



Science & Education Report

MS Fridtjof Nansen 2025

MS Fridtjof Nansen

Elemental Iceland — Circular Saga
from Reykjavík

24 May 2025 — 31 May 2025





Credit: Martin Hain/HX

Science & Education Program

From the volcanic beaches of the south to the glacier-carved fjords of the northwest, the Science and Education Team journeyed with you around Iceland's entire coast, uncovering the wonders of this unique island nation.

Through lectures, hands-on workshops, and cultural experiences ashore—from Heimaey's lava fields to the cliffs of the Westfjords—we explored Iceland's resilient wildlife, rich cultural heritage, and the powerful natural forces that continue to shape its landscapes.

We hope these shared moments—spotting whales off the northern coast, listening to the seabirds of Látrabjarg, or walking through centuries of geological history—have deepened your appreciation for Iceland and sparked a lasting curiosity for the natural world.



Science & Education Program

Aboard HX vessels, we are guests in Iceland's wild and ever-changing landscapes, but through citizen science, you've become part of something bigger. Science is for everyone, happening everywhere, every day, and your participation makes a difference.

By observing wildlife, collecting data, and contributing to global research projects, you've forged a deeper connection with Iceland's ecosystems, from seabird cliffs to volcanic shores.

This journey doesn't end here. You have the tools to keep exploring, documenting, and protecting nature wherever you go. Together, we can turn curiosity into action, fostering a future where people and the planet thrive.

Credit: Martin Barreiro/HX

History

Your journey through the north of Iceland has taken you into landscapes shaped by fire, ice, and ancient myths. Standing at the edge of Goðafoss—the “Waterfall of the Gods”—you may have imagined the moment when pagan idols were cast into the falls, a powerful story still carried in the roar of the water.

At Lake Mývatn, you walked among craters, lava formations, and steaming geothermal fields that revealed just how alive this land remains. The eerie beauty of Dimmuborgir and the sulfurous terrain of Námaskarð showed the wild creativity of Iceland’s volcanic forces, while the serene waters of the Mývatn Nature Baths offered a quiet moment to take it all in.

In the Diamond Circle, you explored dramatic contrasts—from the thunder of Dettifoss, one of Europe’s most powerful waterfalls, to the silent embrace of Ásbyrgi canyon, where ancient floods carved a lush horseshoe-shaped haven. These landscapes don’t just tell Iceland’s story—they invite us into it. We hope these sights and moments will stay with you, reminding you of the deep connection between nature, culture, and curiosity.



History

Your visit to the Snæfellsnes Peninsula offered a taste of Iceland in miniature—from volcanic peaks to black pebble beaches, lava caves, and dramatic coastal cliffs. One of the most iconic sights was Kirkjufell, the steep, solitary mountain rising above Grundarfjörður. Whether admired up close or viewed alongside the photogenic Kirkjufellsfoss waterfall, it's easy to see why this landscape has captured imaginations for centuries.

As you explored Djúpalónssandur's lava-strewn shoreline, ventured into the depths of Vatnshellir cave, or walked the cliffs of Arnarstapi, you stepped into a region shaped as much by story as by stone. Some say Kirkjufell resembles the back of a dragon, others believe it's home to huldufólk—the hidden people of Icelandic folklore. Onboard, Icelandic musician Andri Ivars brought these cultural threads to life through music, humour, and storytelling. From snow-covered volcanic slopes to tales whispered by the wind, Snæfellsnes continues to blur the line between myth and geology, reminding us that the landscape is never just scenery in Iceland. It's a story still being told.



History

During your visit to Ísafjörður, you may taste a local beer called *Sæunn*, named after a very special cow.

For decades, beer was banned in Iceland due to concerns about alcoholism. The ban was lifted on March 1st, 1996, which is now celebrated as "Beer Day" across the country.

The story of *Sæunn* begins when a farmer was ordered to bring some of his cows to slaughter. While walking them down to the fjord, one cow broke away, jumped into the water, and swam across to the other shore. There, another farmer saw her, laughed at the sight, and decided to care for her. Six months later, the cow gave birth to a calf, lived for six more years, and was finally buried by the beach.

When the farmer started brewing beer, he named it after the brave cow. Every year, women swim across the fjord to honour *Sæunn*'s legendary swim.



