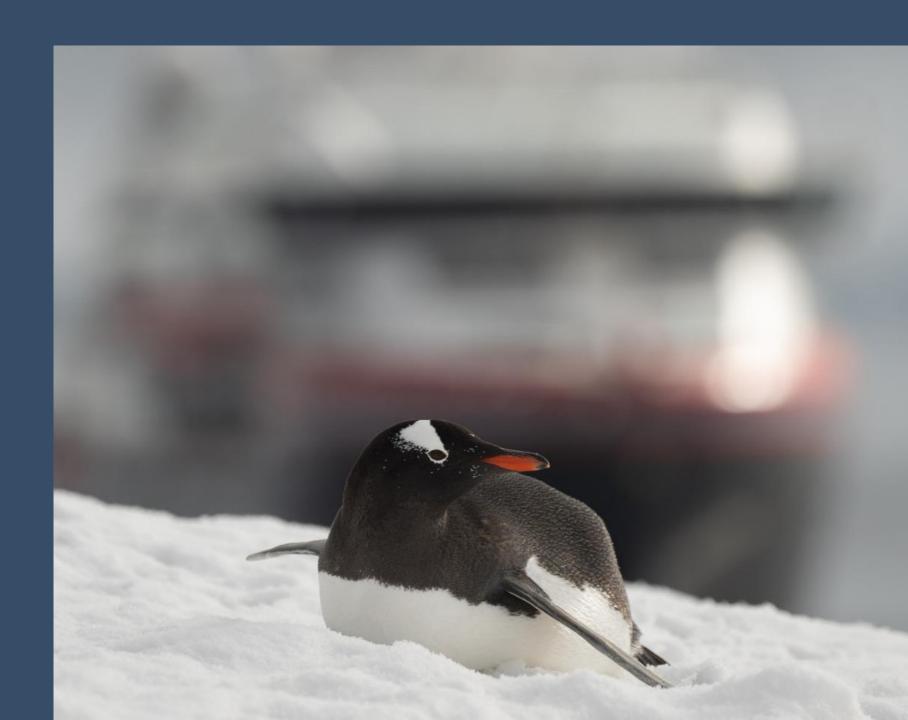


MS FRIDJOF NANSEN

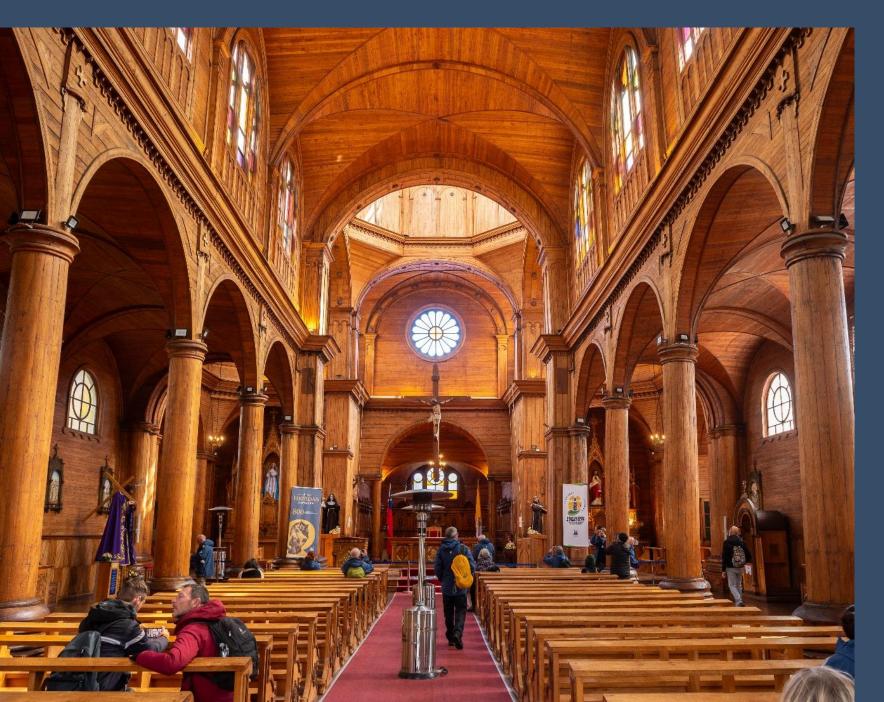
Patagonia & Antarctica Southbound Expedition





Science & education program

The science and education team onboard accompanied you on an expedition cruise island hopping through the Chilean fjords, across the Drake Passage and to Antarctica. Through lectures, discovery sessions and visits ashore we aimed to make every expedition day a memorable and unique learning experience.



History & Culture: A Touch of Chilean Culture

While sailing along the coast of Chile we visited the communities of Castro and Puerto Natales. Local guides a given us a introduction to their culture and daily life whilst we visited landmarks like the beautiful wooden church in Castro. Onboard we have had talks on subjects like the Fuegians - the indigenous inhabitants of Tierra del Fuego.



