IX

Science & Education Report

MS Fridtjof Nansen

Highlights of Antarctica
9 – 19 January 2026

History & Culture

On our voyage we have 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 Peterman Island from January to November 1909 at the same spot as where we made our landing. When MS Fridtjof Nansen sailed through the Lemaire channel we were following the journey Adrian de Gerlache and his ship the *Belgica* did in 1898.

While expedition boat cruising we have seen the Chilean Presidente Gabriel González Videla Base and we talked about how science programmes have been used to further national claims to the Antarctic. On Deception Island we visited an old Norwegian whaling station, active from 1912–1931, and we reflected on the damage the whaling industry 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 three Cloud Observation sessions and sent our data off to NASA!

Thank you to the 58 Cloud Observers who participated in the program, and remember, 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

Register your email with GLOBE

By registering your email address with NASA's GLOBE Observer, and if you time your satellite observations to match a satellite flyover, you will be sent a matching report similar to this one. We have not yet received any matching reports for this voyage, but this example gives you an idea of what you can expect, and this will help you improve your observational skills.

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

GLOBE Observer

Science Boat

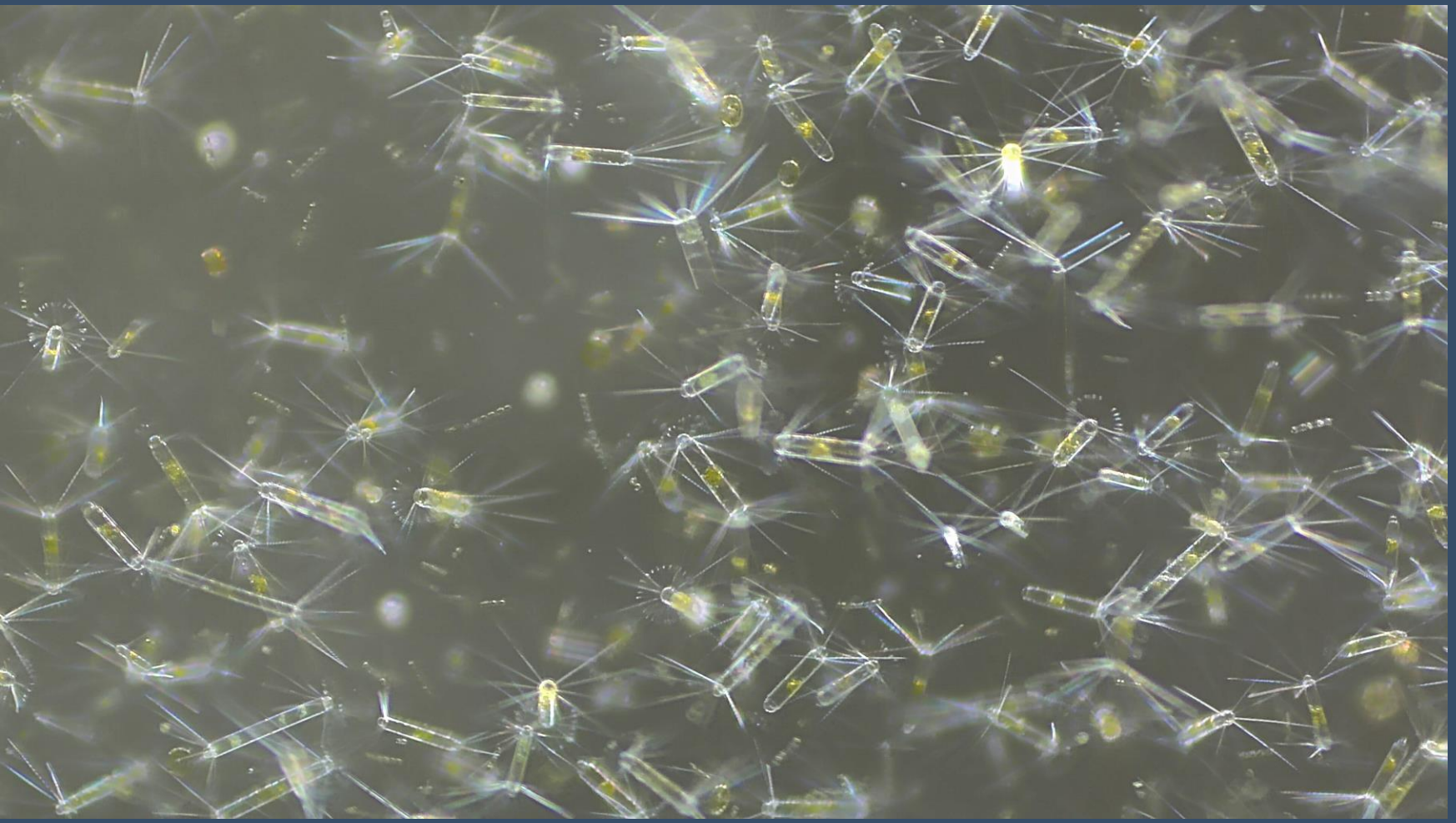
Across 14 science boat sessions at Petermann Island, Pléneau, Paradise Bay, and Whalers Bay, we moved beyond observation into hands-on exploration of Antarctic coastal waters. With each plankton net tow, CTD cast, and Secchi disk reading, you became active participants in the scientific process.