Geology

Kirkjufell's striking shape tells a deeper story of Iceland's ever-changing landscape. Layer by layer, the mountain reveals a history shaped by both fire and ice—built from volcanic rock and ash, then sculpted by powerful glaciers over thousands of years.

Its steep slopes and exposed strata are the result of repeated glacial advances during the Ice Ages of the Pleistocene, carving away softer material and leaving behind the distinctive peak we see today. Kirkjufell stands not only as a beautiful landmark, but as a natural archive of Iceland's dynamic geological past—a place where the forces of eruption and erosion continue to meet.





Wildlife Watch

As we sailed around Iceland's rugged coastlines, you were invited to step out on deck and take in the ever-changing seascape—cliffs, rolling swells, and skies teeming with birdlife. But the most memorable moments often came in stillness, as we scanned the horizon together in quiet anticipation.

Throughout the journey, we encountered an incredible range of seabirds: Northern gannets diving with precision, puffins skimming just above the waves, eider ducks drifting along rocky shores, and countless others adding movement and character to the coastal air. Each sighting brought the shoreline to life, reminding us that even the most remote edges of the world are full of energy, pattern, and purpose.

These encounters are more than passing impressions—they are reminders to stay curious, to look a little longer, and to care for the fragile web of life that depends on these cold northern waters.

NASA Cloud Observer

During our voyage, we contributed to NASA's **GLOBE Cloud Observations**, collecting data on:

- **May 26th** (Ísafjörður)
- **May 28th** (Húsavík)

By comparing your ground-based observations with satellite measurements, scientists can refine cloud classifications, enhance climate models, and improve weather predictions—advancing our understanding of Earth's atmosphere and climate.

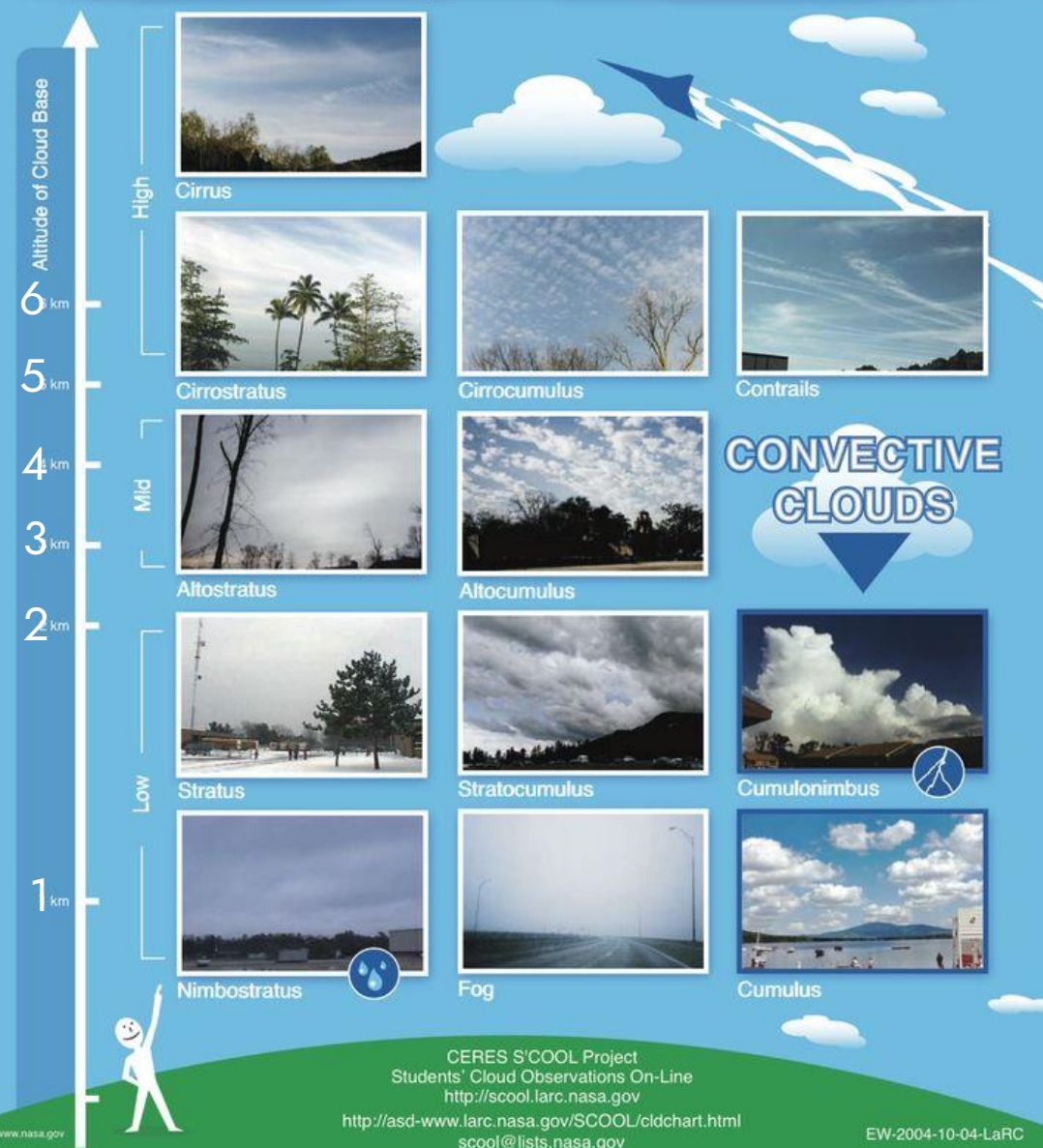
Curious to continue? You can keep observing and submitting data from home using the **GLOBE Observer** app, turning everyday cloud-watching into real scientific impact.

