Science & Education Report

MS Fridtjof Nansen

Highlights of Antarctica

30 December 2025 – 9 January 2026

History & Culture

On our voyage we discussed the explorers that charted the part of the Antarctic Peninsula we have been sailing in. We have talked about how Charcot and his French expedition overwintered on Petermann Island from January to November 1909 at the same spot as where we made our landing. When we sailed through the Lemaire Channel we were following the same journey Adrian de Gerlache and his ship *Belgica* did in 1898.

From the ship we could see the British base at Port Lockroy established in 1944 as a part of the Tabarin wartime operation, and we talked through how science programmes have been used to further national claims to the Antarctic. On Deception Island we sailed past the old Norwegian whaling station, active from 1912–1931, and we reflected on the damage whaling did on the environment as well as on the lives of the men involved.

GLOBE Cloud Observer for NASA

On this Highlights of Antarctica expedition we conducted four GLOBE Cloud Observation sessions and sent our data off to NASA!

Thank you to the 42 Cloud Observers who participated in the program, and don't forget, you can continue to do this at home!

Observations from the Drake Passage are critical as they reflect the ocean-atmosphere interface of the Antarctic Circumpolar Current and winds.

Thank you for your active participation!

View our data on the global map

GLOBE Cloud Observations Paired with NASA Satellite Data

Total Satellite Comparisons: 67

Useful Resources: How to Read My NASA GLOBE Clouds Satellite Comparison Table, How to Compare My Cloud Observations with Satellite Data, Cloud Cover, Cloud Type, Cloud Opacity, Satellites

Observation	GLOBE	NOAA-20 Satellite
Universal Date/Time	2025-12-14 19:21:00	2025-12-14 19:26
Latitude	-64.89	-65.29 to -64.49
Longitude	-62.87	-63.31 to -62.51
Total Cloud Cover	Scattered (25-50%)	Scattered 46.97%
High Clouds	Cirrus Cirrocumulus Cover: Scattered (25-50%) Opacity: Translucent	Cover: Few (0.37%) Altitude: 6.45 (km) Phase: Ice 238.26 (K) Opacity: Transparent
Mid Clouds		Cover: Scattered 44.51% Altitude: 3.96 (km) Phase: Ice/Water Mix 256.48 (K) Opacity: Translucent
Low Clouds		Cover: Few (2.09%) Altitude: 1.31 (km) Phase: Ice/Water Mix 267.65 (K) Opacity: Transparent
GLOBE Cloud Photos and Corresponding NASA Satellite Images. Click image to view --->	GLOBE Photos North East South West Up Down	*VIIRS NOAA-20* Worldview Worldview Tutorial

GLOBE Observer

Register Your Email with NASA GLOBE Observer

By registering your email address with NASA's GLOBE Observer application and if you time your satellite observations to match a satellite flyover, you will be sent a pairing report similar to the one shown on the left.

We have not yet received any matching reports for this voyage, but this example shows you what you can expect, and help you improve your observational skills.

We hope you continue to support this Citizen Science project at home; it is always good to look up at the sky!

View our data on the global map

GLOBE Observer

iNaturalist

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

By capturing and submitting images of the wildlife and plants you encountered, you contributed to a global effort to track species distributions and monitor ecosystems in one of the most remote and rapidly changing regions on Earth.

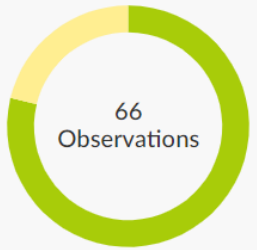
Together, we gathered:
48 Observations
19 Species Identified
6 Observers Participating

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

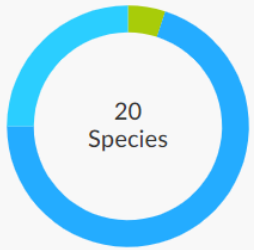
View our data on the iNaturalist website