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



Corethron pennatum (diatom)

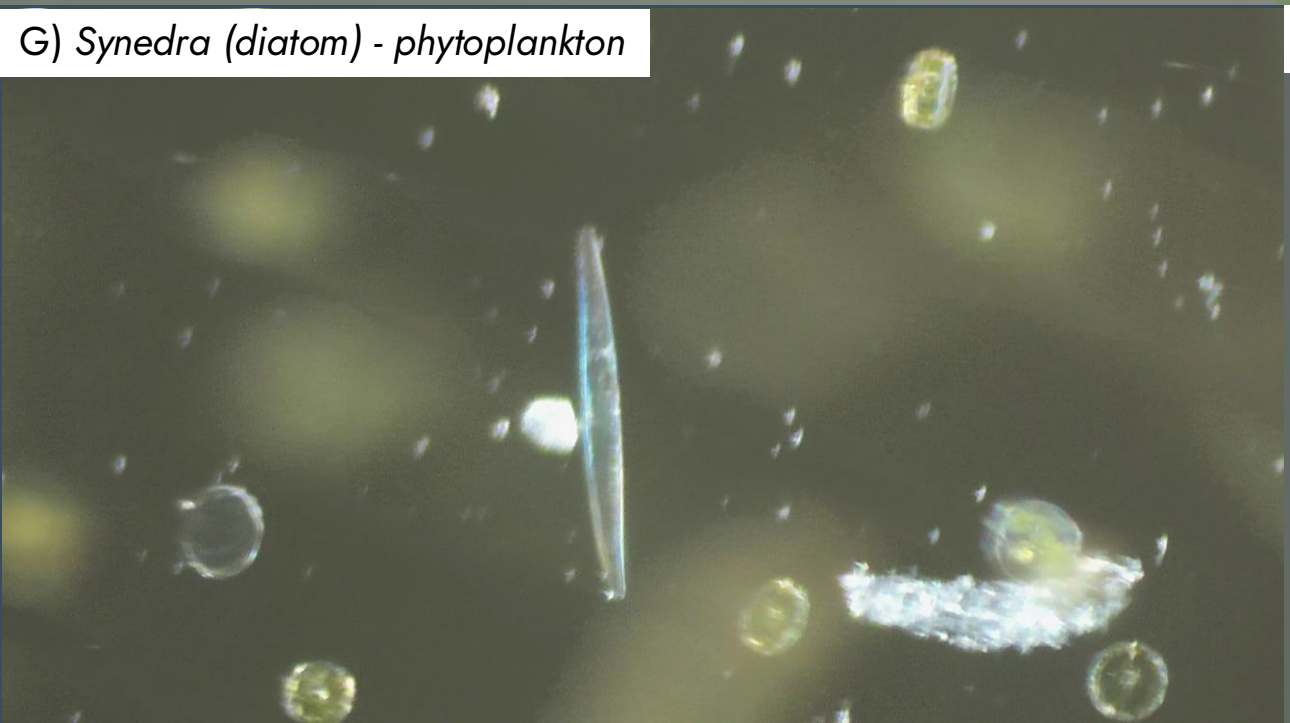
Back in the Science Centre, we brought the ocean into focus by examining our water samples under the microscope to uncover the hidden world of phytoplankton and zooplankton.

We projected 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.

