IX

Science & Education Report

MS Fridtjof Nansen

Highlights of Antarctica
10 – 20 December 2025

History & Culture

On this voyage we have focused on the stories of the expeditions that explored this part of the Antarctic. We have in particular followed the voyages of Charcot and the Belgica to the Antarctic Peninsula. On 14 December 2025 we celebrated the 114-year anniversary of Roald Amundsen conquering the South Pole.

On our return journey we visited the abandoned whaling station on Deception Island. Walking among the ruins offered an opportunity to reflect on the lives of the men that worked there and the impact that the whaling industry had on the environment.

Maybe it also served as a jumping point to think about the way we are threating nature today.

NASA Cloud Observer

During this voyage we were able to conduct two Cloud Observation sessions timed to satellite flyovers. This was a great achievement given our intense operational schedule on the Peninsula. Satellite Observations on the Drake Passage are particularly useful as we are at the ocean-atmosphere interface, which is not usually observed.

Ten people were involved over two sessions. Please continue supporting this program by completing surveys at home.

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:
35 Observations
18 Species Identified
6 Observers Participating

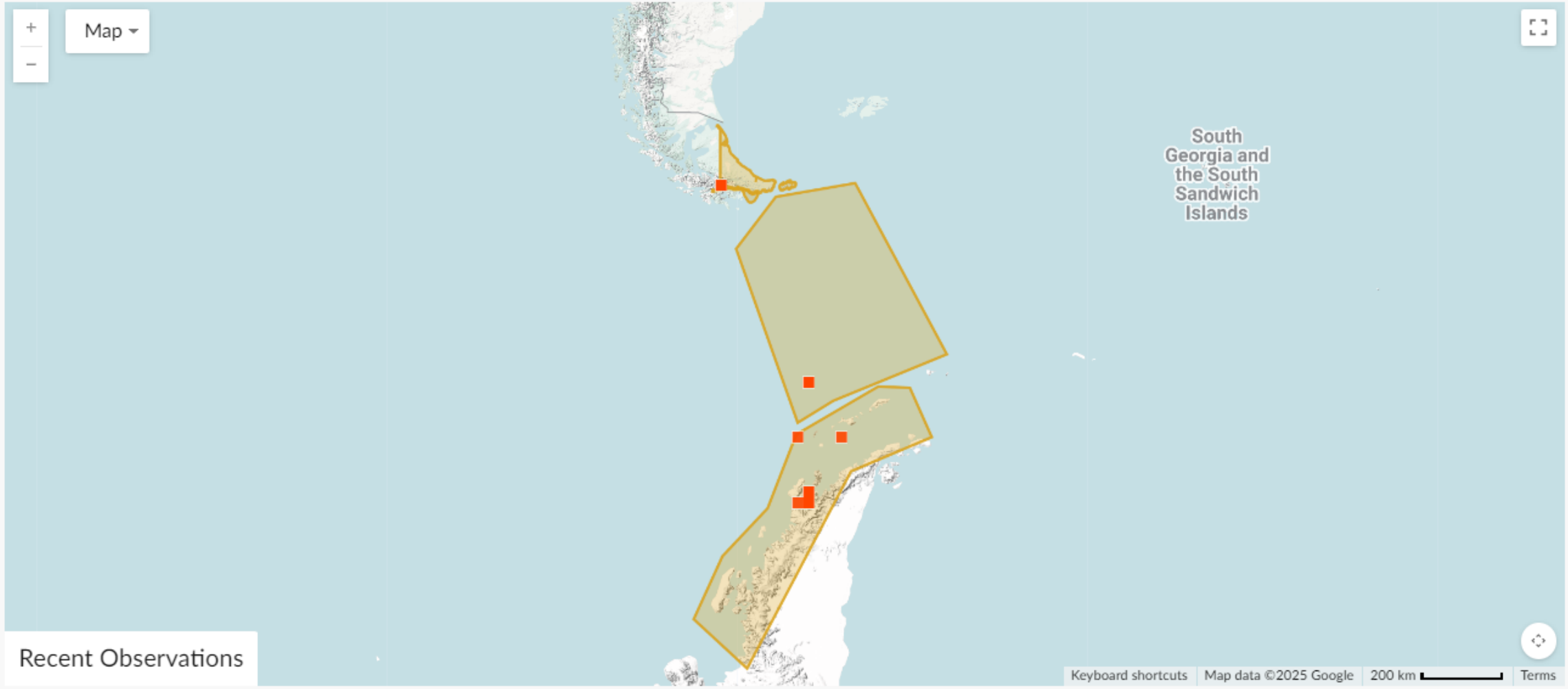
Click on the link to view our collective data and see the impact of your contributions:

View our data on the iNaturalist website

Credit: Chiara Giulia Bertulli/HX

FNANT2521 – MS Fridtjof Nansen 10–20.12.2025

Map of Observations



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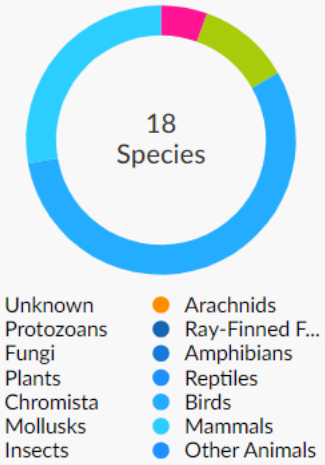
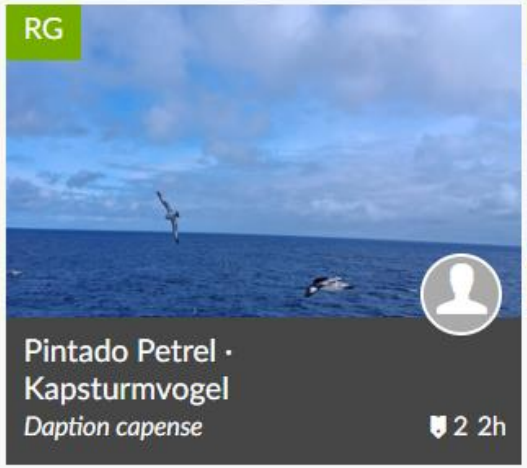
Stats