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





S'COOL Cloud Identification Chart



NASA Cloud Observer

High Clouds (Base above 6,000 meters):

Cirrus: Thin, wispy clouds composed of ice crystals. They often appear as delicate streaks or feathery wisps high in the sky.

Cirrostratus: Thin, sheet-like clouds that cover large portions of the sky. They can create a halo around the sun or moon.

Cirrocumulus: Small, fluffy clouds in a regular pattern, resembling fish scales or ripples.

Medium Clouds (Base between 2,000 and 6,000 meters):

Altostratus: Puffy, grayish-white clouds with rounded edges. They often form parallel rows or patches.

Altostratus: Thick, grayish clouds that partially obscure the sun or moon. They lack the distinct features of cirrostratus.

Low Clouds (Base below 2,000 meters):

Stratus: Uniform, grayish clouds that cover the sky like a blanket. They can bring drizzle or light rain.

Stratocumulus: Low, lumpy clouds with defined edges. They often appear in rows or patches.

Nimbostratus: Thick, dark gray clouds associated with steady rain or snow.

Remember that these cloud types can vary in appearance and behaviour, but this basic classification helps meteorologists understand weather patterns and atmospheric conditions. If you'd like to explore more examples, you can check out NASA's [On-Line Cloud Chart](#).

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

iNaturalist

Throughout this voyage, you played a vital role in documenting the incredible biodiversity of Iceland.

By capturing and submitting images of wildlife and plant life, you contributed to a global effort to track species distribution and monitor ecosystems across some of Iceland's most remote and ecologically rich coastlines.

Together, we gathered:

221 Observations

82 Species Identified

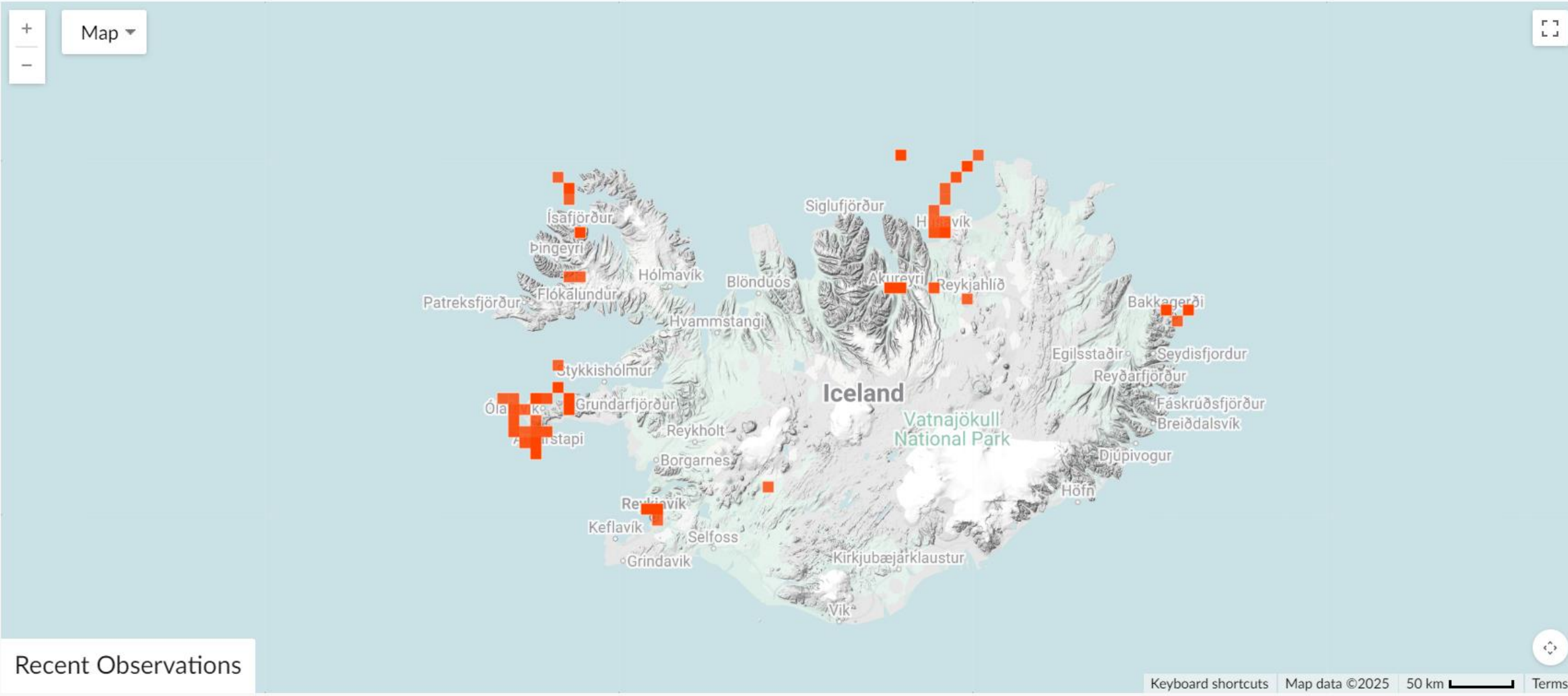
9 Observers Participating

Click on the **link** to view our collective data and see the impact of your contributions:

View our [data](#) on the iNaturalist website

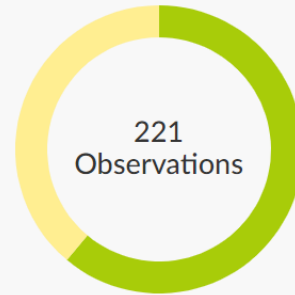


Map of Observations

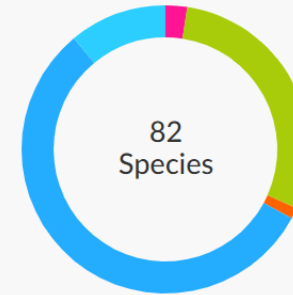


FNICE2506 – MS Fridtjof Nansen 24-31.5.2025

Stats



● Research Grade
● Needs ID
● Casual



● Unknown
● Protozoans
● Fungi
● Plants
● Chromista
● Mollusks
● Insects
● Arachnids
● Ray-Finned F...
● Amphibians
● Reptiles
● Birds
● Mammals
● Other Animals

Recent Observations →

[View All](#)



Sea Campion
Silene uniflora

1 1d



Sea Thrift
Armeria maritima

1 1d



Roseroot
Rhodiola rosea

1 1d



Black-legged Kittiwake
Rissa tridactyla

1 1d



eBird

Bird-watching isn't just a hobby—it's a powerful tool for science. eBird, a global citizen science platform, allows bird enthusiasts to record and share sightings, contributing valuable data for research and conservation.

During our voyage, our onboard ornithologists conducted wildlife watches, completing 7 checklists and recording 38 bird species along the way.

Every entry adds to a growing database that helps scientists track migration patterns, monitor populations, and understand bird behaviour in remote regions like Antarctica. Scan the QR code to explore our data and see how your observations contribute to a global effort in avian research:

View our [data](#) on the eBird website

FNICE2506 MS Nansen: Reykjavik to Reykjavik (24-31 May 2025)

24 – 31 May 2025 (8 days)

Public

 Iceland

Austurland | Norðurland eystra |

Vestfirðir | Vesturland

 Science Coordinator, Marcus Bergström





Photo: Ingvild Riska

Plankton Samples

Back in the science centre, we brought the ocean into focus—examining our water samples under the microscope to uncover the hidden world of **phytoplankton** and **zooplankton**.