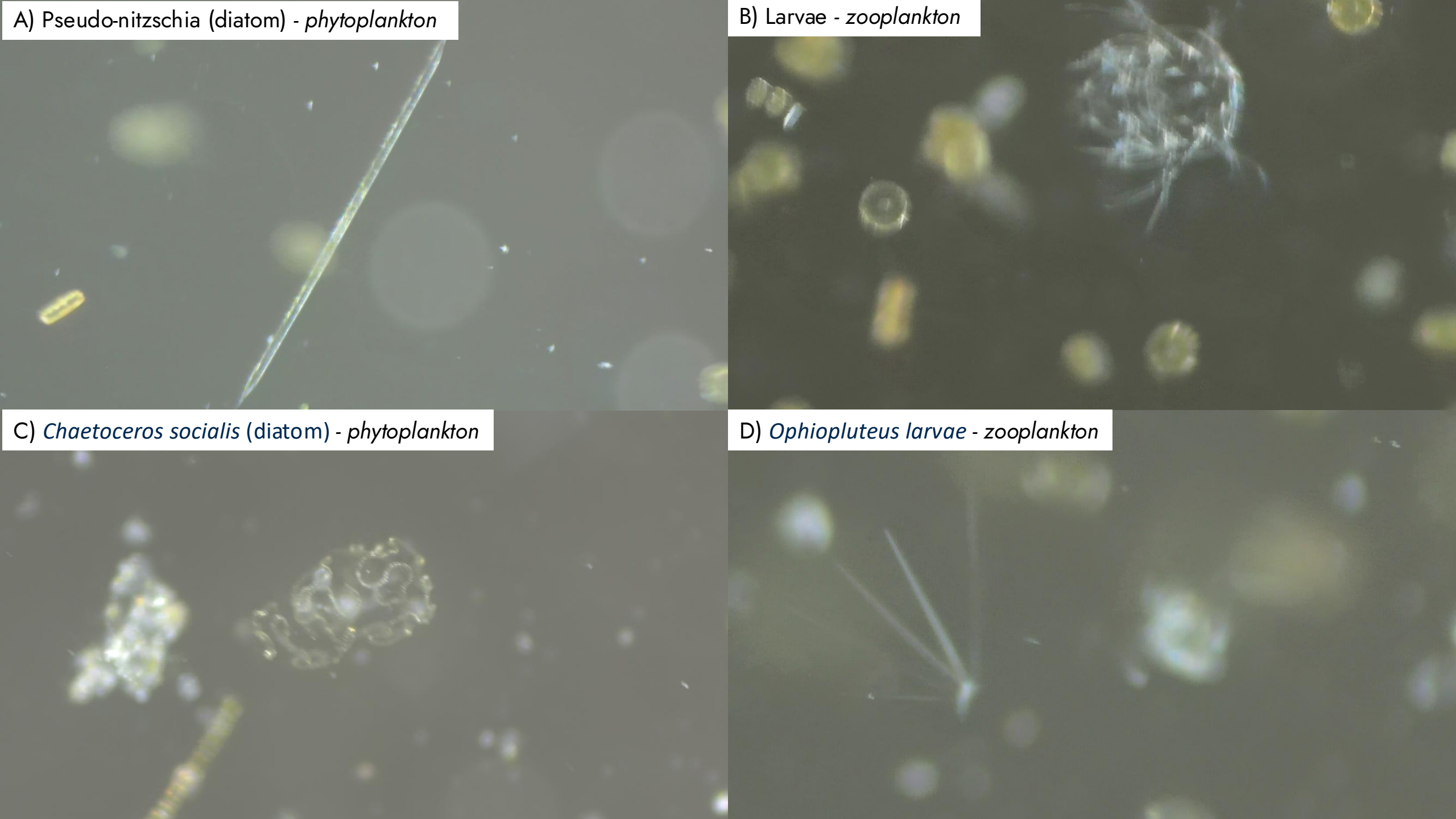
The samples revealed a world dominated by phytoplankton and zooplankton, forming the foundation of the marine food web. What seemed invisible to the eye became a vivid reminder that even the smallest life forms shape this vast and wild ecosystem.


E) *Corethron pennatum* (diatom) - *phytoplankton*


F) *Licmophora* (diatom) - *phytoplankton*


G) *Synedra (diatom) - phytoplankton*


H) *Diatom chain - phytoplankton*


A) Pseudo-nitzschia (diatom) - *phytoplankton*
B) Larvae - *zooplankton*
C) *Chaetoceros socialis* (diatom) - *phytoplankton*
D) *Ophiopluteus larvae* - *zooplankton*

Underwater Drone

We explored the underwater depths of Orne Harbour, reaching a depth of 17m. The slopes are covered with various seaweeds, which protect a rich ecosystem of sea stars.

View the highlights from our underwater drone footage on YouTube

Guest Scientists

TEAM SOUNDTRAP

Heidi Ahonen
Senior Research Scientist
heidi.ahonen@npolar.no

Heidi Ahonen, a Marine Bioacoustician, studies the key contributors of sounds in polar marine environments and the impacts of anthropogenic noise on marine fauna.