History & Culture: In the wake of the explorers

On our voyage we visited several sites connected to the great Antarctic explorers. Our sailing route have often trailed the voyage of the legendary Belgica expedition -going through de Gerlache Strait and landing on Wiencke Island. On board we have had presentations on the life and travels of explorers like Fridtjof Nansen, Ernest Shackleton and Roald Amundsen. On Deception Island we observed the remains on the whaling station and we have discussed the damaged the whaling industry did to the Antarctic environment. Also, on our visits to The Damoy Hut and Brown Station we learned about the history of science in the Antarctic.





NASA cloud observer

We conducted three observations in total during this voyage, from Valparaiso to the Peninsula. The results from just outside of Puerto Natales, on November 9th, are as follows. Our observation differs from the satellite overviews, and therefore will complement the satellite data to improve the models, providing more information about how the atmosphere behaves from below up to the top. Thank you for your interest and help!

View our data on the global map

Observation	GLOBE	GOES-16 Satellite	<u>Terra Satellite</u>
Universal Date/Time	2024-11-09 13:10:00	2024-11-09 13:07	2024-11-09 13:14
Latitude	-51.76	-52.08 to -51.44	-52.13 to -51.33
Longitude	-72.5	-72.82 to -72.18	-72.88 to -72.08
Total Cloud Cover	Scattered (25-50%)	Broken 58.73%	Broken 63.73%
High Clouds	Cover: Scattered (25-50%)	No Clouds	Cover: Few (6.07%) Altitude: 6.74 (km) Phase: Ice/Water Mix 235.18 (K) Opacity: Translucent
Mid Clouds	Cover: Isolated (10-25%)	Cover: Broken 52.38% Altitude: 2.71 (km) Phase: Water 265.88 (K) Opacity: Translucent	Cover: Scattered 36.76% Altitude: 3.49 (km) Phase: Ice/Water Mix 259.83 (K) Opacity: Translucent
Low Clouds	Cumulus Stratocumulus Cover: Scattered (25-50%)	Cover: Few (6.35%) Altitude: 1.62 (km) Phase: Water 273.81 (K) Opacity: Translucent	Cover: Isolated 20.91% Altitude: 1.31 (km) Phase: Ice/Water Mix 276.51 (K) Opacity: Translucent
GLOBE Cloud Photos and Corresponding NASA Satellite Images. Click image to view> Note: Photos submitted though GLOBE need approval before being displayed, this may take a few days.	North East South West Up Down	GOES-16 Visible Infrared GEO Tutorial	Worldview Worldview Tutorial

NASA cloud observer

You were quite a few to assist Jean and Mario during the observations. We conducted three observations in total during this voyage, from Valparaiso to the Peninsula. The results from just outside of Puerto Natales, on November 9th, are as follows. Our observation differs from the satellite overviews, and therefore will complement the satellite data to improve the models, providing more information about how the atmosphere behaves from below up to the top. Thank you for your interest and help!

<u>View our data</u> on the global map



Geological Highlight

Our first stop in Antarctica was Deception Island in the South Shetland Islands. This active volcano boasts a stunning landscape shaped by eruptions. The submerged caldera is surrounded by towering volcanic basalt cliffs. In Telefon Bay, we explored black sand beaches, saw fumaroles, and observed penguins, seals, and seabirds thriving in the geothermal warmth. Deception Island is a living laboratory for volcanology and glaciology, offering geologists a unique and unforgettable experience.

iNaturalist

We submitted 671 observations identifying 151 species from planktonic creatures to marine mammals and birds. We submitted 90 species of birds and 16 species of mammal. The most observed species were the Black-browed Albatross followed by the South American Tern. Thank you all very much for your participation!

View our data submitted on our <u>iNaturalist</u> <u>project</u>







About

Leave & 44

Shared observations from guests and Expedition Team onboard MS Fridtjof Nansen during the expedition cruise "Antarctica and Patagonia Expedition (Southbound)" from 1st -18th November, aiming to collect data on the local biodiversity.

Read More >

Your Membership

PROJECT MEMBERS ONLY

■ Project Journal

View All

Overview

671 **OBSERVATIONS** 151 SPECIES 96 **IDENTIFIERS** 16 **OBSERVERS**



Recent Observations (





520

Sponges Phylum Porifera





Antarctic Starfish

Odontaster validus



Most Species dougiewainwright

J 1 2h



Most Observed Species Black-browed Albatross

U4 4 days ago Orcinus orca Southern Royal Albatross U2 6 days ago Striated Caracara

South American Sea Lion

J 2 7 days ago



Science Boat

During our voyage we studied the abundance and types of plankton present in our sampling locations. This included taking a plnkton sample, recording water conditions using our 'CTD', and using a Secchi disk to record water clarity, indicating the amount of plankton present.

Date	Location	Depth (m)	Temp (°c)
13.11.24	Deception Island	12.5	-1.5
14.11.24	Leith Cove	8.2	-0.2
15.11.24	Paradise Bay	6.4	1

<u>View our data</u> submitted to the Secchi Disk Project



Plankton samples

Plankton are ocean drifters transported by currents and tides, and the lack of ability to navigate against these natural forces. Animals (zooplankton) and plant-like algae (phytoplankton), play a key role in supporting the marine food web and health of our oceans.

During our science boat sessions we collected plankton samples in Telefon Bay (Deception Island), Leith Cove (Damoy Point), and Paradise Bay.