FNANT2523 – MS Fridtjof Nansen 30 Dec 2025–9 Jan 2026

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

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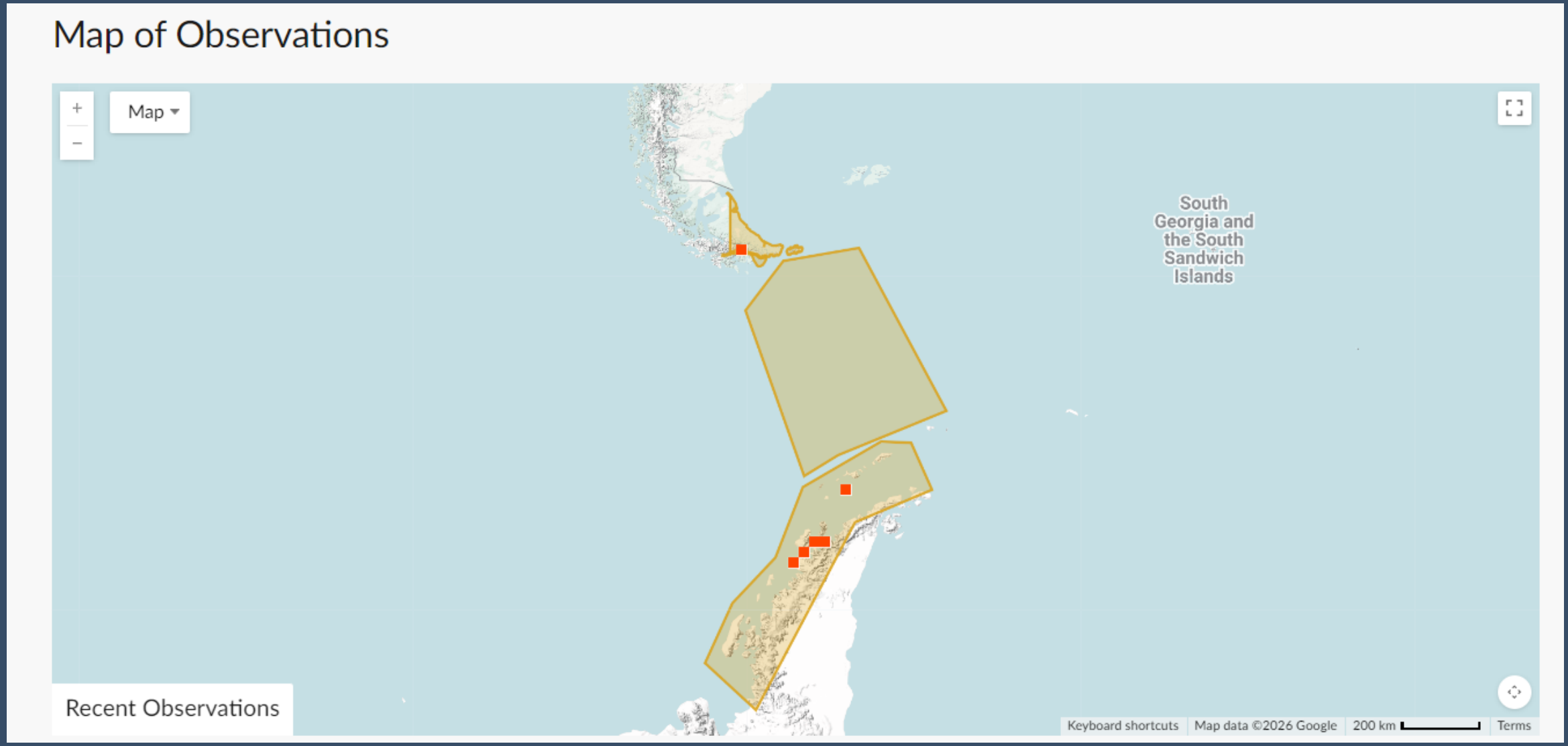