Fabienne Mannherz
PhD Student
fm@ecos.au.dk

Fabienne Mannherz, a Marine Bioacoustician, investigates noise sources from shipping operations and how to mitigate impacts on marine mammals.

Visit our Science & Education Hub online to find out more

AWR | ANTARCTIC WILDLIFE RESEARCH FUND

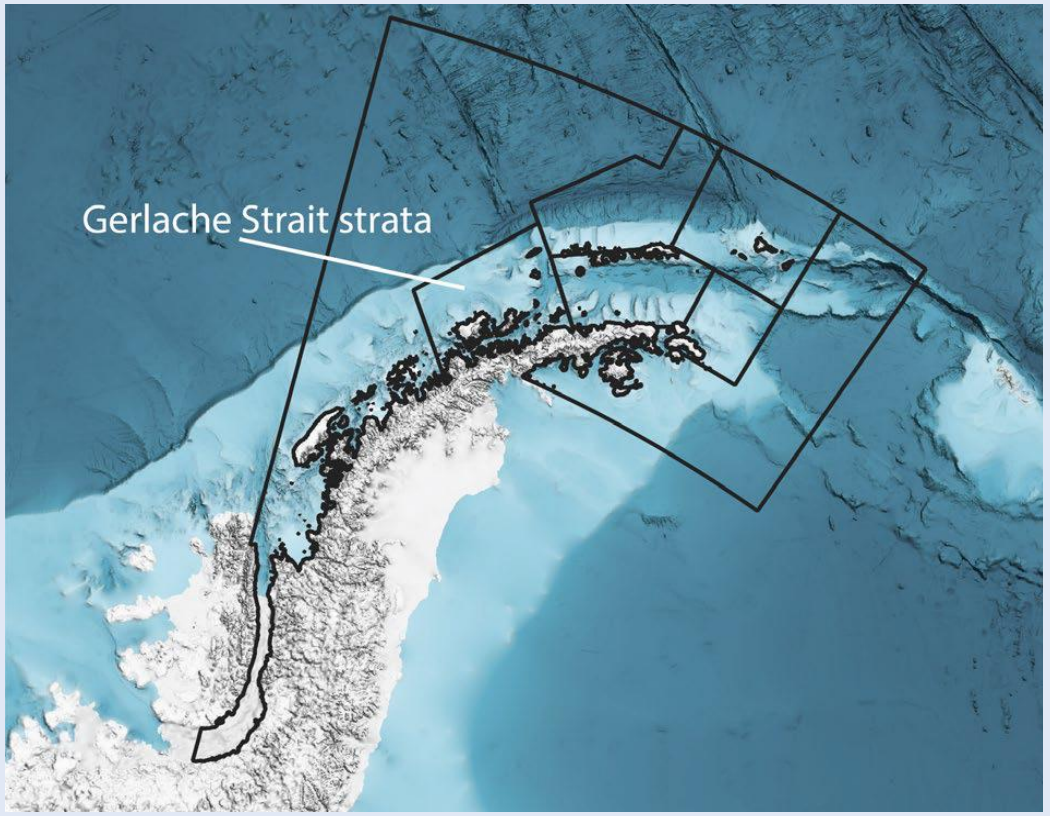
Gerlache Strait – Spatiotemporal overlap of krill fishing with cetaceans and other krill predators

Address the key knowledge gap of krill fishery-predator interactions *in a region where* ***catch levels*** *are* ***proposed to increase substantially****, and* ***data collection*** *has been acknowledged to be* ***limited***

We will initiate

i) a time-series of **year-round presence/absence data on** cetaceans and other air-breathing **krill predators that are detectable by Passive Acoustic Monitoring (PAM)**