Recent Observations

View All



Science Boat

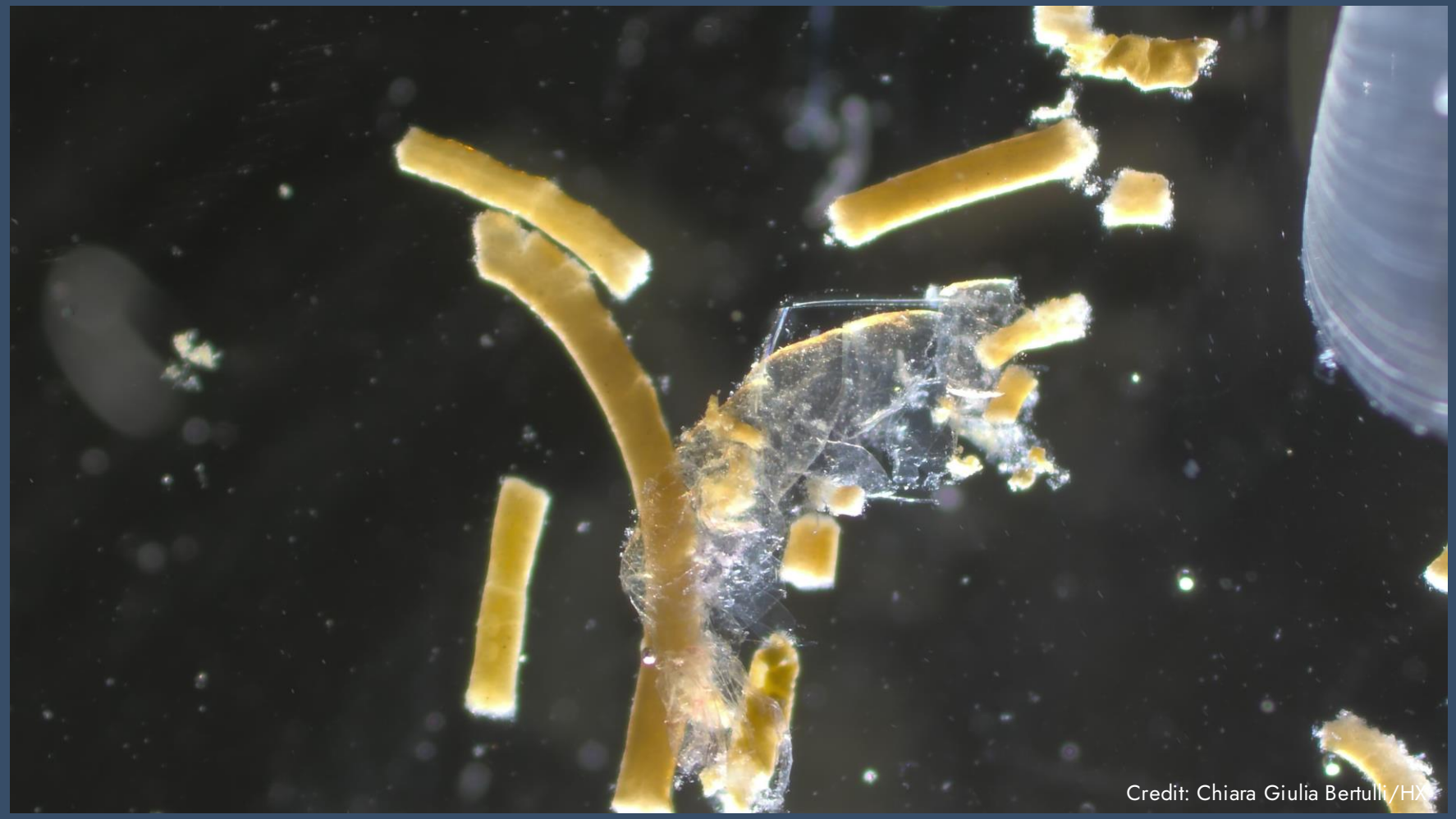
Across six science boat sessions at Damoy Point, Brown Bay, Fournier Bay, Orne Island, Danco Island, and Whaler's Bay, we moved beyond observation into hands-on exploration of Antarctic coastal waters. With each plankton net tow, CTD cast, and Secchi disk reading, you became active participants in the 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



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**.