Science Boat

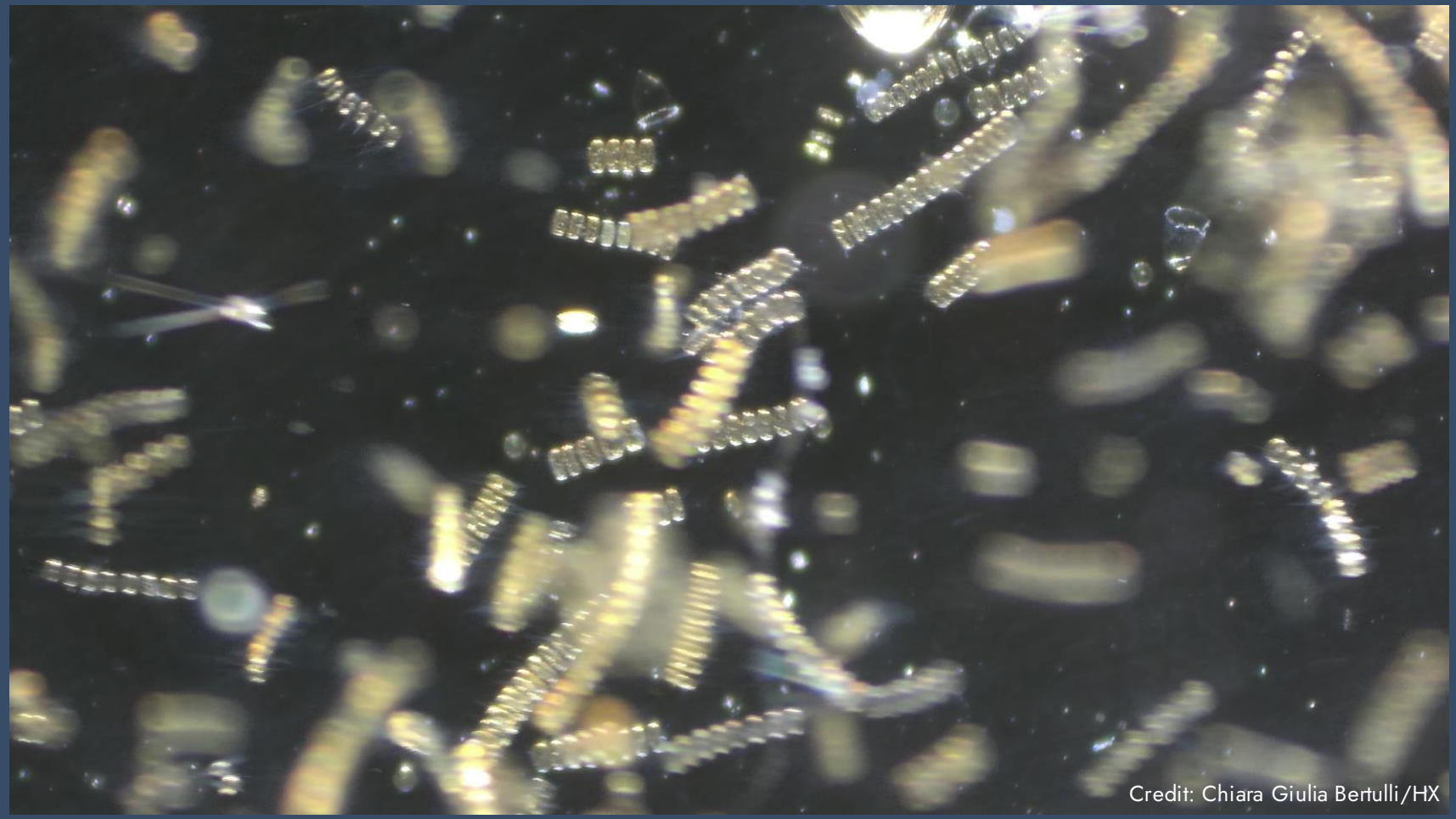
Across 10 science boat sessions at Petermann Island, Orne Harbour, Danco Island, and Telefon Bay, we moved beyond observation into hands-on exploration of Antarctic coastal waters. With each plankton net tow, CTD cast, and Secchi disk reading, you became active participants in the scientific process.

The plankton net revealed the microscopic life supporting Antarctic food webs, the CTD uncovered the water column's temperature and salinity structure, and the Secchi disk provided a simple but powerful measure of water clarity linked to phytoplankton abundance.

These sessions were about curiosity, discovery, and connection, showing that science is not distant, but a way of observing and understanding the world around us.