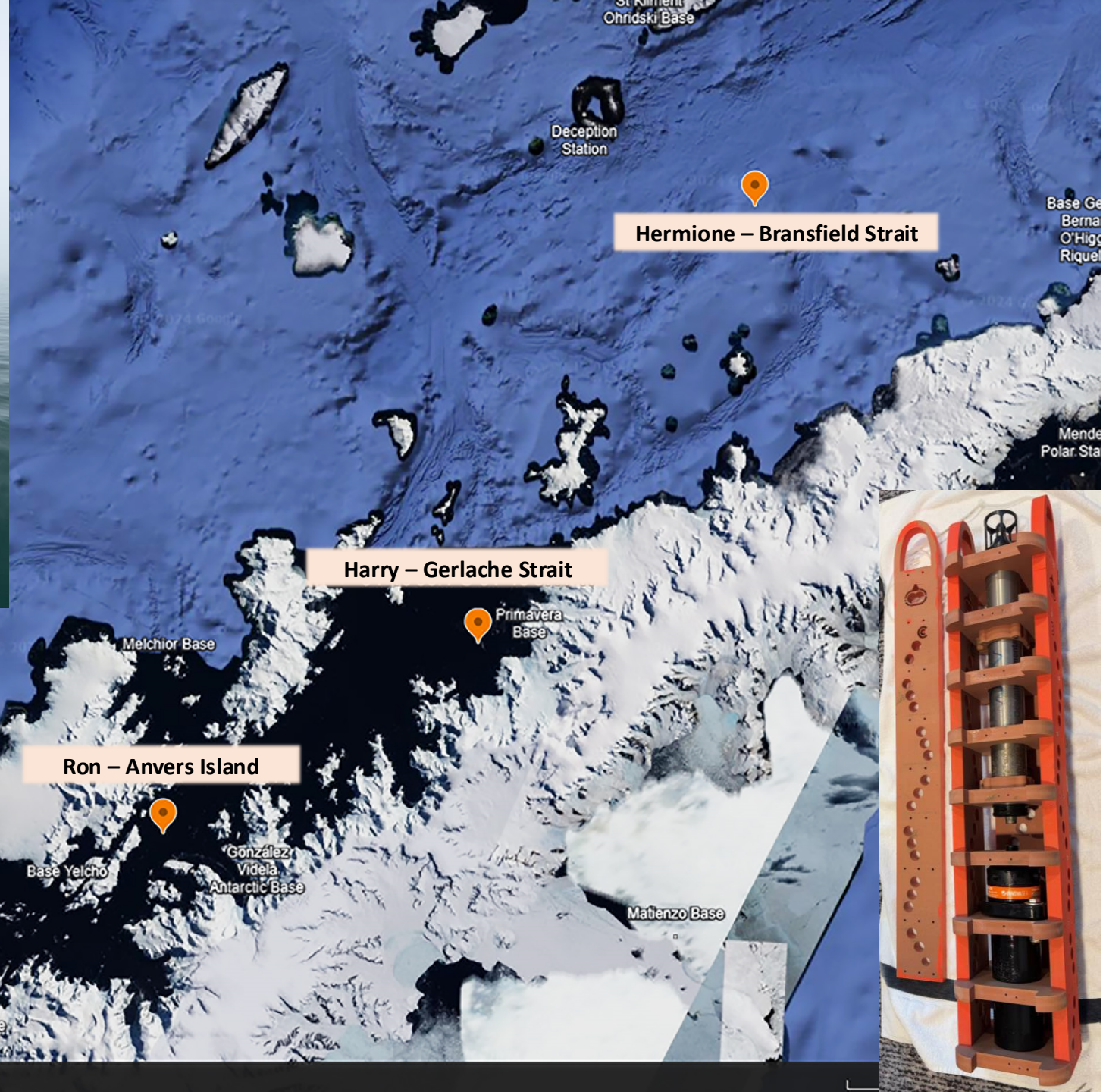
ii) a framework to **evaluate the overlap of fisheries and krill predators** over time in the region

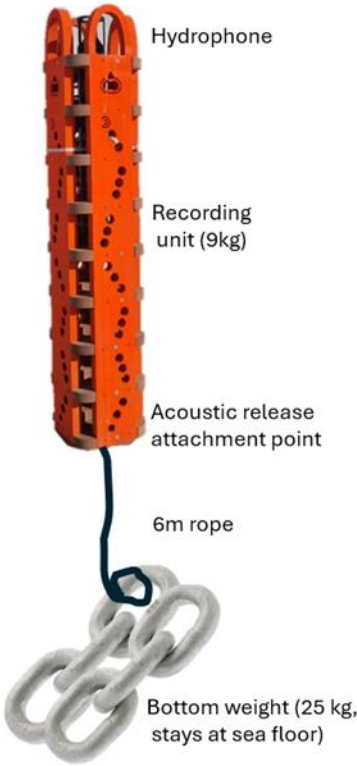


Project collaborators

IAATO

ARK ASSOCIATION OF RESPONSIBLE KRILL HARVESTING COMPANIES





SoundTrap

Acoustic release

AWR | ANTARCTIC WILDLIFE RESEARCH FUND

Results from Antarctica Cruise 9 – 19 Jan 2026

Recovery of recording stations

i) Ron (unsuccessful)

