

The background image is a polar landscape featuring a massive, layered ice wall or glacier face. The ice has various shades of blue and white, with visible textures and cracks. In the foreground, a small black inflatable boat with several people in bright orange and yellow gear is on the water. The water is dark blue with small ice floes. A large, translucent 'TX' logo is overlaid on the image, with the 'T' on the left and the 'X' in the center. The text 'Science & Education Report' is centered over the 'X' in a white, sans-serif font.

Science & Education Report

MS Fridtjof Nansen

Highlights of Antarctica
20 – 30 December 2025



History & Culture

On our voyage we focused on the stories of the expeditions that explored this part of the Antarctic. In particular, we followed the voyages of Jean-Baptiste Charcot and the *Belgica* to the Antarctic Peninsula. We also looked at how the explorers celebrated Christmas on their voyages.

The history of Antarctica is full of stories of exciting adventures and quests for knowledge, but it is also a history of different nations competing for control over the southern continent.

On our voyage, we saw several historic science stations at places like Port Lockroy, Brown Station, and at Deception Island. We discussed how these bases can be seen both as physical representations of scientific exploration as well as national states using bases to strengthen their claim to the Antarctic Peninsula.



GLOBE Cloud Observer for NASA

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

Thank you to the 34 cloud observers who participated in the programme. Don't forget, you can continue to do cloud observations at home!

Observations from the Drake Passage are especially important because this region captures how the Antarctic Circumpolar Current and the overlying winds interact at the ocean surface.

Thank you for your active participation!

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



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



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 wildlife and plants, 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:

66 Observations

20 Species Identified

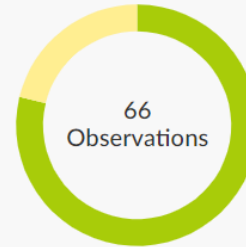
7 Observers Participating

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

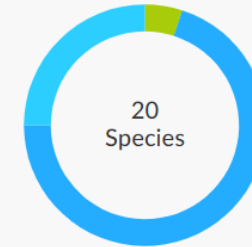
View our [data](#) on the iNaturalist website



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](#)