Using microscopes, we projected magnified images onto the screen, allowing everyone to see the intricate details of these tiny organisms. Smaller binocular microscopes offered a hands-on experience, inviting you to search for life in each drop of water.

The samples revealed a world dominated by diatoms, a type of phytoplankton that forms the foundation of the marine food web. What seemed invisible to the eye became a vivid reminder that even the smallest life forms shape this vast and wild ecosystem.

A) *Isopod* - zooplankton



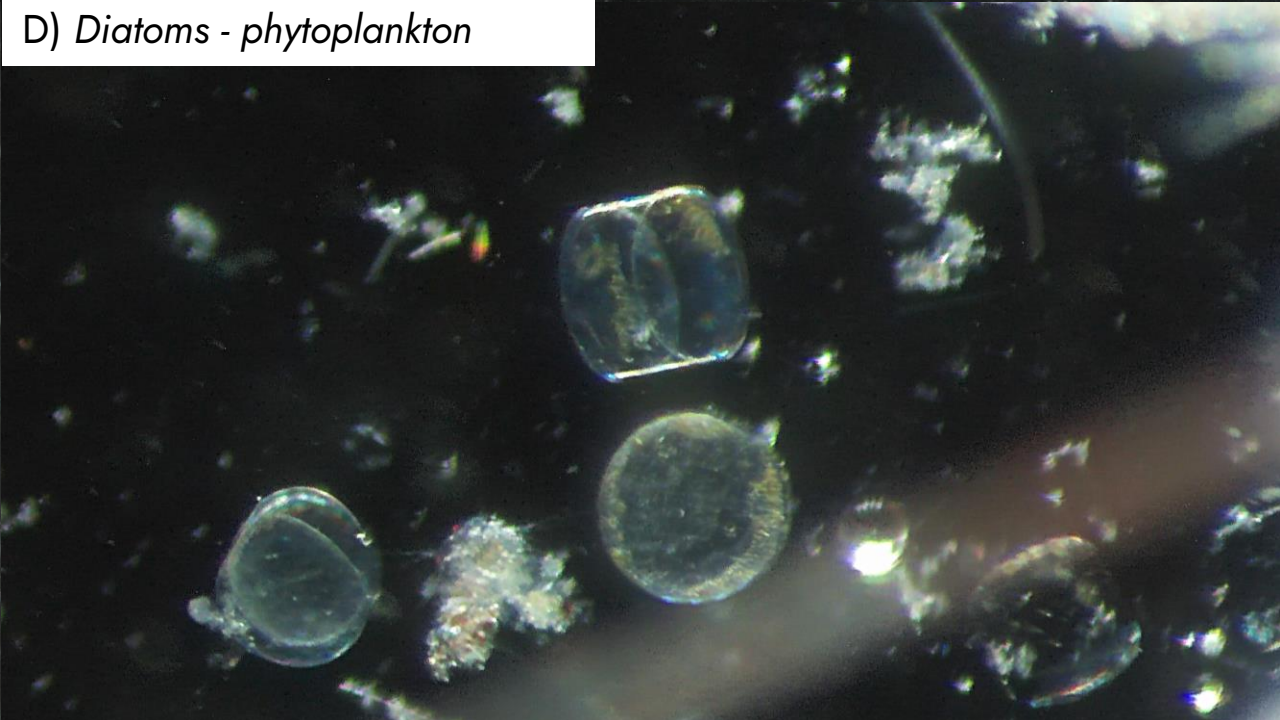
B) *Copepod* - zooplankton



C) *Medusa* - zooplankton



D) *Diatoms* - phytoplankton



Wildlife List - Birds



Wildlife List – Seabirds

Scientific name	English	Deutsch	Français	Norsk	24	25	26	27	28	29	30	31
<i>Fulmarus glacialis</i>	Northern Fulmar	Eissturmvogel	Fulmar boréal	Havhest	x	x	x	x	x	x	x	x
<i>Ardena gravis</i>	Great Shearwater	Großer Sturmtaucher	Puffin majeur	Storlire								
<i>Puffinus puffinus</i>	Manx Shearwater	Atlantiksturmtaucher	Puffin des Anglais	Havlire							x	
<i>Oceanodroma leucorhoa</i>	Leach's Storm Petrel	Wellenläufer	Océanite cul-blanc	Stormsvale								
<i>Chroicocephalus ridibundus</i>	Black-headed Gull	Lachmöwe	Mouette rieuse	Hettemåke	x	x	x	x			x	
<i>Morus bassanus</i>	Northern Gannet	Basstölpel	Fou de Bassan	Havsule	x	x			x	x	x	
<i>Larus argentatus</i>	Herring Gull	Silbermöwe	Goéland argenté	Gråmåke	x	x	x	x	x	x	x	
<i>Larus fuscus</i>	Lesser Black-backed Gull	Heringsmöwe	Goéland brun	Sildemåke	x	x	x	x	x	x	x	x
<i>xxLarus glaucoides</i>	Iceland Gull	Polarmöwe	Goéland arctique	Grønlandsmåke		x						