View our data submitted to the Secchi Disk Project
Listen to our recordings on Soundcloud

Plankton Samples


Credit: Chiara Giulia Bertulli/HX

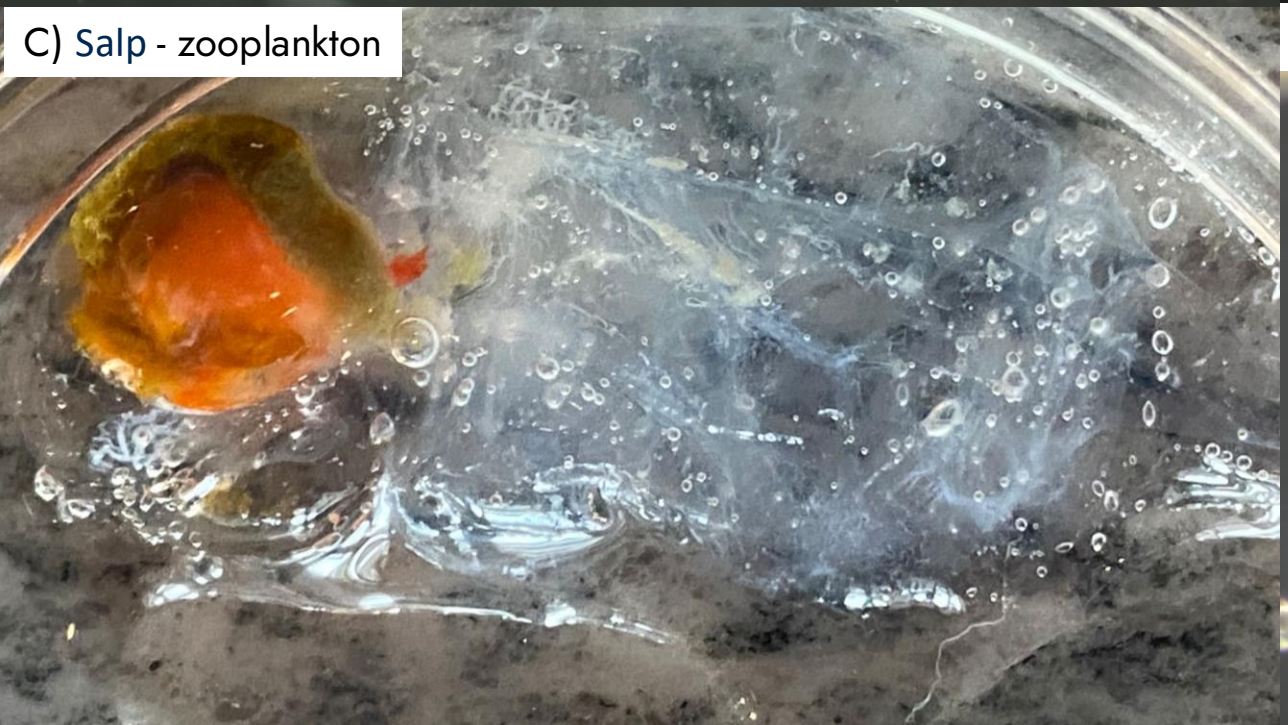
Back in the Science Centre, we brought the ocean into focus by examining our water samples under the microscope to uncover the hidden world of **phytoplankton** and **zooplankton**.