RG



Humpback Whale ·
Buckelwal
Megaptera novaeangliae

3 5d

RG



Humpback Whale ·
Buckelwal
Megaptera novaeangliae

3 6d

RG



Chinstrap Penguin ·
Zügelpinguin
Pygoscelis antarcticus

2 4d

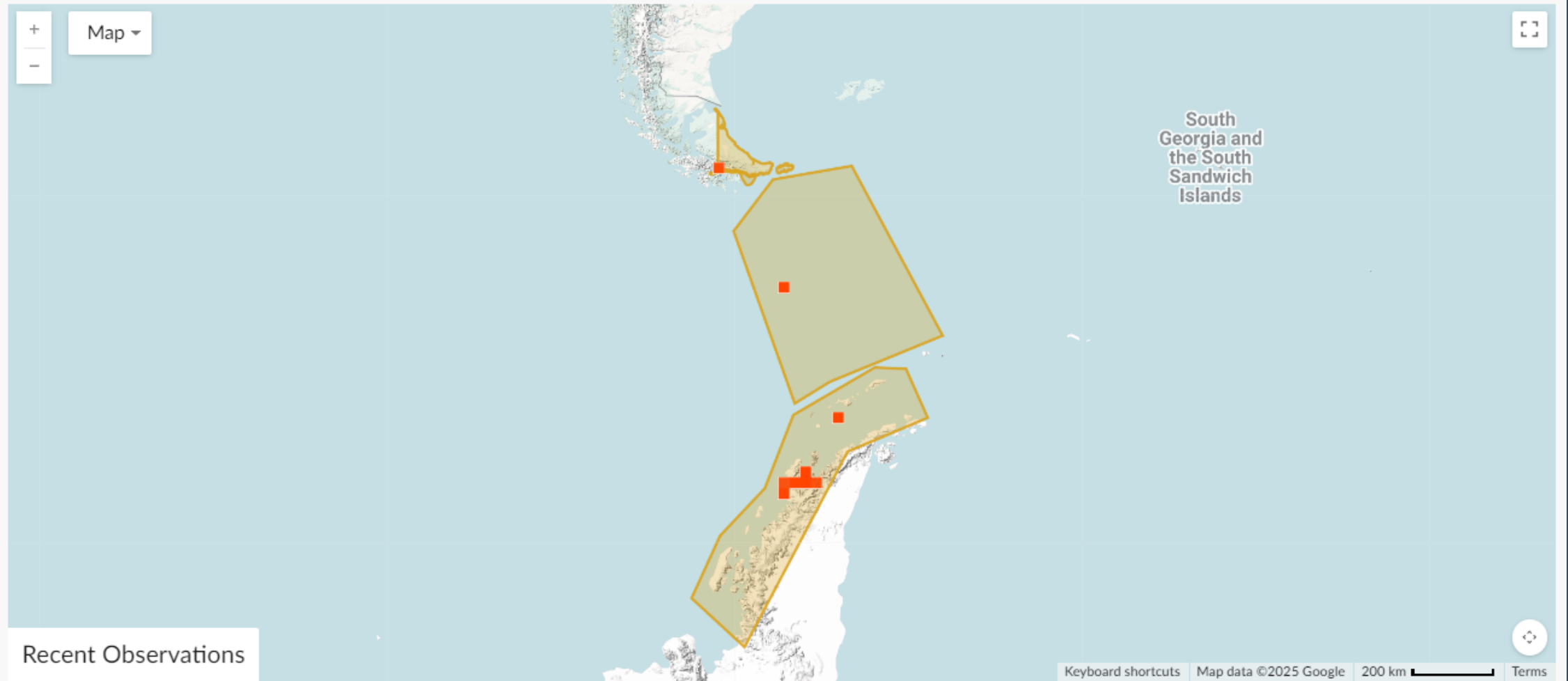
RG



Gentoo Penguin ·
Eselspinguin
Pygoscelis papua

2 5d

Map of Observations





Science Boat

Across nine science boat sessions held at Hidden Bay, Jougla, Damoy, Brown Sation, 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, as well as 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

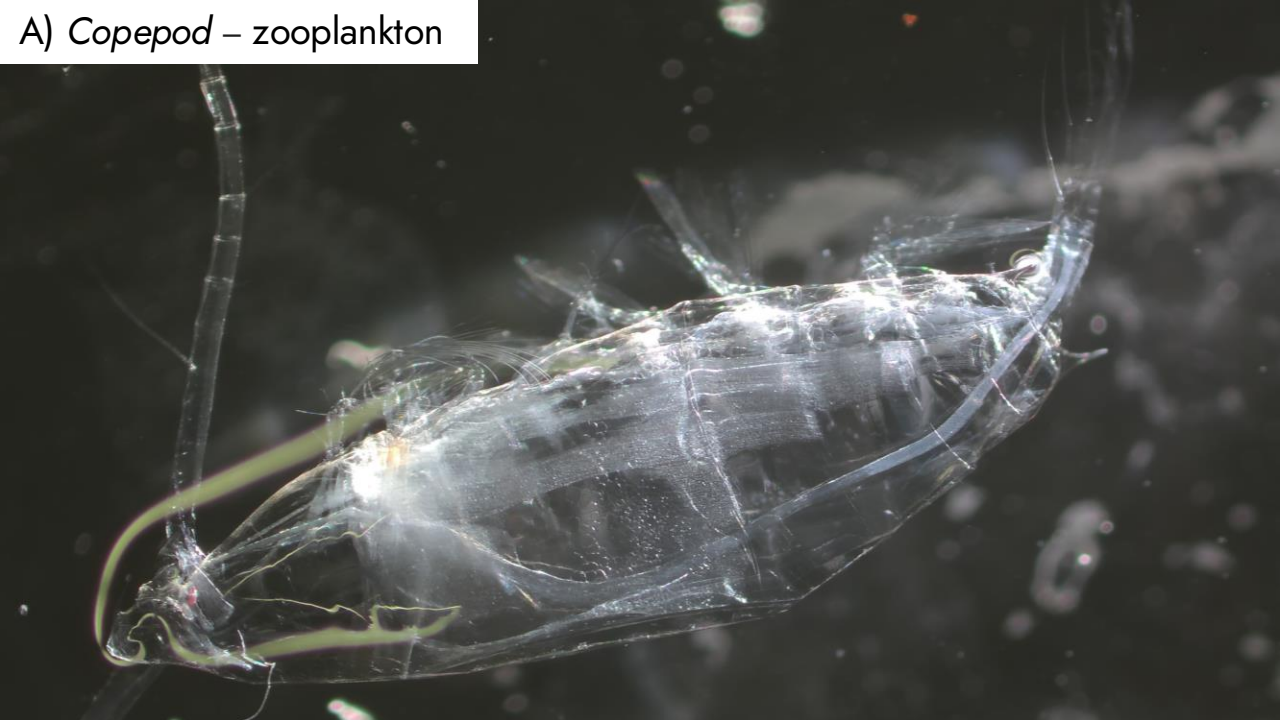
Back in the Science Centre, we brought the ocean into focus, examining our water samples under the microscopes to uncover the hidden world of **phytoplankton** and **zooplankton**.