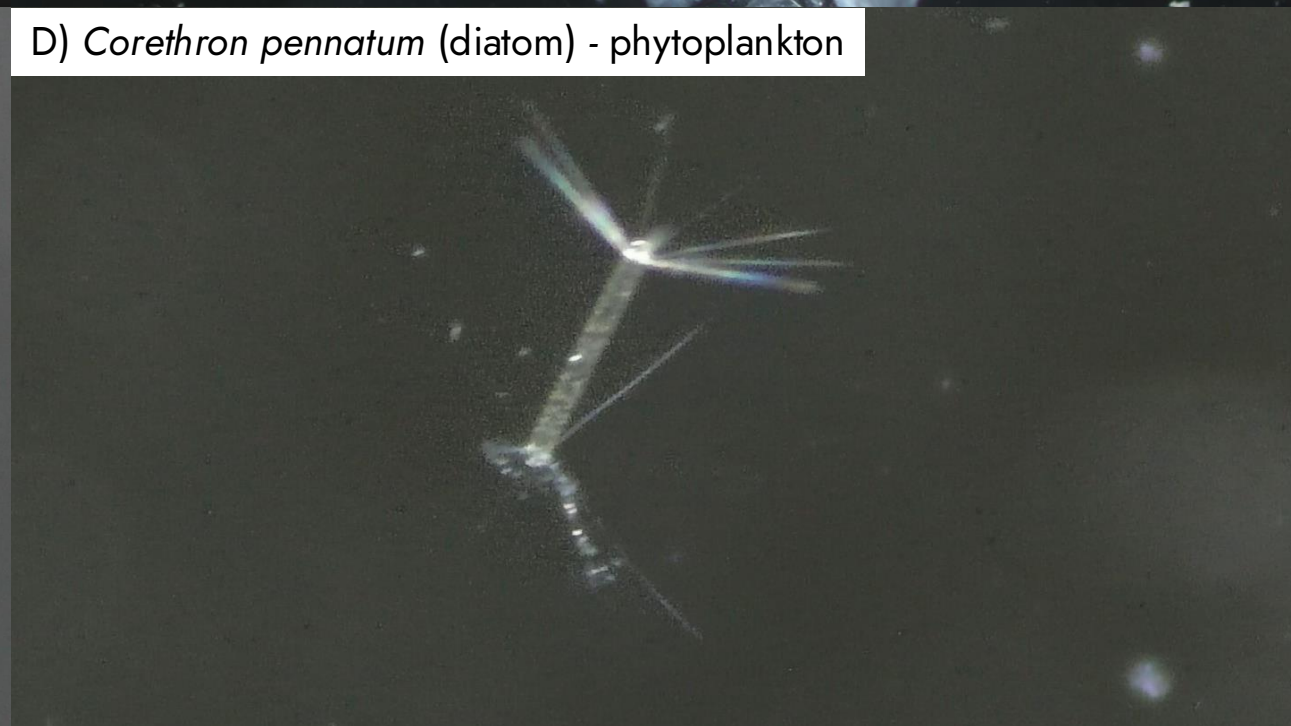
Using microscopes, we projected magnified images onto the screen, allowing everyone to see the intricate details of these tiny organisms. Smaller binocular microscopes offered a hands-on experience, inviting you to search for life in each drop of water.

The samples revealed a world dominated by phytoplankton and zooplankton, forming 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.