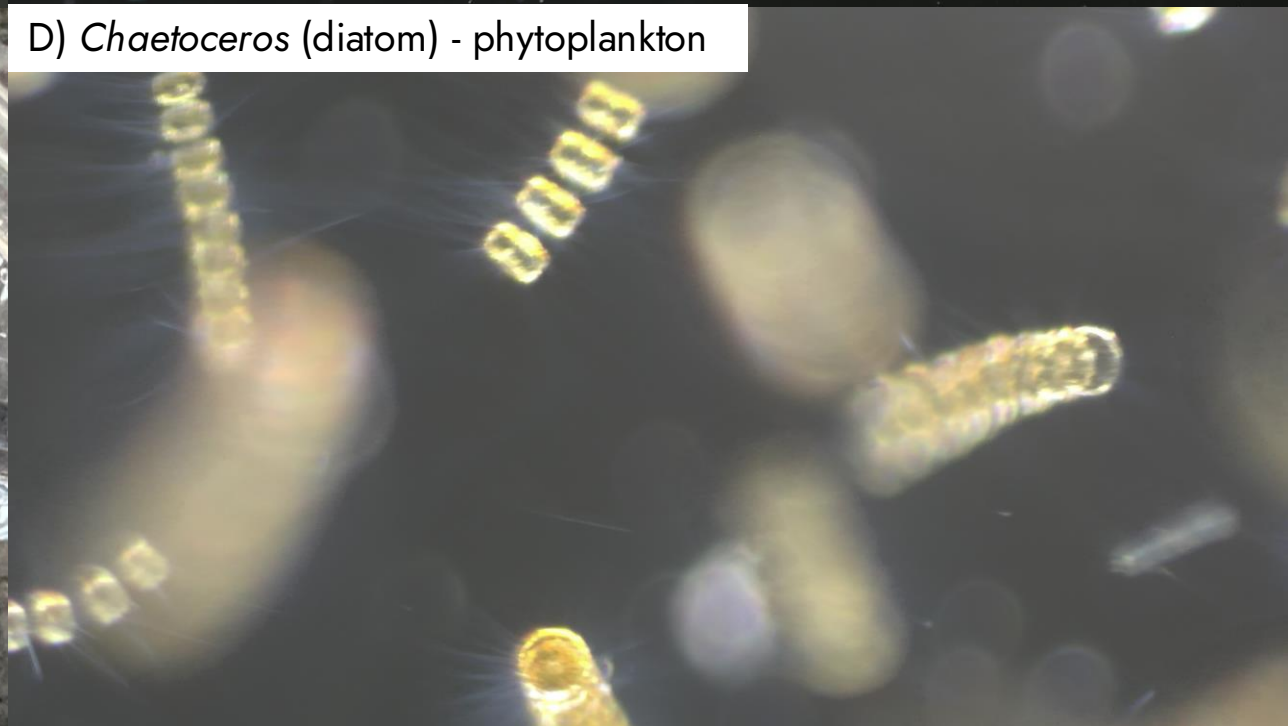
We projected these magnified images onto the screen, allowing everyone to see the intricate details of these tiny organisms. Smaller microscopes offered a hands-on experience, inviting you to search for life in each drop of water.

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


A) Copepod - zooplankton


B) Amphipod - zooplankton


C) Salp - zooplankton


D) *Chaetoceros* (diatom) - phytoplankton

E) *Corethron pennatum* (diatom) - phytoplankton

F) *Diatom chain* - phytoplankton

Underwater Drone

Petermann Island is a perfect place to see penguins flying… in the sea!

On 2 January 2026, we visited Petermann Island, where colonies of Adélie and gentoo penguins cohabit.

Thanks to the underwater drone, we could see penguins swimming effortlessly as though in flight and also discovered the beautiful seabed landscape rich in red seaweeds and limpets.

View the highlights from our underwater drone footage on YouTube

Guest Scientists

Michelle Wille
Marcel Klaassen

Polar Pathogens and
Microbial Ecosystems Lab

What have we been up to?

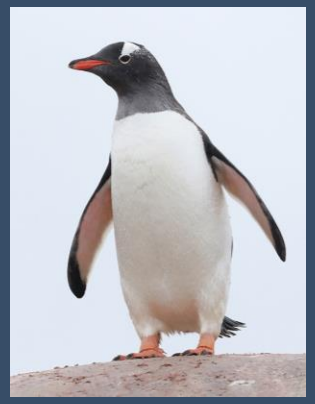
Throughout the journey we have visited a range of wildlife colonies to

1. Check on the health status of colonies and look for signs of disease

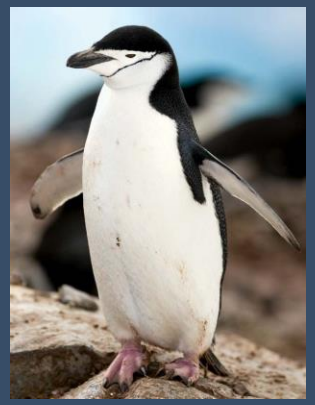
2. Collect a range of samples to assess wildlife health including :
- Faecal (scat, poop) samples
- Direct oral and cloacal swabs from seabirds
- Nasal swabs from seals
- Tissue samples from carcasses

Visit our Science & Education Hub online to find out more

How Many Samples Did We Collect?