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.

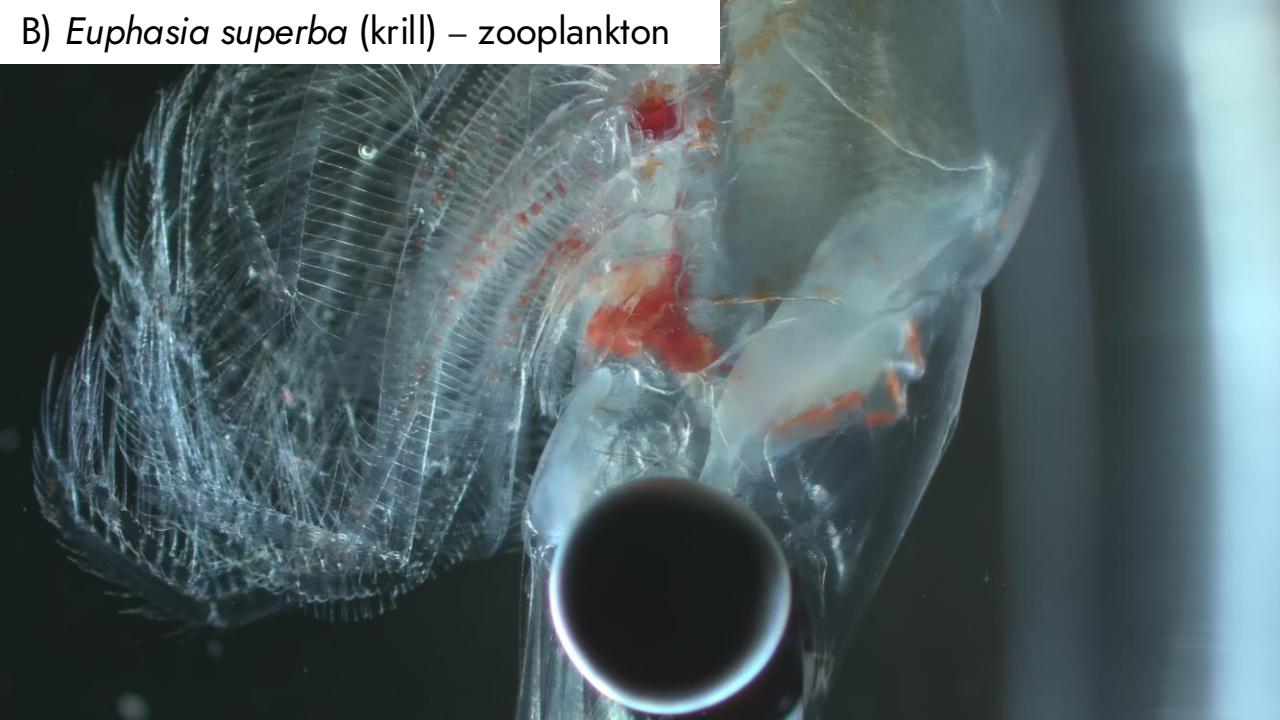
The samples revealed a world dominated by phytoplankton and zooplankton, forming the foundation of the marine food web. What was invisible to the eye became a vivid reminder that even the smallest life forms shape this vast and wild ecosystem.