<i>Larus hyperboreus</i>	Glaucous Gull	Eismöwe	Goéland bourgmestre	Polarmåke	x	x	x		x	x	x	
<i>Larus marinus</i>	Great Black-backed Gull	Mantelmöwe	Goéland marin	Svartbak	x	x	x	x	x	x	x	x
<i>Pagophila eburnea</i>	Ivory Gull	Elfenbeinmöwe	Mouette blanche	Ismåke								
<i>Rissa tridactyla</i>	Black-legged Kittiwake	Dreizehenmöwe	Mouette tridactyle	Krykkje	x	x	x	x	x	x	x	x
<i>Xema sabini</i>	Sabine's Gull	Schwalbenmöwe	Mouette de Sabine	Sabinemåke								
<i>Sterna paradisaea</i>	Arctic Tern	Küstenseeschwalbe	Sterne arctique	Rødnebbterne	x	x	x	x	x	x	x	x
<i>Phalacrocorax aristotelis</i>	European Shag	Krähenscharbe	Cormoran huppé	Toppskarv								
<i>Phalacrocorax carbo</i>	Great Cormorant	Kormoran	Grand Cormoran	Storskarv			x					
<i>Stercorarius longicaudus</i>	Long-tailed Skua/Jaeger	Falkenraubmöwe	Labbe à longue queue	Fjelljo								
<i>Stercorarius parasiticus</i>	Arctic Skua	Schmarotzerraubmöwe	Labbe parasite	Tyvo		x	x	x	x	x	x	
<i>Stercorarius pomarinus</i>	Pomarine Skua/Jaeger	Spatelraubmöwe	Labbe pomarin	Polarjo								
<i>Stercorarius skua</i>	Great Skua	Skua	Grand Labbe	Storjo					x	x	x	
<i>Alca torda</i>	Razorbill	Tordalk	Petit Pingouin	Alke		x		x	x			
<i>Alle alle</i>	Little Auk/Dovekie	Krabbentaucher	Mergule nain	Alkekonge								
<i>Fratercula arctica</i>	Atlantic Puffin	Papageitaucher	Macareux moine	Lunde	x	x	x		x	x	x	x
<i>Cephus grylle</i>	Black Guillemot	Gryllteiste	Guillemot à miroir	Teist	x	x	x	x	x	x	x	x
<i>Uria aalge</i>	Common Guillemot	Trottellumme	Guillemot marmette	Lomvi	x	x	x	x	x	x	x	
<i>Uria lomvia</i>	Brünnich's Guillemot	Dickschnabellumme	Guillemot de Brünnich	Polarlomvi			x		x	x		