48 gentoo penguins sampled
- Oral swabs
- Cloacal swabs
- Blood samples

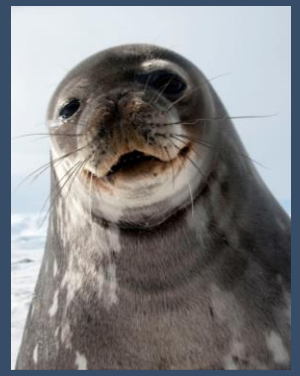


31 chinstrap penguins sampled
- Oral swabs
- Cloacal swabs

33 Adélie penguin sampled
- Oral swabs
- Cloacal swabs
- Blood samples

2 brown skuas found
- Oral swabs
- Abdominal swabs
- Brain swabs

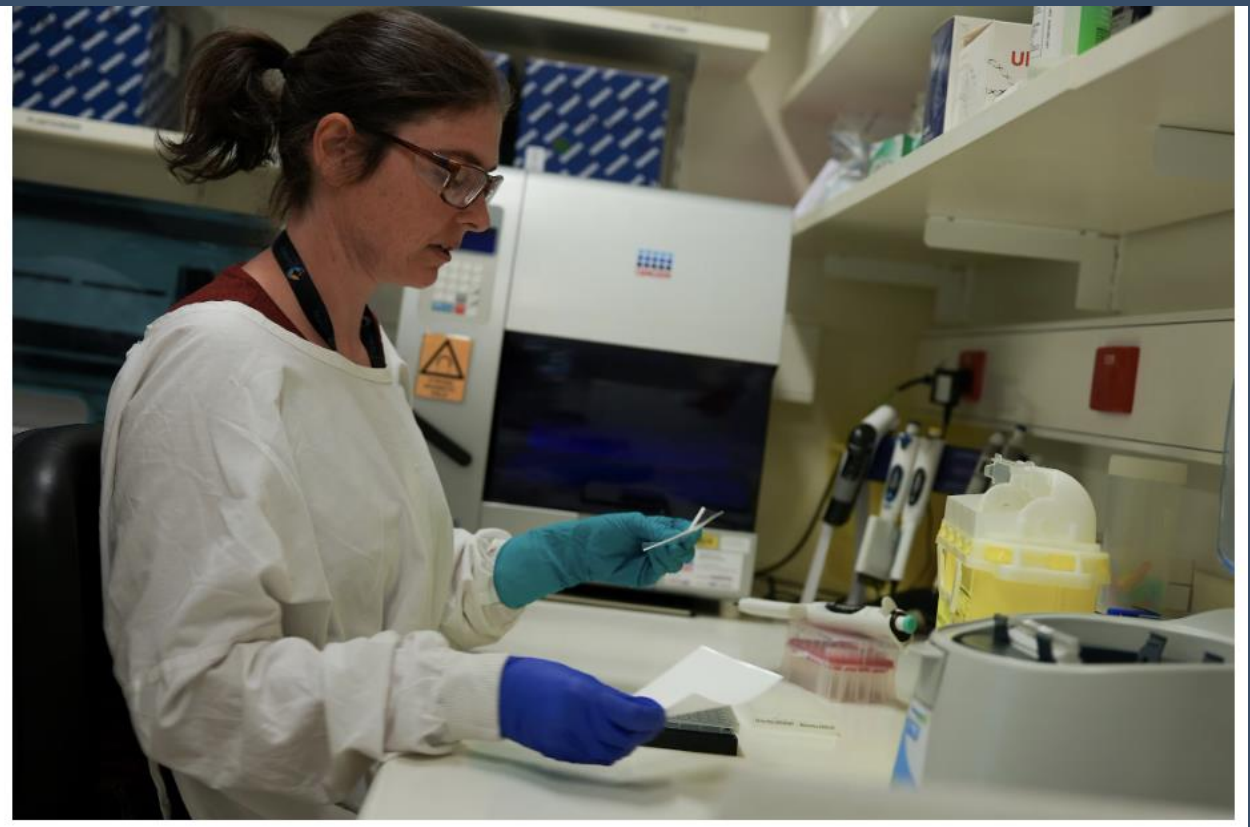
4 kelp gulls sampled
- Faecal samples



7 Weddell seals sampled
- Nasal swabs
- Faecal samples

254 samples

Samples Returned to Australia for Testing



Keep up to date

Wildlife List — Birds

Wildlife List – Seabirds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
Stercorarius antarcticus	brown skua	Subantarktikskua	labbe antarctique	棕贼鸥
Stercorarius maccormicki	south polar skua	Antarktikskua	labbe de McCormick	麦氏贼鸥
Larus dominicanus	kelp gull	Dominikanermöwe	goéland dominicain	黑背鸥
Sterna vittata	Antarctic tern	Antarktikseeschwalbe	sterne couronnée	南极燕鸥
Pygoscelis adeliae	Adélie penguin	Adeliepinguin	manchot d'Adélie	阿德利企鹅
Pygoscelis papua	Gentoo penguin	Eselspinguin	manchot papou	白眉企鹅
Pygoscelis antarcticus	chinstrap penguin	Kehlstreifpinguin	manchot à jugulaire	纹颊企鹅
Spheniscus humboldti	Magellanic penguin	Magellanpinguin	manchot de Magellan	麦哲伦企鹅
Diomedea exulans	snowy albatross	Wanderalbatros	albatros hurleur	漂泊信天翁
Diomedea epomophora	southern royal albatross	Südkönigsalbatros	albatros royal	皇信天翁
Phoebetria palpebrata	light-mantled albatross	Graumantelalbatros	albatros fuligineux	灰背信天翁