Credit: Chiara Giulia Bertulli/HX

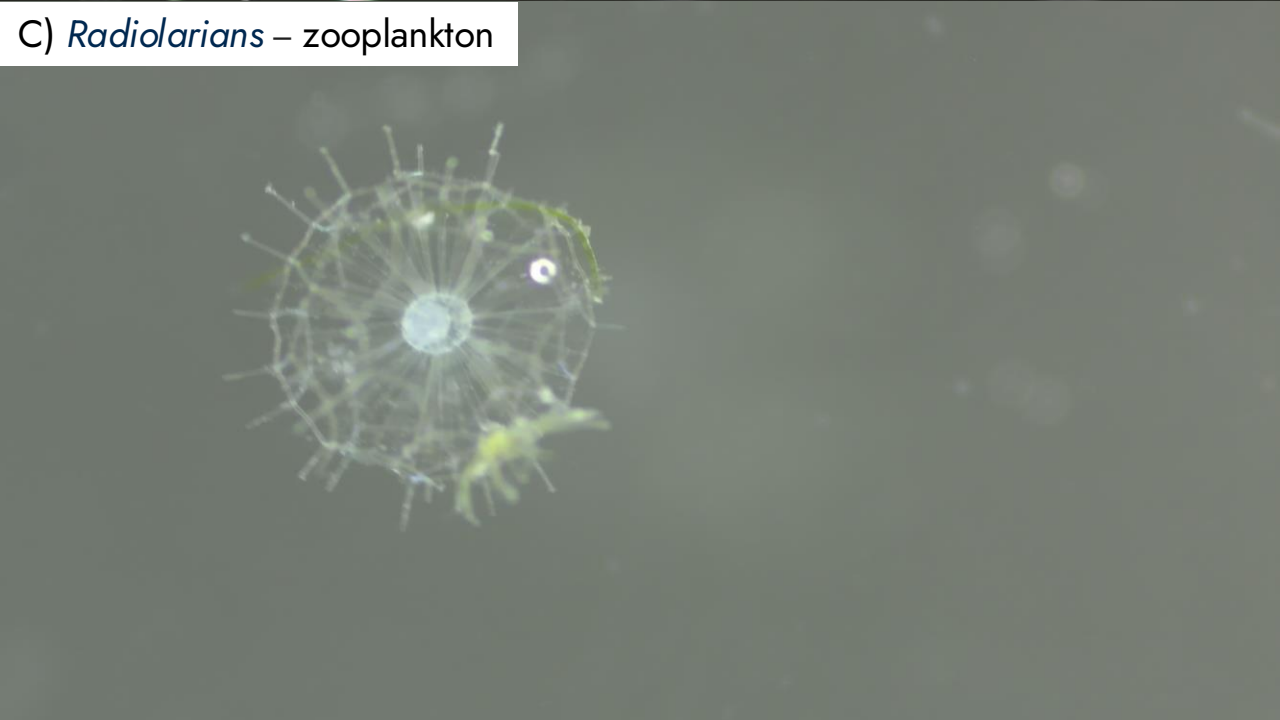
A) *Copepod* – zooplankton



B) *Euphasia superba* (krill) – zooplankton



C) *Radiolarians* – zooplankton



D) *Tintinnids* – zooplankton



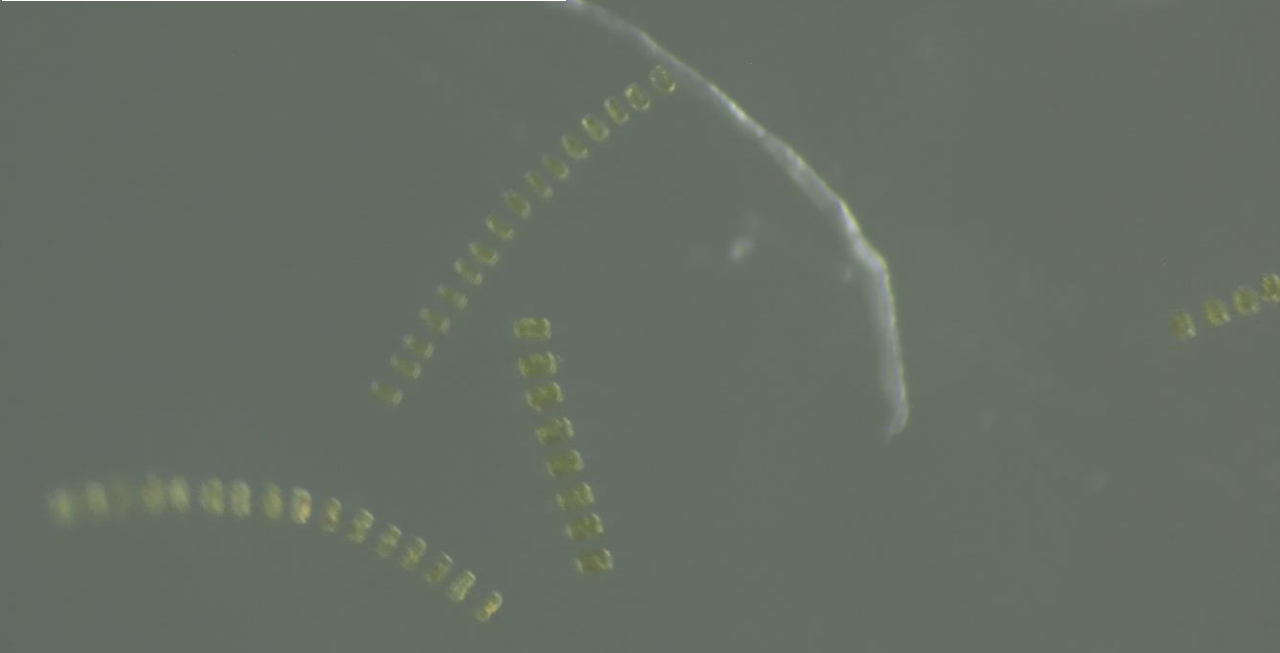
E) *Corethron pennatum* (diatom) – phytoplankton