Wildlife List – Waterbirds

Scientific name	English	Deutsch	Français	Norsk	24	25	26	27	28	29	30	31
<i>Cygnus cygnus</i>	Whooper Swan	Singschwan	Cygne chanteur	Sangsvane			x					
<i>Anas acuta</i>	Northern Pintail	Spießente	Canard pilet	Stjertand								
<i>Anas crecca</i>	Eurasian Teal	Krickente	Sarcelle d'hiver	Krikkand								
<i>Anas platyrhynchos</i>	Mallard	Stockente	Canard colvert	Stokkand	x	x	x	x	x	x	x	x
<i>Anser anser</i>	Greylag Goose	Graugans	Oie cendrée	Grågås	x					x		
<i>Anser brachyrhynchus</i>	Pink-footed Goose	Kurzschnabelgans	Oie à bec court	Kortnebbgås								
<i>Anser caerulescens</i>	Snow Goose	Schneegans	Oie des neiges	Snøgås								
<i>Branta bernicla</i>	Brant Goose	Ringelgans	Bernache cravant	Ringgås		x						
<i>Branta canadensis</i>	Canada Goose	Kanadagans	Bernache du Canada	Kanadagås								
<i>Branta leucopsis</i>	Barnacle Goose	Weißwangengans	Bernache nonnette	Hvitkinngås								
<i>Bucephala islandica</i>	Barrow's Goldeneye	Spatelente	Garrot d'Islande	Islandsand				x	x			
<i>Clangula hyemalis</i>	Long-tailed Duck	Eisente	Harelde kakawi	Havelle		x	x	x	x	x		
<i>Aythya marila</i>	Greater Scaup	Bergente	Fuligule milouinan	Bergand								
<i>Histrionicus histrionicus</i>	Harlequin Duck	Kragenente	Arlequin plongeur	Harlekinand		x	x	x	x			
<i>Mareca penelope</i>	Eurasian Wigeon	Pfeifente	Canard siffleur	Brunnakke				x	x			
<i>Melanitta nigra</i>	Common Scoter	Trauerente	Macreuse noire	Svartand								
<i>Mergus merganser</i>	Common Merganser	Gänsesäger	Grand Harle	Laksand								
<i>Mergus serrator</i>	Red-breasted Merganser	Mittelsäger	Harle huppé	Siland	x	x	x	x	x	x	x	x
<i>Somateria mollissima</i>	Common Eider	Eiderente	Eider à duvet	Ærfugl	x	x	x	x	x	x	x	x
<i>Somateria spectabilis</i>	King Eider	Prachteiderente	Eider à tête grise	Praktærfugl								
<i>Spatula clypeata</i>	Northern Shoveler	Löffelente	Canard souchet	Skjeand								
<i>Aythya fuligula</i>	Tufted Duck	Reiherente	Fuligule morillon	Toppand				x				
<i>Charadrius hiaticula</i>	Common Ringed Plover	Sandregenpfeifer	Pluvier grand-gravelot	Sandlo		x	x	x	x	x	x	
<i>Pluvialis apricaria</i>	European Golden Plover	Goldregenpfeifer	Pluvier doré	Heilo		x	x	x	x	x	x	
<i>Pluvialis squatarola</i>	Grey Plover	Kiebitzregenpfeifer	Pluvier argenté	Tundralo								
<i>Gavia immer</i>	Common Diver/Loon	Eistaucher	Plongeon huard	Islom					x			
<i>Gavia stellata</i>	Red-throated Diver/Loon	Sterntaucher	Plongeon catmarin	Smålom				x	x	x		
<i>Haematopus ostralegus</i>	Eurasian Oystercatcher	Austernfischer	Huïtrier pie	Tjeld	x	x	x	x	x	x	x	x
<i>Podiceps auritus</i>	Slavonian/Horned Grebe	Ohrentaucher	Grèbe esclavon	Horndykker				x				
<i>Arenaria interpres</i>	Ruddy Turnstone	Steinwälzer	Tournepieuvre à collier	Steinvender		x	x					

Wildlife List – Waterbirds

Scientific name	English	Deutsch	Français	Norsk	24	25	26	27	28	29	30	31
<i>Calidris canutus</i>	Red Knot	Knutt	Bécasseau maubèche	Polarsnipe		x	x					
<i>Calidris alba</i>	Sanderling	Sanderling	Bécasseau sanderling	Sandløper								
<i>Calidris alpina</i>	Dunlin	Alpenstrandläufer	Bécasseau variable	Myrsnipe		x	x					
<i>Calidris maritima</i>	Purple Sandpiper	Meerstrandläufer	Bécasseau violet	Fjæreplytt		x	x					
<i>Gallinago gallinago</i>	Common Snipe	Bekassine	Bécassine des marais	Enkeltbekkasin		x	x	x	x	x		
<i>Limosa limosa</i>	Black-tailed Godwit	Uferschnepfe	Barge à queue noire	Svarthalespove		x	x	x	x	x		
<i>Numenius phaeopus</i>	Whimbrel	Regenbrachvogel	Courlis corlieu	Småspove		x	x	x	x	x		
<i>Phalaropus fulicarius</i>	Grey/Red Phalarope	Thorshühnchen	Phalarope à bec large	Polarsvømmesnipe								
<i>Phalaropus lobatus</i>	Red-necked Phalarope	Odinshühnchen	Phalarope à bec étroit	Svømmesnipe			x	x	x			
<i>Tringa totanum</i>	Common Redshank	Rotschenkel	Chevalier gambette	Rødstilk		x	x	x	x	x		