ii) Harry

iii) Hermione

For 2026/2027 – preparation of two new deployments

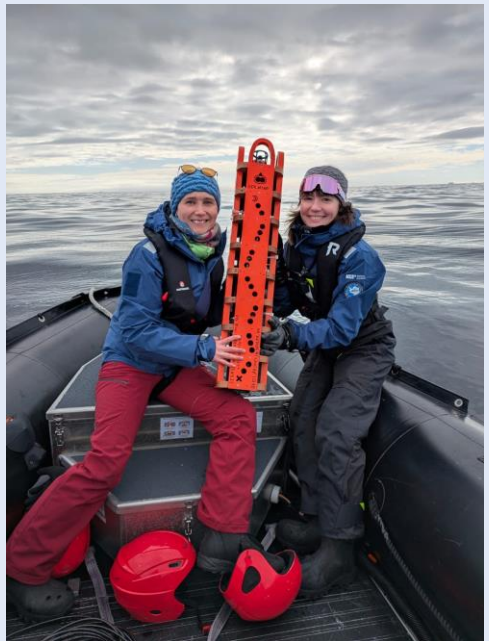
i) Harry → going back to old location (Gerlache Strait)

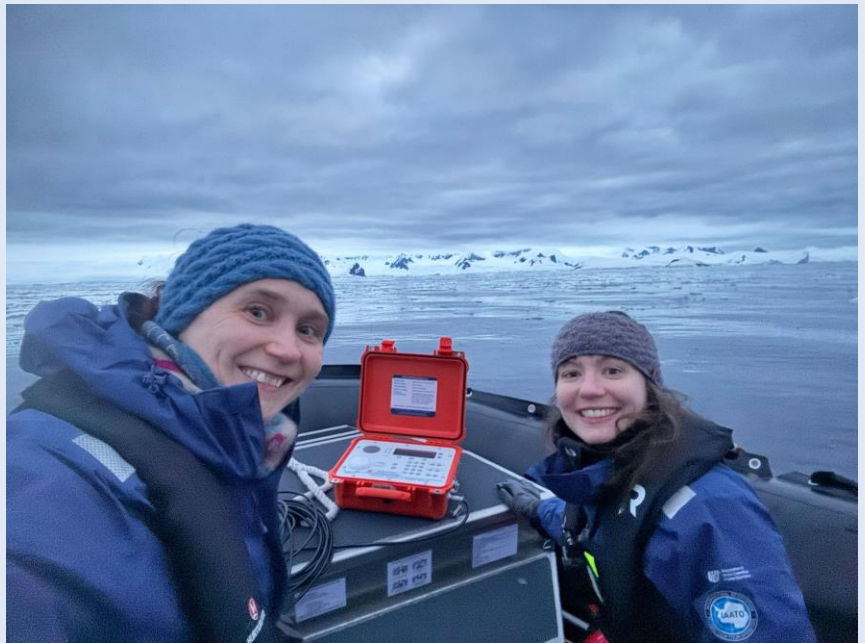
ii) Hermione → reposition to Paradise Bay (which will be facilitated by the amazing MS Fridjtof Nansen Expedition Team)

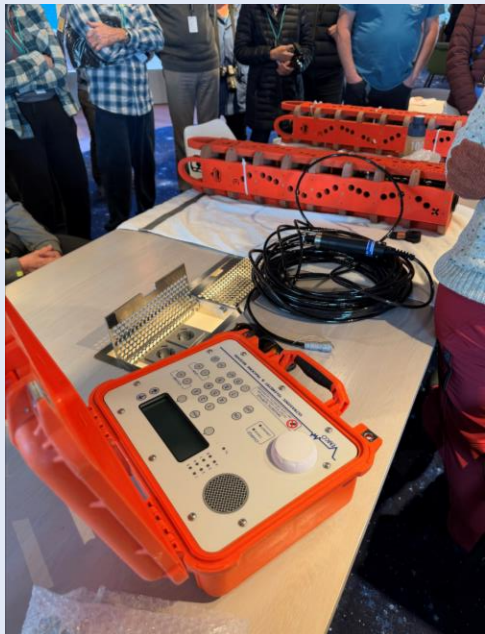
2 science boat experiment recordings

i) Electrical Zodiac

ii) MS Fridtjof Nansen







Project collaborators

IAATO

ARK ASSOCIATION OF RESPONSIBLE KRILL HARVESTING COMPANIES

The Nature Connection Storytelling Project

www.thenatureconnectionproject.com.au

We use storytelling as a deeply personal & open medium to better understand the relationship between humans and nature.

Commenced August 2023
350+ stories to date

Sustainable Communities and Waste
National Environmental Science Program

UNIVERSITY of TASMANIA

Ariane Moore

University of Tasmania, Australia

Nature Connection Research Fellow
PhD Candidate in Philosophy
(Philosophy of religion & environment)

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If you're interested in an accessible introduction to my research, please watch my TEDxHobart talk (2022) on YouTube via QR code:

HX & the University of Tasmania (UTAS) Short Courses

Guest Scientist: Dr Kirsten le Mar

Thank you to everyone who provided feedback on the HX & UTAS Introductory Antarctic Course.