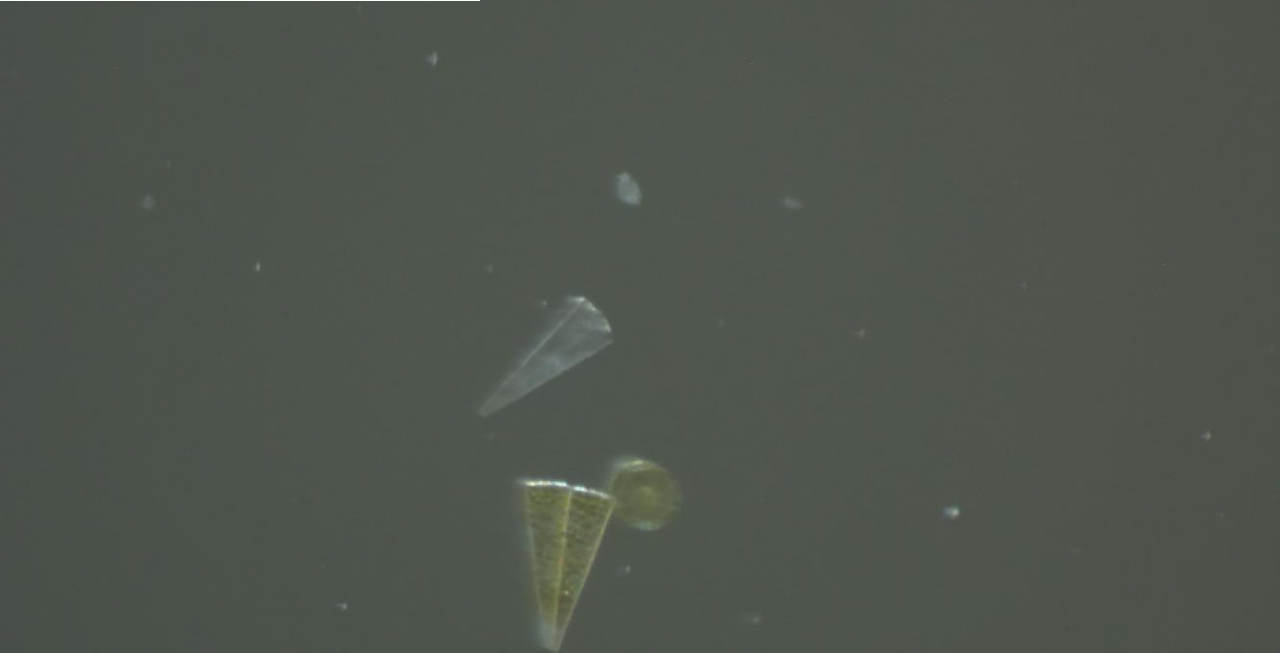
F) *Amphipod* – zooplankton



G) *Diatom chain* – phytoplankton



H) Diatoms – phytoplankton



Guest Scientists

Meagan Dewar
Ashley Olson

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
 - Faeces (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?