The image on the left shows a variety of phytoplankton and a copepod (crustacean), the sample was taken from Paradise Bay.



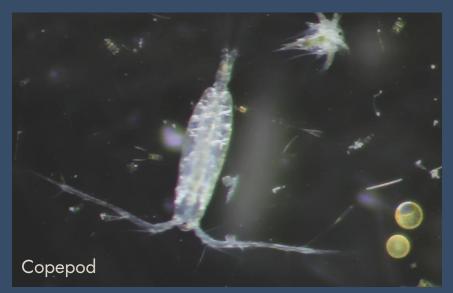
Phytoplankton

Diatoms are a type of phytoplanktonic cells which external skeleton is made of silica. They underpin the bottom of the marine food web as they, like plants on land, convert sunlight into energy and oxygen and also sequester carbon dioxide. This function is provided by the green coloured pigment, chlorophyll which you can observe in the picture on the left.

The left image shows some 'Corethron' diatoms — their specialised silica spines are thought to be used for protection against predators and to help them stay afloat near the waters surface.









Zooplankton

Zooplankton are the animal component of plankton, and are weakly swimming small organisms and larvae.

In Castro we managed to find zoea larvae, a developed larval stage of crab complete with long protective spines and compound eye (top left and right). We also found porcelean crab larvae (bottom right) with it's spectacuarly long spine, and copepods (bottom left). Copepods are torpedo shaped small crustaceans and are important food sources for larger animals.









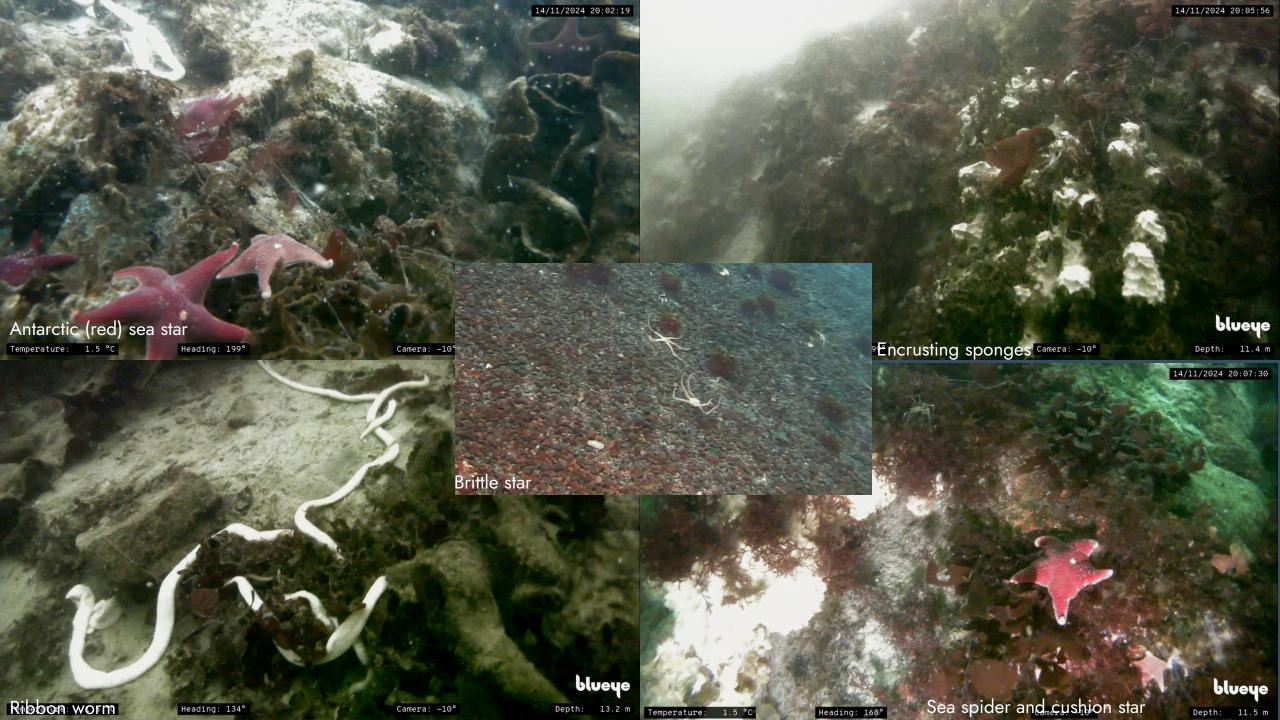
Some Bigger Beasties...

At Damoy Point we also found some slightly bigger creatures, including amphipods (kidney bean shaped marine crustaceans), and ispopods (flattened crustaceans), which fill an important role in the ecosystem by feeding on detritus.

Underwater Drone

Using our underwater drone 'Dora' we explored the underwater marine environment at Telefon Bay - Deception Island, and Leith Cove — Damoy Point. We discovered the surprisingly colourful benthic zone and noticed marine creatures including brittle and cushion stars, ribbon worms, encrusting sponges, Antarctic sea urchins and feather worms.









Whilst onboard our ORCA marine conservationist, Dawn, undertook 32 hours of surveying over a distance of 593km.