For those of you who are interested in doing the course, the information is below:

Introductory Antarctic Course
- FREE Introductory Course for HX guests
- 2.5 hours of engaging content
- Perfect for curious travellers
- Soon to be available in German and Mandarin
- Learn at your own pace for 6 months
- Certificate of Attendance

For more information: www.travelhx.com/en/campaigns/hx-and-utas-antarctica-science-course/

HX & University of Tasmania (UTAS) Short Courses

Guest Scientist: Dr Kirsten le Mar

For those of you who are interested learning more, there is also an advanced course.

Antarctica: A Journey of Discovery with HX & UTAS

- 20 hours of in-depth learning
- University-level content made accessible
- Formal UTAS qualification (2 credit points)
- Certificate of Completion
- Exclusive HX passenger pricing:
  €350 for HX guests
  €250 for HX Explorers & suite guests

Coming soon to other destinations: **Introductory courses for Arctic expeditions**.
Build your knowledge across the world's most remarkable places.

For more information: www.travelhx.com/en/campaigns/hx-and-utas-antarctica-science-course/

Wildlife List — Birds

Wildlife List – Seabirds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
Stercorarius maccormicki	south polar skua	Antarktikskua	labbe de McCormick
Larus dominicanus	kelp gull	Dominikanermöwe	goéland dominicain
Sterna vittata	Antarctic tern	Antarktikseeschwalbe	sterne couronnée
Sterna hirundinacea	South American tern	Falklandseeschwalbe	sterne hirundinacée
Pygoscelis adeliae	Adélie penguin	Adeliepinguin	manchot d'Adélie
Pygoscelis papua	gentoo penguin	Eselspinguin	manchot papou
Pygoscelis antarcticus	chinstrap penguin	Kehlstreifpinguin	manchot à jugulaire
Spheniscus humboldti	Magellanic penguin	Magellanpinguin	manchot de Magellan
Eudyptes chrysolophus	macaroni penguin	Goldschopfpinguin	gorfou doré
Diomedea epomophora	southern royal albatross	Südkönigsalbatros	albatros royal
Phoebetria palpebrata	light-mantled albatross	Graumantelalbatros	albatros fuligineux
Thalassarche chrysostoma	grey-headed albatross	Graukopfalbatros	albatros à tête grise
Thalassarche melanophris	black-browed albatross	Schwarzbrauenalbatros	albatros à sourcils noirs
Fregetta tropica	black-bellied storm-petrel	Schwarzbauch-Sturmschwalbe	océanite à ventre noir
Oceanites oceanicus	Wilson's storm petrel	Buntfuß-Sturmschwalbe	océanite de Wilson

Wildlife List – Seabirds and Shorebirds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
Macronectes giganteus	southern giant petrel	Riesensturmvogel	pétrel géant
Fulmarus glacialoides	southern fulmar	Silbersturmvogel	fulmar argenté
Daption capense	cape/pintado petrel	Kapsturmvogel	damier du cap
Halobaena caerulea	blue petrel	Blausturmvogel	prion bleu
Pachyptila desolata	Antarctic prion	Taubensturmvogel	prion de la désolation
Procellaria aequinoctialis	white-chinned petrel	Weißkinn-Sturmvogel	puffin à menton blanc
Ardenna grisea	sooty shearwater	Dunkler Sturmtaucher	puffin fuligineux
Leucocarbo/Phalacrocorax atriceps	imperial cormorant	Kaiserscharbe	cormoran impérial
Leucophaeus scoresbii	dolphin gull	Blutschnabelmöwe	goéland de Scoresby
Chionis albus	snowy sheathbill	Weißgesicht-Scheidenschnabel	Chionis blanc
Theristicus melanopis	black-faced ibis	Schwarzzügelibis	ibis à face noire

eBird

During this voyage, our Ornithologist, Kieren, completed 35 surveys. 26 species were recorded between Ushuaia and the Antarctic Peninsula. The most frequently observed were gentoo penguins, kelp gulls, and the imperial cormorant.