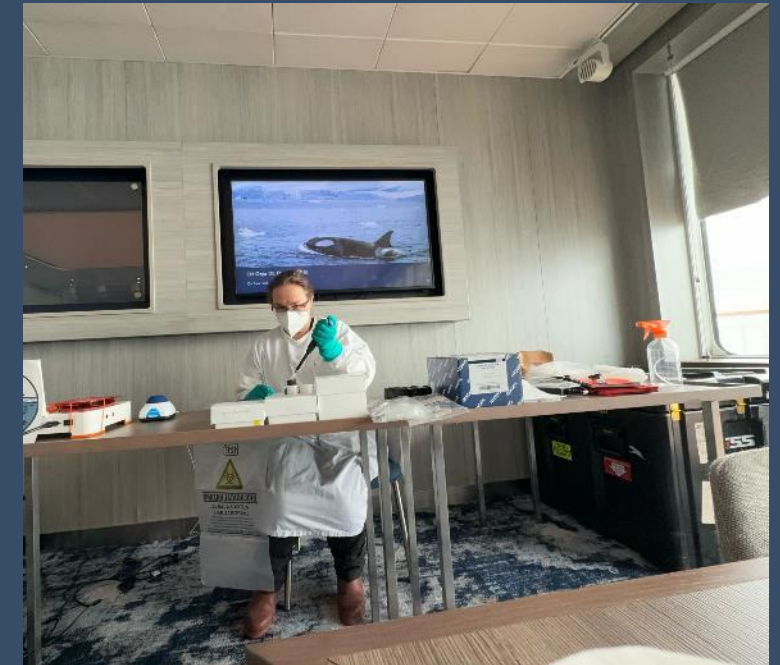
Species	Sample Type	Total
Adélie penguin	oral	31
Adelie penguin	cloacal	31
blue eyed shags	faeces	4
chinstrap penguin	oral/cloacal	2
chinstrap penguin	faeces	31
chinstrap penguin	oral (carcass)	1
chinstrap penguin	brain	1
gentoo penguin	oral	168
gentoo penguin	cloacal	159
gentoo penguin	faeces	274
giant petrel	faeces	6
leopard seal	nasal	2
leopard seal	faeces	1
southern elephant seal	nasal	3
skua	faeces	4
skua	oral/cloacal	3
snowy sheathbill	oral (carcass)	1
snowy sheathbill	brain	1
snowy sheathbill	faeces	5
snowy sheathbill	oral/cloacal	1
Weddell seal	faeces	8
Weddell seal	nasal	50

What Else Will Be Analysed?



When samples return to Australia we will

1. Explore the microbial, viral, and parasite community that lives within our Antarctic wildlife to further understand the important role of these organisms in wildlife health.
2. Compare these results to samples collected throughout the season and past seasons to examine changes over space and time.



Wildlife List — Birds



Wildlife List — Seabirds

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

Wildlife List — Seabirds and a Shorebird

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



eBird

During this voyage, our Ornithologists Kieren and Lia, did 22 surveys. 32 species were recorded between Ushuaia and the Antarctic Peninsula. The species most frequently observed were gentoo penguins, kelp gulls, and sooty shearwaters.

View our data on our [eBird trip report](#)

Wildlife

List — Marine Mammals



Wildlife List – Marine Mammals

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
<i>Balaenoptera acutorostrata</i>	common minke whale	Zwergwal	rorqual à museau pointu	小须鲸
<i>Balaenoptera physalus</i>	fin whale	Finnwal	rorqual commun	长须鲸
<i>Megaptera novaeangliae</i>	humpback whale	Buckelwal	baleine à bosse	大翅鲸
<i>Orcinus orca</i>	killer whale, orca	Schwertwal, Orca	orque	虎鲸
<i>Hydrurga leptonyx</i>	leopard seal	Seeleopard	léopard de mer	豹海豹
<i>Leptonychotes weddellii</i>	Weddell seal	Weddelrobbe	phoque de Weddell	韦德尔氏海豹
<i>Lobodon carcinophaga</i>	crabeater seal	Krabbenfresser	phoque crabier	食蟹海豹
<i>Mirounga leonina</i>	southern elephant seal	Südlicher See-Elefant	éléphant de mer austral	南象海豹
<i>Otaria byronia</i>	South American sea lion	Mähnenrobbe	lion de mer d'Amérique du Sud	南美海狮
<i>Lagenorhynchus australis</i>	Peale's dolphin	Peale-Delfin	lagénorhynque de Peale	皮氏斑纹海豚
<i>Lagenorhynchus obscurus</i>	dusky dolphin	Schwarzdelfin	lagénorhynque obscur	乌海豚/暗色斑纹海豚



Happywhale

- We had great success in terms of whale sightings on this voyage!
- With some great help from our Expedition Team and from our guests, we were able to submit 17 sightings to Happywhale.
- Thank you all for helping us capture these amazing photos and unforgettable moments!

Citizen Science to the rescue!

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



IX

Connect with Your Inner Scientist