Highlights: 5 burmeister's porpoise recorded in the Chilean fjords, not perhaps the most charismatic cetaceans, but a rare sighting indeed and providing us with vital data as so little is known about these enigmatic, secretive animals!

We have seen 8 different species, fin, sei and killer whale, beaked whale, burmeisters porpoise and dusky dolphin, peale's and Chilean dolphin.







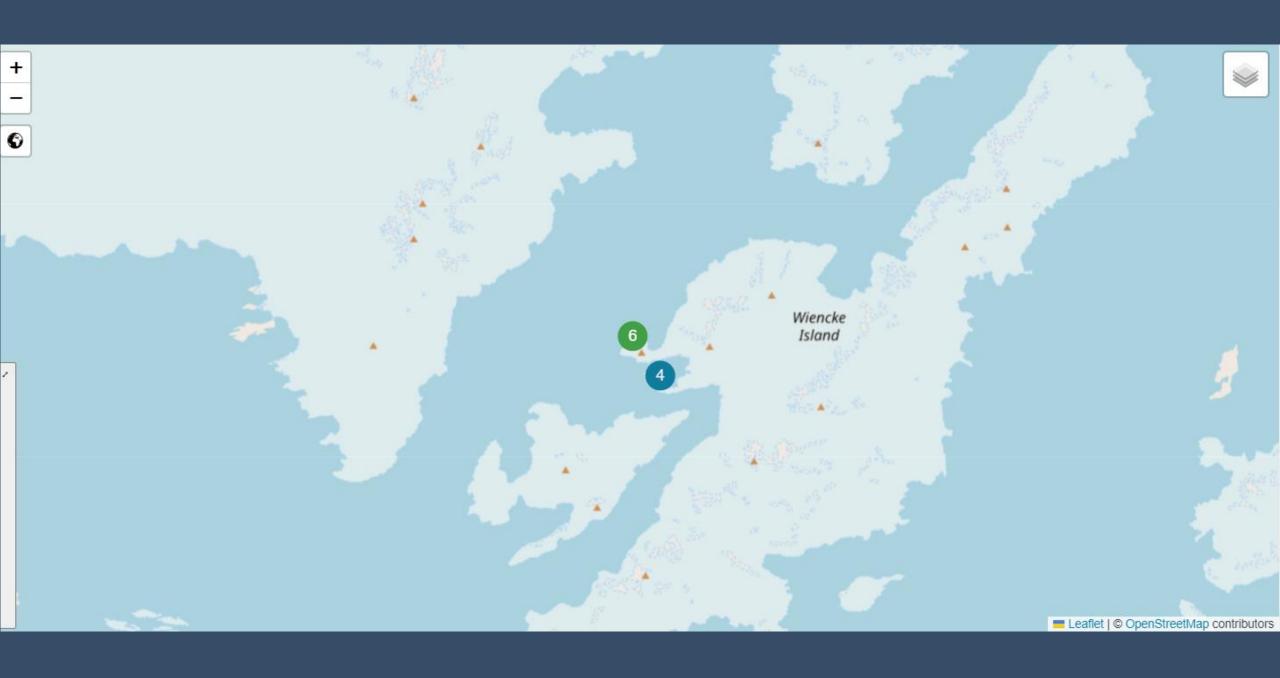
HappyWhale

This voyage was a total success in terms of whale sightings: 20 flukes were submitted to the platform, 14 of them returning a match. 3 individual were identified as female after being seen with their calves.

Additionnally, 3 Weddell seal photos were submitted.

In parallel, we submitted our data to the VCAPS- IAATO program, with more than 100 humpback whale sighitngs for the whole voyage! Thank you so much for helping us gathering amazing pictures and moments!

View our data on the global map





Wildlife List — marine mammals

Cetaceans — whales, dolphins and porpoises

												No	vem	ber							
Scientific name	English	Deutsch	Français	Norsk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Balaenoptera physalus	Fin Whale	Finnwal	Rorqual commun	Finhval											•						•
Balaenoptera borealis	Sei Whale	Rorqual de Rudolphi	Seiwal	Seihval										•	•						
Megaptera novaeangliae	Humpback Whale	Buckelwal	Baleine à bosse	Knølhval											•		•		•		
Balaenoptera bonarensis	Antarctic Minke Whale	Sűdlicher Zwergwal	Petit Rorqual de l'Antarctique	Sørlig Vågehval														•			
Orcinus orca	Killer Whale or Orca	Orca o Schwertwal	Orque	Spekkhogger													•				
Cephalorhyncus eutropia	Chilean Dolphin	Weißbauchdelfin	Céphalorhynque noir	Chiledelfin				•					•								
Lagenorhynchus obscurus	Dusky Dolphin	Schwarzdelfin	Lagénorhynque obscur	Mørkdelfin					•												
Lagenorhynchus australis	Peale's Dolphin	Peale-Delfin	Lagénorhynque de Peale	Peales delfin				•													