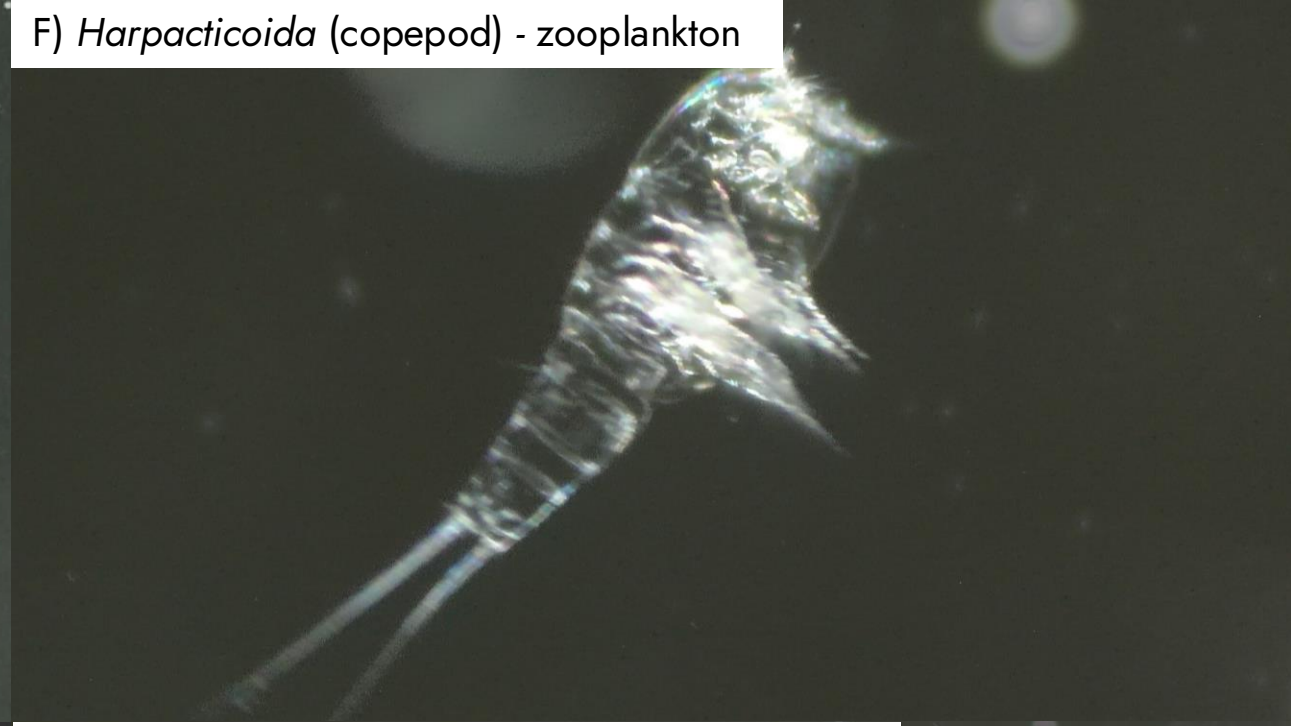

A) *Euphasia superba* (krill) - zooplankton


B) *Limacina sp.* (sea snail) - zooplankton


C) *Diatom chain* - phytoplankton


D) *Corethron pennatum* (diatom) - phytoplankton


E) *Trigonium sp*. (diatom) - phytoplankton


F) *Harpacticoida* (copepod) - zooplankton


G) *Diatom* - phytoplankton


H) *Unknown (maybe egg sac)* - zooplankton

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:
- 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 This Trip?

Species	Sample Type	Number
gentoo penguin	faeces	30
gentoo penguin	oral swab / cloacal swab	46
Adélie penguin	oral swab / cloacal swab	1
Adélie penguin	faeces	1
chinstrap penguin	faeces	1
chinstrap penguin	oral swab / cloacal swab	1
skua	oral swab / cloacal swab	1
giant petrell	faeces	5
Weddell seal	nasal	17
Weddell seal	faeces	7
leopard seal	nasal and faeces	1
Total for this trip		111
Total for all trips		414

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.

Guest Scientists

Dr Linda Hunt and Dr Claire Konkes

University of Tasmania project: From Tourists to Ambassadors

During our voyage, Dr Linda Hunt and Dr Claire Konkes from the University of Tasmania conducted an ethnographic study to explore how travel to Antarctica influences engagement with the continent.

They conducted a total of 66 interviews.

- Guests - 24 (interviewed twice)
- 2 (return journey only)
- Expedition crew - 16
- Total = 66 interviews

UNIVERSITY of TASMANIA
AUSTRALIA

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	Adelie 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
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
Macronectes giganteus	southern giant petrel	Riesensturmvogel	pétrel géant	巨鹱
Fulmarus glacialoides	southern fulmar	Silbersturmvogel	fulmar argenté	银灰暴风鹱

Wildlife List – Seabirds and shorebird

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
Thalassoica antarctica	Antarctic petrel	Antarktiksturmvogel	pétrel Antarctique	南极鹱
Daption capense	cape petrel	Kapsturmvogel	damier du Cap	花斑鹱
Pagodroma nivea	snow petrel	Schneesturmvogel	pétrel des neiges	雪鹱
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
Pelecanoides urinatrix	common diving petrel	Subantarktis-Lummensturmvogel	puffinure plongeur	鹈燕
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 Kerien and Liam, did 38 surveys. 25 species were recorded between Ushuaia and the Antarctic Peninsula. The most frequently observed were gentoo penguins, cape petrels, and southern fulmars.

View our data on our e-Bird trip report

Wildlife List — Marine Mammals

Wildlife List – marine mammals

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
Balaenoptera borealis	sei whale	Seiwal	rorqual de Rudolphi	塞鲸
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
Hyperoodon planifrons	southern bottlenose whale	Südlicher Entenwal	hyperoodon austral	南瓶鼻鲸
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
Mirounga leonina	southern elephant seal	Südlicher See-Elefant	eléphant de mer austral	南象海豹

Humpback Whale, photographed on 15th December, Guest Frank Morales

Happywhale

- This voyage was a great success in terms of whale sightings
- With some great help from our Expedition Team and our guests, we were able to submit many 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


Connect with Your Inner Scientist