ymer Ø, Blomsterbukta, Terrassevig, Rødepynt, Raffles Ø, Nøkkeldal and Roma Glacier, to study plankton and the hydrography of our destination.

You helped monitor ocean clarity through participation in the Secchi Disk citizen science study, contributing to important research on the distribution of phytoplankton blooms and collecting water profiles for the marine database EMODnet.

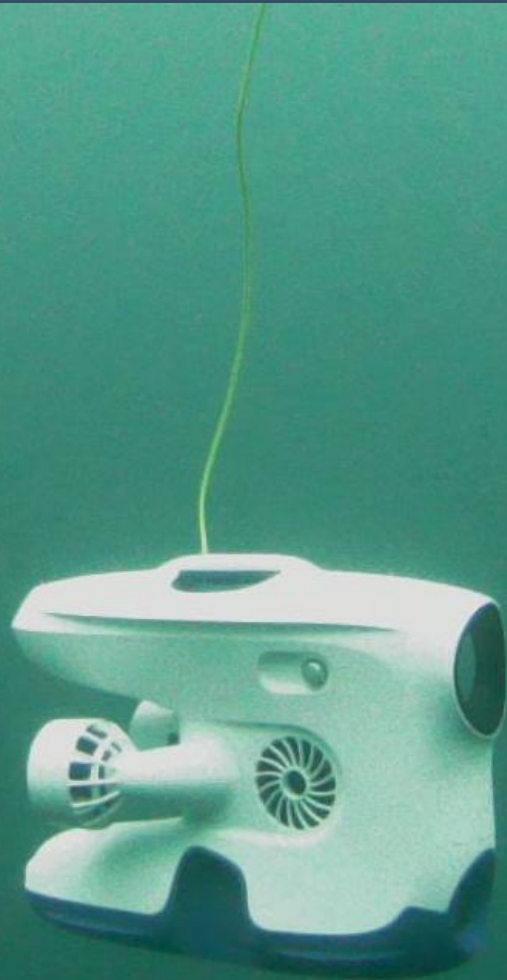
[View our data](#) submitted to the Secchi Disk Project

Plankton Samples

Using the samples taken on your science boats, you dove into the underwater world of plankton back in the on board Science Centre. Despite the fjords of East Greenland being covered by ice for much of the year, we managed to collect a range of different organisms. Despite their small size, plankton are essential for the development and maintenance of the wider oceanic food web.

Tiny diatom phytoplankton of the genus *Chaetoceros*, were found linked together in chains when viewed under the microscopes. In the world of zooplankton, our finds included *Calanus* copepods, comb jellies, and sea butterflies belonging to the group of marine snails known as Pteropods





Underwater Drone

During our cruising in Bjørne Øer we used our Blueye Pioneer underwater drones to explore the underwater world of Scoresby Sound.

View the highlights from our underwater drone footage [on YouTube](#)



Wildlife List — Birds





Wildlife List – Seabirds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Fulmarus glacialis</i>	northern fulmar	Eissturmvogel	fulmar boreal
<i>Ardenna gravis</i>	great shearwater	Kappensturmtaucher	puffin majeur
<i>Ardenna grisea</i>	sooty shearwater	Dunkler Sturmtaucher	puffin fuligineux
<i>Puffinus puffinus</i>	manx shearwater	Schwarzschnabelsturmtaucher	puffin des anglais
<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>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 aalge</i>	common guillemot (common murre)	Trottellumme	guillemot marmette
<i>Uria lomvia</i>	Brünnich's guillemot (thick-billed murre)	Dickschnabellumme	guillemot de brünnich

Auks

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

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

Unlike other seabirds, Auks lack the ability to store the food in form of stomach oil, so the adults bring fresh food to their chicks in their beak or in their pouch.



Wildlife List — Shore birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
<i>Charadrius hiaticula</i>	common ringed plover	Sandregenpfeifer	pluvier grand-gravelot
<i>Calidris alba</i>	sanderling	Sanderling	bécasseau sanderling
<i>Calidris alpina</i>	dunlin	Alpenstrandläufer	bécasseau variable
<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>Branta leucopsis</i>	barnacle goose	Weißwangengans	bernache nonnette
<i>Somateria mollissima</i>	common eider	Eiderente	eider à duvet
<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>Lagopus muta</i>	rock ptarmigan	Alpenschneehuhn	Lagopède alpin
<i>Oenanthe oenanthe</i>	northern wheatear	Steinschmätzer	traquet motteux
<i>Corvus corax</i>	northern (common) raven	Kolkrabe	grand corbeau
<i>Plectrophenax nivalis</i>	snow bunting	Schneeammer	bruant des neiges



eBird

During our Wildlife Watches, our ornithologist Andres conducted detailed seabird surveys, recording observations for the citizen science platform eBird. We recorded 30 different species of birds in 37 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



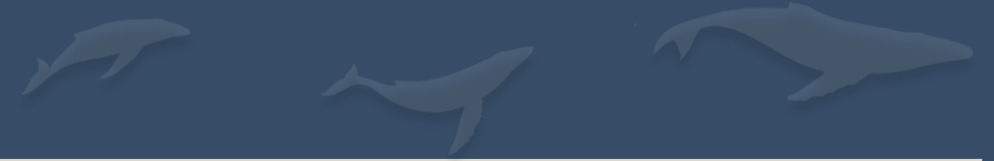


Polar Bear

Polar bears are one of the species many of you hoped to see in East Greenland. Despite the challenges of the landscape, and the sparse distribution of polar bears in this region, we were lucky enough to see a bear swimming twice around the islands of the aptly named Bjørnøer, or, the Bear Islands.

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>Ursus maritimus</i>	polar bear	Eisbär	ours blanc
<i>Erignathus barbatus</i>	bearded seal	Bartrobbe	phoque barbu
<i>Pagophilus groenlandicus</i>	harp seal	Sattelrobbe	phoque du Groenland
<i>Balaenoptera acutorostrata</i>	common Minke whale	Zwergwal	petit rorqual
<i>Balaenoptera physalus</i>	fin whale	Finnwal	rorqual commun
<i>Megaptera novaeangliae</i>	humpback whale	Buckelwal	baleine à bosse



Happywhale

The Expedition Team submitted pictures of the identifying features of the marine mammals that we encountered to the citizen science platform, Happywhale. In total, two observations were submitted for your voyage.

Happywhale allows for the following of individual whales and other marine mammals, to learn about their life history and migratory routes. This helps us better understand these fascinating creatures and contributes to their conservation.

[View our submissions](#) to Happywhale



Wildlife List — Land Mammals



Wildlife List – Land mammals



SCIENTIFIC NAME		ENGLISH	DEUTSCH	FRANÇAIS
<i>Vulpes lagopus</i>		Arctic fox	Polarfuchs	renard arctique
<i>Lepus arcticus</i>		Arctic hare	Polarhase	lièvre arctique
<i>Ovibos moschatus</i>		muskox	Moschusochse	boeuf musqué

**Thank you for
participating!**

THX