Wildlife List — marine mammals



MS Fridtjof Nansen – Wildlife List

True seals, eared seals and other marine mammals

		November																			
Scientific name	English	Deutsch	Français	Norsk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Otaria byronia	South American Sea lion	Mähnenrobbe	Lion de mer d'Amérique du Sud	Søramerikansk sjøløve			•	•	•		•			•	•						
Arctocephalus australis	South American Fur Seal	Südamerikanische r Seebär	Otarie à fourrure australe	Søramerikansk pelssel			•		•												
Leptonychotes weddellii	Weddell Seal	Weddelrobbe	Ohoque de Weddell	Weddellsel													•	•	•		
Hydrurga leptonyx	Leopard Seal	Léopard de mer	Seeleopard	Leopardsel															•		
Mirounga leonina	Southern Elephant Seal	Eléphant de mer austral	Südlicher See- Elefant	Sydlig sjøelefant													•				

Wildlife List — marine mammals

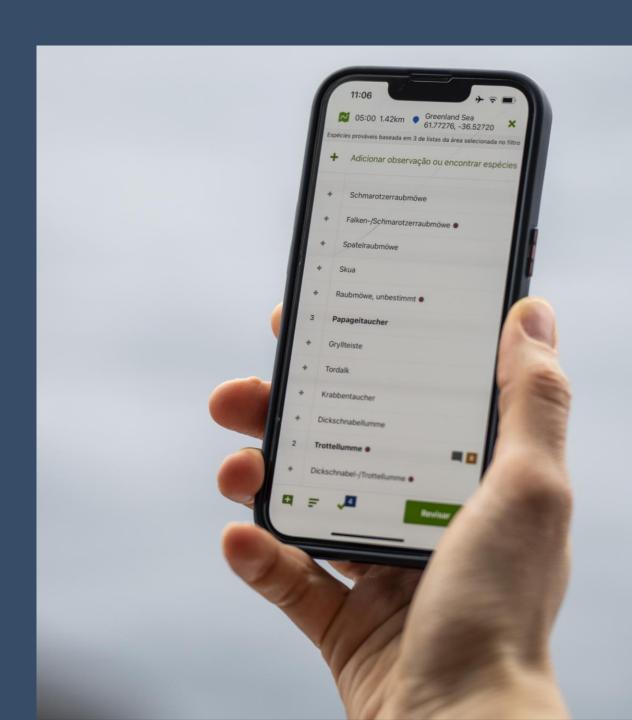
Land Mammals

												Nove	emb	er							
Scientific name	English	Deutsch	Français	Norsk	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Lama guanicoe	Guanaco											•									
Lycalopex griseus	South American Gray Fox											•									
Puma concolor	Puma	Puma										•									

eBird

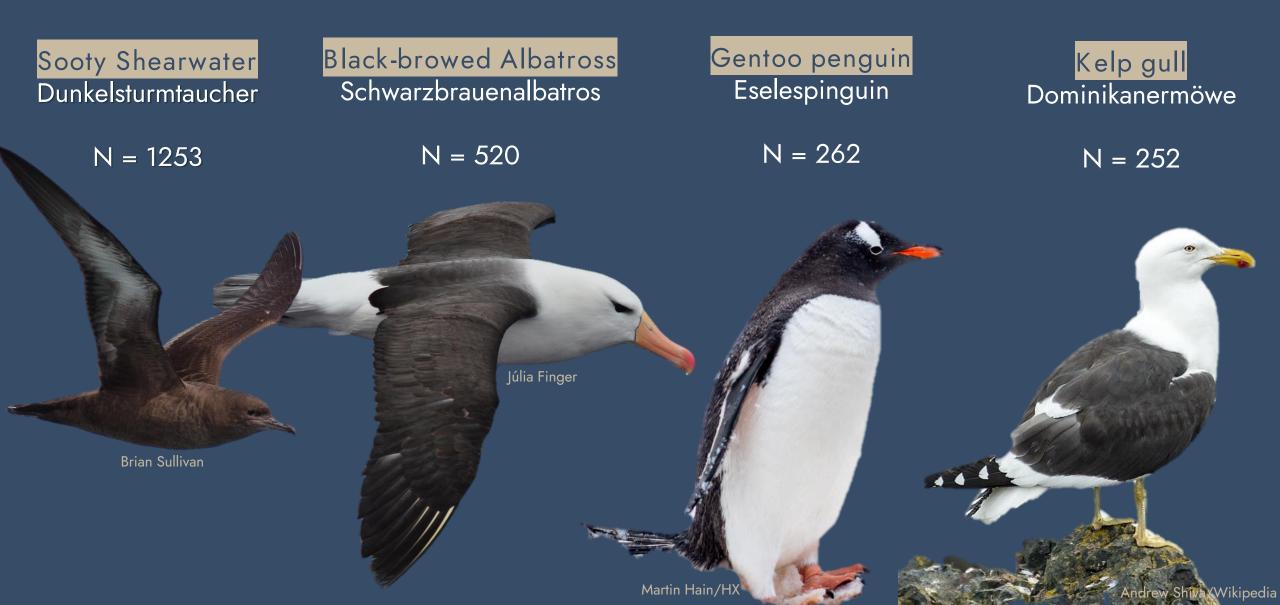
During this voyage, our ornithologists, Júlia and Marcus, did 49 surveys between Valparaiso, the Western Antarctic Peninsula and Ushuaia. A total of 97 species were observed and 4,025 individuals counted. The top observed species were Gentoo Penguin, the Kelp Gull, the Southern Fulmar and the Cape Petrel.