Wildlife List – Landbirds

Scientific name	English	Deutsch	Français	Norsk	24	25	26	27	28	29	30	31
<i>Haliaeetus albicilla</i>	White-tailed Eagle	Seeadler	Pygargue à queue blanche	Havørn		x						
<i>Calcarius lapponicus</i>	Lapland Bunting/Longspur	Spornammer	Plectrophane lapon	Lappspurv								
<i>Plectrophenax nivalis</i>	Snow Bunting	Schneeammer	Plectrophane des neiges	Snøspurv		x			x	x		
<i>Columba livia</i>	Rock Dove	Felsentaube	Pigeon biset	Klippedue (Bydue)								
<i>Corvus corax</i>	Northern Raven	Kolkrabe	Grand Corbeau	Ravn		x	x	x	x	x	x	
<i>Falco columbarius</i>	Merlin	Merlin	Faucon émerillon	Dvergfalk								
<i>Falco peregrinus</i>	Peregrine Falcon	Wanderfalke	Faucon pèlerin	Vandrefalk								
<i>Falco rusticolus</i>	Gyr Falcon	Gerfalke	Faucon gerfaut	Jaktfalk								
<i>Acanthis flammea</i>	Common Redpoll	Birkenzeisig	Sizerin flammé	Gråsisik								
<i>Anthus pratensis</i>	Meadow Pipit	Wiesenpieper	Pipit farlouse	Heipiplerke		x	x	x	x	x	x	
<i>Motacilla alba</i>	White Wagtail	Bachstelze	Bergeronnette grise	Linerle	x	x	x	x	x	x	x	x
<i>Oenanthe oenanthe</i>	Northern Wheatear	Steinschmätzer	Traquet motteux	Steinskvett							x	
<i>Passer domesticus</i>	House Sparrow	Hausperling	Moineau domestique	Gråspurv								
<i>Lagopus lagopus</i>	Willow Ptarmigan	Moorschneehuhn	Lagopède des saules	Lirype				x	x			
<i>Bubo scandiacus</i>	Snowy Owl	Schneeeule	Harfang des neiges	Snøugle								
<i>Sturnus vulgaris</i>	European Starling	Star	Étourneau sansonnet	Stær	x	x	x	x	x	x	x	x
<i>Turdus iliacus</i>	Redwing	Rotdrossel	Grive mauvis	Rødvingetrost	x	x	x	x	x	x	x	x
<i>Turdus merula</i>	Common Blackbird	Amsel	Merle noir	Svarttrost								
<i>Regulus regulus</i>	Goldcrest	Wintergoldhänchen	Roitelet huppé	Fuglekonge				x				



Atlantic Puffin (*Fratercula Arctica*)



Atlantic Puffin (*Fratercula Arctica*)



Atlantic Puffin (*Fratercula Arctica*)

Credit: Marcus Bergström/HX



Atlantic Puffin (*Fratercula Arctica*)



Atlantic Puffin (*Fratercula Arctica*)

Wildlife List - Marine Mammals



Wildlife List – Marine Mammals



Scientific Name	English	Deutsch	Français
<i>Halichoerus grypus</i>	Grey seal	Kegelrobbe	Phoque gris
<i>Globicephala melas</i>	Long-finned pilot whale	Grindwal	Globicephale noir
<i>Balaenoptera musculus</i>	Blue whale	Blauwal	Baleine bleue
<i>Megaptera novaeangliae</i>	Humpback whale	Buckelwal	Baleine à bosse
<i>Orcinus orca</i>	Orca	Schwertwal	Orque
<i>Balaenoptera acutorostrata</i>	Minke Whale	Zwergwal	Petit rorqual
<i>Physeter macrocephalus</i>	Sperm Whale	Pottwal	Cachalot
<i>Lagenorhynchus albirostris</i>	White-beaked Dolphin	Weißschnauzendelfin	Dauphin à bec blanc

A photograph of two whales swimming in deep blue water. A large, semi-transparent watermark 'IX' is overlaid on the image. The text 'Connect With Your Inner Scientist' is centered in white.

Connect With Your Inner Scientist