Thalassarche chrysostoma	grey-headed albatross	Graukopfalbatros	albatros à tête grise	灰头信天翁
Thalassarche melanophris	Black-browed albatross	Schwarzbrauenalbatros	albatros à sourcils noirs	黑眉信天翁
Oceanites oceanicus	Wilson's storm petrel	Buntfuß-Sturmschwalbe	océanite de Wilson	烟黑叉尾海燕

Wildlife List – Seabirds and shorebird

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
Macronectes giganteus	southern giant petrel	Riesensturmvogel	pétrel géant	巨鹱
Fulmarus glacialoides	southern fulmar	Silbersturmvogel	fulmar argenté	银灰暴风鹱
Daption capense	cape petrel	Kapsturmvogel	damier du cap	花斑鹱
Halobaena caerulea	blue petrel	Blausturmvogel	prion bleu	蓝鹱
Pachyptila desolata	Antarctic prion	Taubensturmvogel	prion de la désolation	鸽锯鹱
Pachyptila belcheri	slender-billed prion	Dünnschnabel-Sturmvogel	prion de belcher	细嘴锯鹱
Procellaria aequinoctialis	white-chinned petrel	Weißkinn-Sturmvogel	puffin à menton blanc	白颏风鹱
Ardenna grisea	sooty shearwater	Dunkler Sturmtaucher	puffin fuligineux	灰鹱
Leucocarbo atriceps	imperial cormorant	Kaiserscharbe	cormoran impérial	蓝眼鸬鹚
Chionis albus	snowy sheathbill	Weißgesicht-Scheidenschnabel	chionis blanc	白鞘嘴鸥

eBird

During this voyage, our Ornithologists Kieren and Liam conducted 31 surveys. 28 species were recorded between Ushuaia and the Antarctic Peninsula. The most frequently observed bird species were gentoo penguins, Adélie penguins, and southern fulmars.