Find the trip report for the voyage and the checklists here.





Most abundant species



Trip Report on eBird



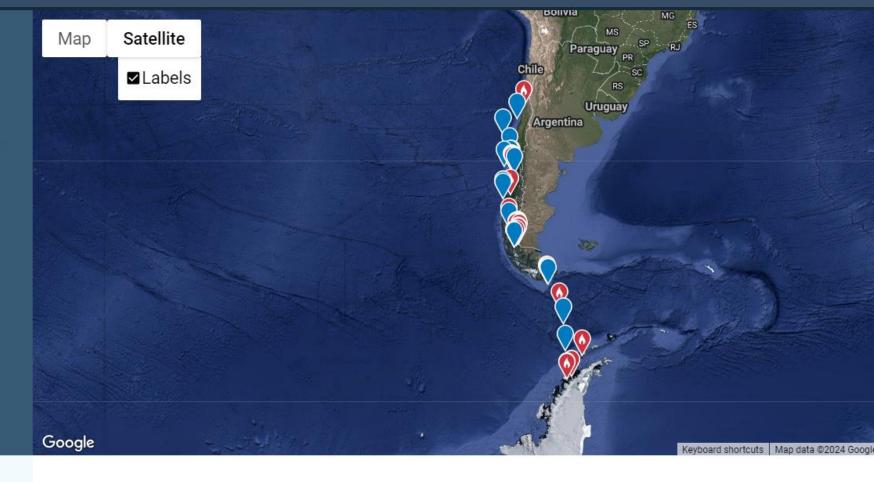
MS Fridtjof Nansen 2024 -Patagonia and Antarctica (Southbound)

1 – 18 Nov 2024 (18 days) Public

Antarctica | Chile | Subregions

Science Coordinator, Julia Victoria Grohmann Finger, Marcus Bergström





HX Expedition
Chilean Fjords and Antarctica

Edit narrative

DATA FOR: Group (all people) -







Trip Report on eBird



eBird Chile CHECKLIST S201667294

Thu 7 Nov 2024 09:45 Edit date and effort

Angostura White--Puerto Pinto Natales County, Magallanes, Chile Edit location

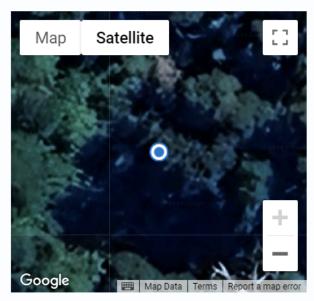
Share



Marcus Bergström

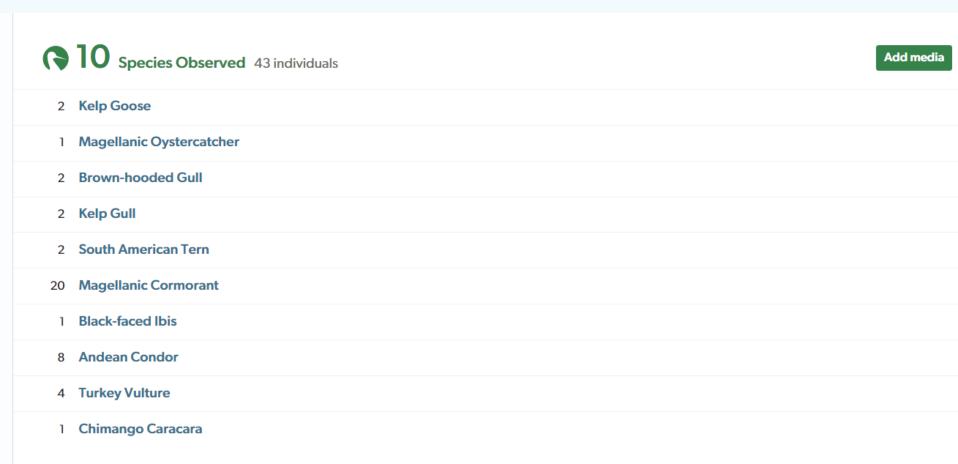
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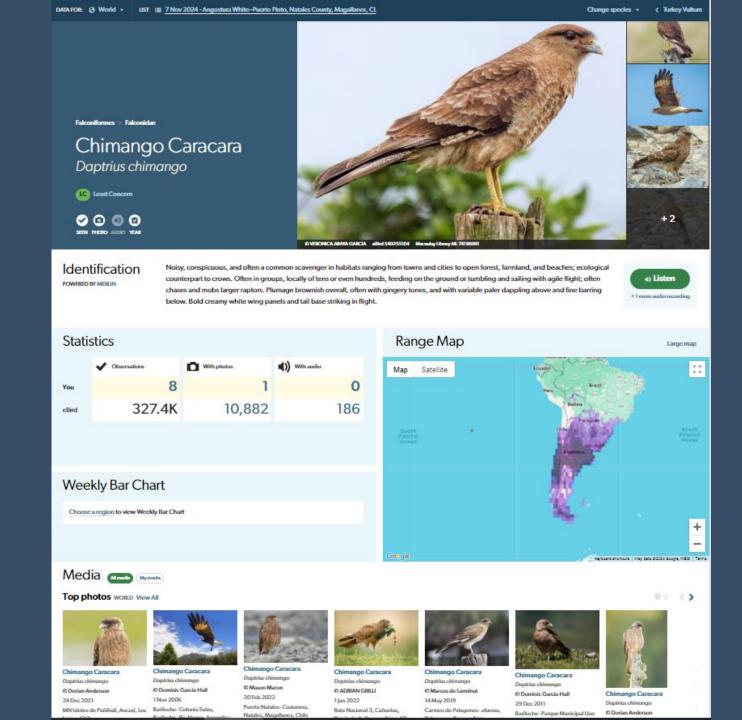
å 1 hr, 54 min