View our data on our eBird trip report

Wildlife List – Marine Mammals

Wildlife List – Marine Mammals

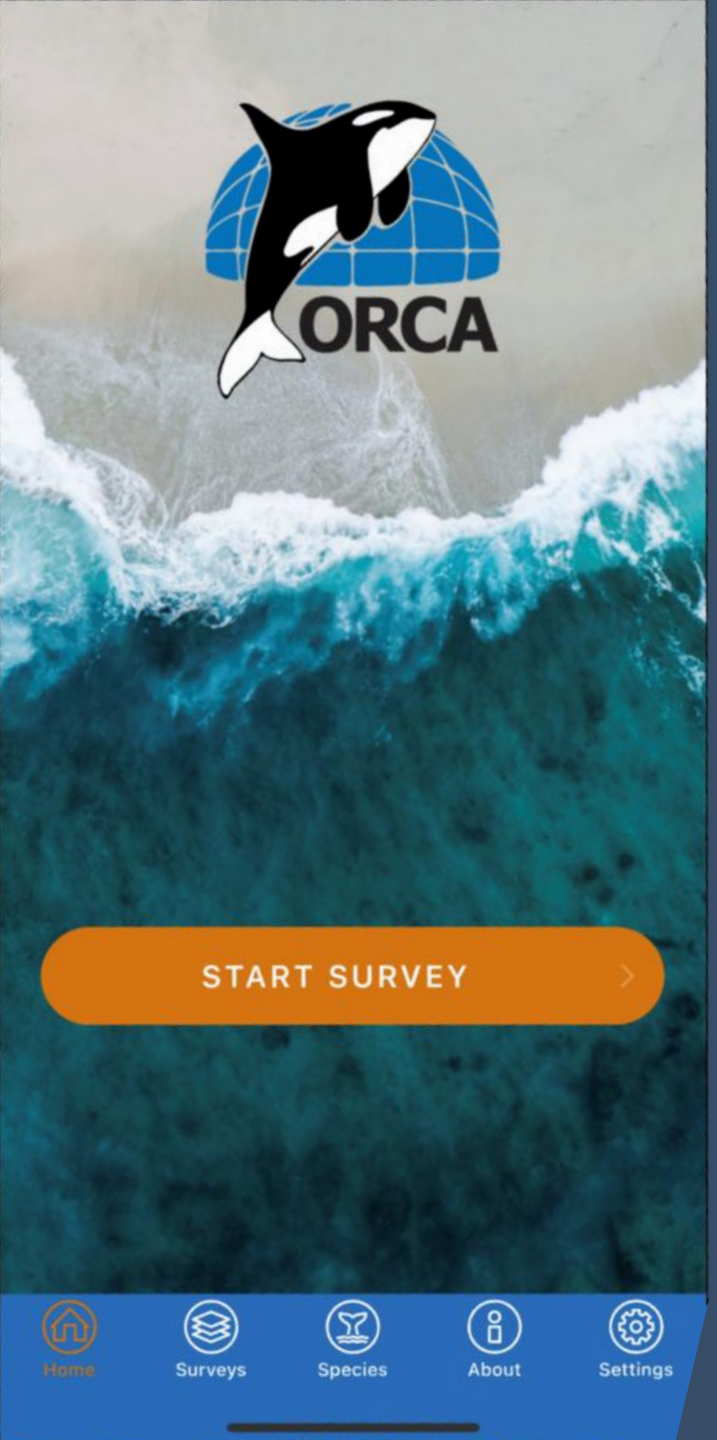
SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS
Balaenoptera bonaerensis	Antarctic minke whale	Südlicher Zwergwal	rorqual à museau pointu de l'Antarctique
Balaenoptera physalus	fin whale	Finnwal	rorqual commun
Megaptera novaeangliae	humpback whale	Buckelwal	baleine à bosse
Orcinus orca	killer whale, orca	Schwertwal, Orca	orque
Balaenoptera borealis	sei whale	Seiwal	rorqual de Rudolphi
Sagmatias australis	Peale's dolphin	Peale-Delfin	lagénorhynque de Peale
Hydrurga leptonyx	leopard seal	Seeleopard	léopard de mer
Leptonychotes weddellii	weddell seal	Weddelrobbe	phoque de Weddell
Lobodon carcinophaga	crabeater seal	Krabbenfresser	phoque crabier
Otaria flavescens	South American sea lion	Mähnenrobbe	lion de mer d'Amérique du Sud
Arctocephalus australis	South American fur seal	Südamerikanischer Seebär	otarie à fourrure australe
Mirounga leonina	southern elephant seal	Südlicher See-Elefant	eléphant de mer austral

Happywhale

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



ORCA Ocean Watchers

Survey

- 9 surveys completed
- 14 hrs 16 minutes
- 160 nautical miles

Sightings

- 04 unidentified whale
- 02 fin whales
- 02 southern fur seals
- 04 southern sea lions
- 08 Peale's dolphins
- 53 humpback whales


IX
Connect with your inner scientist