View our data on our eBird trip report

Wildlife List – Marine Mammals

Wildlife List – Marine Mammals

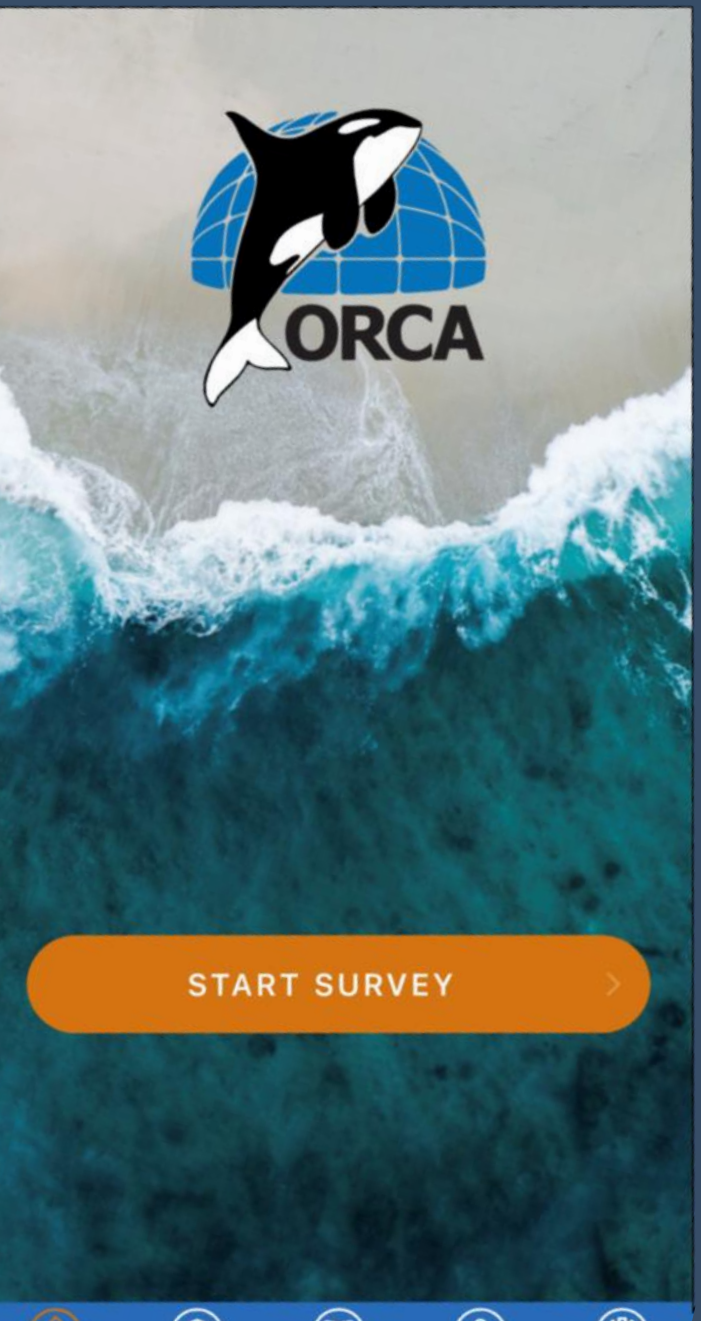
SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
Balaenoptera bonaerensis	Antarctic minke whale	Südlicher Zwergwal	rorqual à museau pointu de l'Antarctique	南露脊鲸
Balaenoptera physalus	fin whale	Finnwal	rorqual commun	长须鲸
Megaptera novaeangliae	humpback whale	Buckelwal	baleine à bosse	大翅鲸
Orcinus orca	killer whale, orca	Schwertwal, Orca	orque	虎鲸
Balaenoptera borealis	sei whale	Seiwal	rorqual de rudolphi	北须鲸/塞鲸
Lagenorhynchus obscurus	dusky dolphin	Schwarzdelfin	lagénorhynque obscur	乌海豚/暗色斑纹海豚
Hydrurga leptonyx	leopard seal	Seeleopard	léopard de mer	豹海豹
Leptonychotes weddellii	Weddell seal	Weddelrobbe	phoque de Weddell	韦德尔氏海豹
Lobodon carcinophaga	crabeater seal	Krabbenfresser	phoque crabier	食蟹海豹
Otaria byronia	South American sea lion	Mähnenrobbe	lion de mer d'Amérique du Sud	南美海狮
Mirounga leonina	southern elephant seal	Südlicher See-Elefant	eléphant de mer austral	南象海豹

Happywhale

- This voyage was a great success in terms of whale sightings
- With some great help our Expedition Team and our from guests, we were able to submit one sighting to Happywhale.
- Thank you all for helping us capture amazing photos and unforgettable moments!

Citizen Science to the rescue!

View our data on the global map



ORCA Ocean Watchers

Survey

- 6 Surveys Completed
- 10 hrs 06 minutes
- 124.8 Nautical Miles

Sightings

- 09 unidentified whales


IX
Connect with your inner scientist