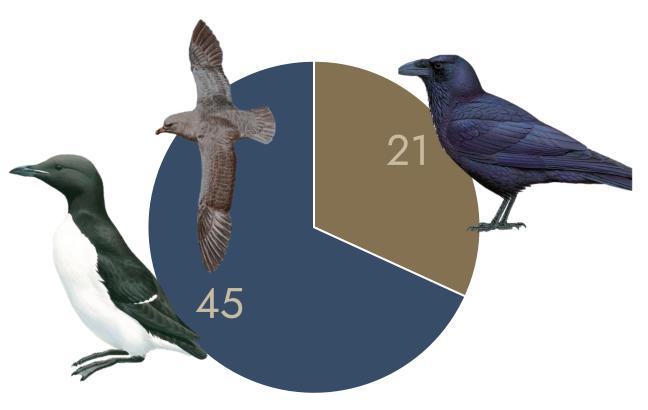
eBird Mobile Tracks

Submitted from eBird for Android, version 3.1.2

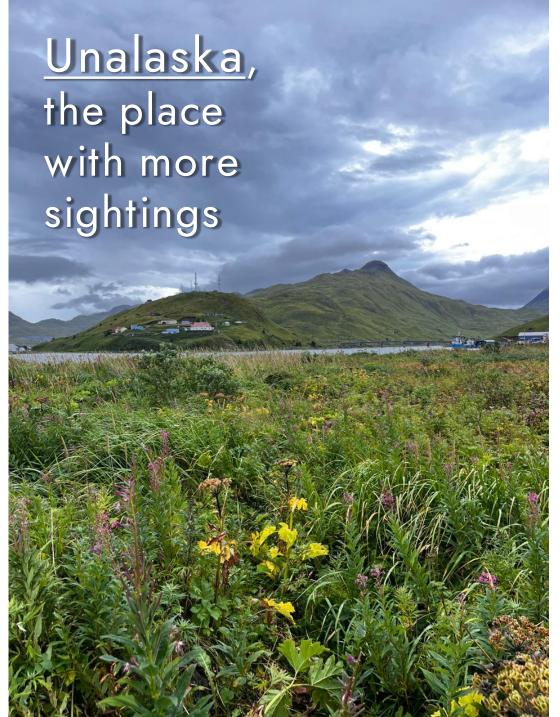


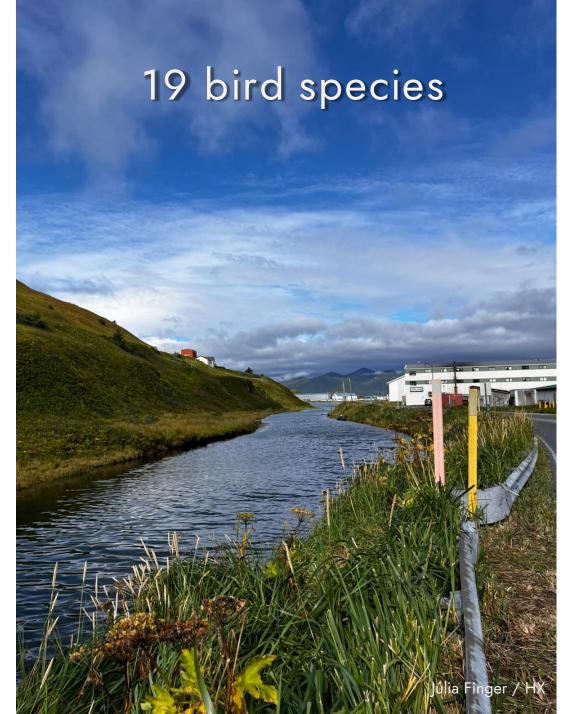


Habitat



■ Terrestrial ■ Water







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Antarctica | Chile | Subregions

Science Coordinator, Julia Victoria Grohmann Finger, Marcus Bergström

HX Expedition

Chilean Fjords and Antarctica

Edit narrative



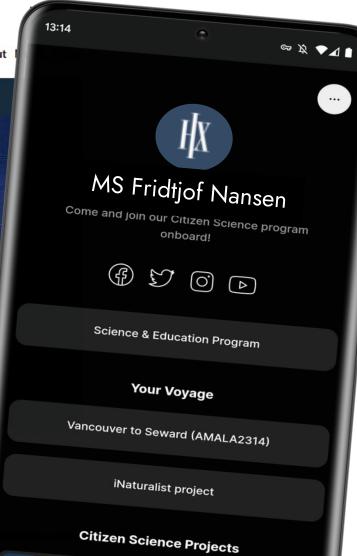
97

Species Observed

47 Checklists

a 31

Species with Photos



NASA GLOBE Observer

ebird

eBird

Wildlife List - Birds

Wildlife List — Seabirds

Leucocarbo bransfildensis EN: Antarctic Shag FR: Cormoran antarctique DE: Antarktisscharbe NO: Antarktisskarv 南极鸬鹚	х		x	x	x	x	х	
Stercorarius chilensis EN: Chilean Skua FR: Labbe du Chili DE: Chileskua NO: Kanelio 智利贼鸥	x	8		2 6				
Stercorarius antarcticus EN: Subantarctic Brown Skua FR: Labbe antarctique DE: Subantarktikskua NO: Sørhavsjo	x						x	
Stercorarius maccormicki EN: South Polar Skua FR: Labbe de McCormick DE: Antarktikskua NO: Sørjo 麦氏贼鸥			x	x	x	x	x	
Larus dominicanus EN: Kelp Gull FR: Goéland dominicain DE: Dominikanermöwe NO: Taremåke 黑背鸥	x		х	x	x	x	х	

Wildlife List – Seabirds

Sterna vittata EN: Antarctic Tern FR: Sterne couronnée DE: Antarktische seechwalbe NO: Sørhavsterne 南极燕鸥			x		x	x	x		
Sterna hirundinacea EN: South American Tern ER: Sterne hirundinacée DE: Falklandseechwalbe NO: Svaleterne 南美燕鸥	x								
Chionis albus EN: Snowy Sheathbill FR: Chionis blanc DE: Weißgesicht- Scheidenschnabel NO: Antarktisslirenebb			x	x	x		x		
Diomeda epomophora EN: Southern Royal Albatross FR: Albatros royal DE: Königsalbatros NO: Kongealbatross 南方皇信天翁								x	
Diomeda exulans EN: Wandering Albatross ER: Albatros hurleur DE: Wanderalbatros NO: Vandrealbatross 漂泊信天翁									x

Wildlife List — Seabirds

Thalassarche chrysostoma EN: Grey-headed Albatross FR: Albatros à tête grise DE: Graukopfalbatros NO: Gråhodealbatross 灰头信天翁		x	x	x							
Thalassarche melanophris EN: Black-browed Albatross FR: Albatros à sourcils noirs DE: Schwarzbrauenalbatros NO: Svartbrynalbatross 黑眉信天翁		x	x	x				50		x	x
Phoebetria palpebrata EN: Light-mantled Albatross FR: Albatros fuligineux DE: Graumantelalbatros NO: Gråalbatross 灰背信天翁	1		x							x	
Macronectus giganteus EN: Southern Giant Petrel FR: Pétrel géant DE: Riesensturmvogel NO: Sørkjempepetrell 巨鸌		x	x		x	x	x		x		x
Macronectus halli EN: Northern Giant Petrel ER: Pétrel de Hall DE: Hallsturmvogel NO: Nordkjempepetrell 霍氏巨鹱											

Wildlife List — Seabirds

Eulmarus glacialoides EN: Southern Fulmar FR: Fulmar argenté DE: Silbersturmvogel NO: Sørhavhest 银灰暴风鹱		x	х	x	x	x			
Daption capense EN: Cape Petrel FR: Damier du Cap DE: Kapsturmvogel NO: Flekkpetrell 花斑鸌			x				x	x	x
Thalassoica antarctica EN: Antarctic Petrel FR: Pétrel antarctique DE: Antarktissturmyogel NO: Antarktispetrell 南极鹱									
Procellaria aeguinoctialis EN: White-chinned Petrel ER: Puffin à menton blanc DE: Weißkinn-Sturmvogel NO: Hvithakepetrell 白颏风鹱	of agraph 2000 65 of dead		x					x	
Ardenna grisea EN: Sooty Shearwater FR: Puffin fuligineux DE: Dunkelsturmtaucher NO: Grålire 灰鹱		x	х						

Wildlife List – Seabirds

Halobalaena caerulea EN: Blue Petrel FR: Prion bleu DE: Blausturmvogel NO: Blåpetrell 蓝鹱	The part of the pa	х								
Pachyptila desolata EN: Antarctic Prion FR: Prion de la Désolation DE: Taubensturmyogel NO: Antarktishvalfugl 鸽锯鹱			x				P.			
Pachyptila belcheri EN: Slender-billed Prion ER: Prion de Belcher DE: Dünnschnabel-Sturmvogel NO: Smalnebbhvalfugl 细嘴锯鹱										
Pagodroma nivea EN: Snow Petrel FR: Pétrel des neiges DE: Schneesturmvogel NO: Snøpetrell 雪鸌	X						×			
Oceanites oceanicus EN: Wilson's Storm Petrel FR: Océanite de Wilson DE: Buntfuß-Sturmschwalbe NO: Wilsonstormsvale 黃蹼洋海燕		x	x	x	x	x		x	x	

Wildlife List — Seabirds

Fregetta tropica

EN: Black-bellied Storm Petrel

FR: Océanite à ventre noir

DE: Schwarzbauch-

Sturmschwalbe

NO: Svartbukstormsvale

黑腹舰海燕



x x

