

The image features two whales swimming in deep blue water. A large, semi-transparent 'IHW' logo is overlaid on the left side of the image. The text 'Science & Education Report' is centered in white. The whale in the foreground is larger and more detailed, showing its skin texture and fins. The second whale is smaller and positioned behind it, partially obscured by the 'IHW' text.

Science & Education Report

MS FRIDTJOF NANSEN

07th - 17th February

2024

Highlights of Antarctica





Science & Education Program

During this voyage, we ran **5 citizen science** projects in total: Nasa Cloud Globe Observer, eBird, HappyWhale, FjordPhyto and SecchiDisk. You were able to enrich your mind with **17 lectures** on different topics from birds to rocks. You also took part in the **12 discovery sessions** we put on.

We also helped our guest scientists from Polar Watch Program to gather data to assess the healthy state of the humpback whales population in Antarctica.

A lot of you were very interested in the scientific aspect of our voyage and we thank you all for your enthusiasm. Here we provide a resume of our science activities.



Lectures & Discovery sessions

17 Lectures

12 Discovery sessions



Wildlife Watch

A total of 37 species were observed,
including:
10 Mammals
28 Birds



NASA Globe Cloud Observer

Quite a few of you assisted Mario during our daily observations. We did 2 observations in total during this voyage, from the Drake passage to the Peninsula. Our observations bringing more information of how the atmosphere behaves from below up to the top. Thank you very much for your interest and help, even during our snowy/stormy weather!

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

Our observations this trip:



Date	Location	Match
09.02.24	Drake Passage	-
15.02.24	Drake Passage	-



Owen Hunt/HX

Total observations: 2

eBird

During this voyage, our ornithologist, Simon, did **12 surveys** between the Drake Passage and the Western Antarctic Peninsula. A total of **18 species** were observed and **756 individuals** counted. The top observed species were Gentoo Penguin, Kelp Gull and Black-browed Albatross. Find the trip report for the voyage and the checklists [here](#).



eBird

MS Fridtjof Nansen eBird Surveys 7 – 17 February 2024

eBird

12 checklists
18 species observed



A total of 28 bird species were seen on this trip:

Gentoo Penguin	Wandering Albatross
Adelie Penguin	Grey-headed Albatross
Chinstrap Penguin	Black-browed Albatross
Antarctic Shag	Light-mantled Albatross
Imperial Cormorant	Southern Giant Petrel
Rock Shag	Southern Fulmar
Chilean Skua	Cape Petrel
	White-chinned Petrel
	Soft-plumaged Petrel
Subantarctic\ Brown Skua	Snow Petrel
South Polar Skua	Slender-billed Prion
Kelp Gull	Sooty Shearwater
Dolphin Gull	Wilson's Storm Petrel
Antarctic Tern	Black-bellied Storm Petrel
South American Tern	
Snowy Sheathbill	

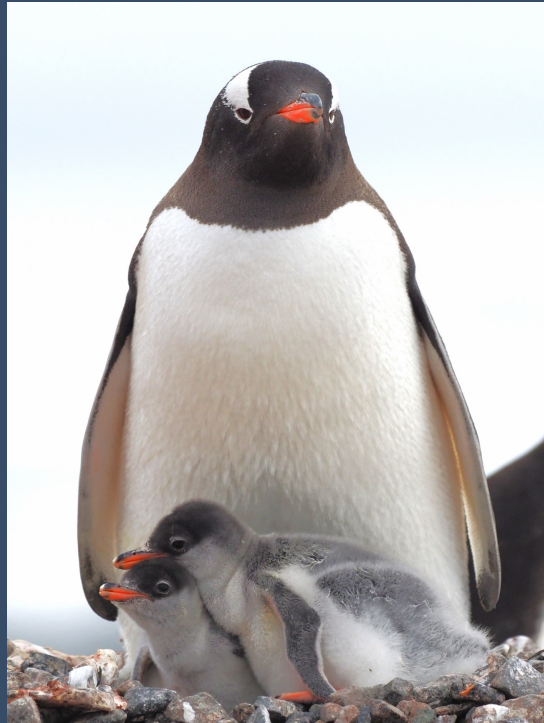
At least 756 individuals of 18 species logged into eBird

- Beagle Channel
- Drake Passage
- Antarctica

Most abundant species on our surveys



**480 Gentoo
Penguin**



**125 Antarctic
Shag**



**39 Wilson's Storm
Petrel**





Secchi Disk

We ran 5 science boat sessions during this trip: Cuverville, Neko Harbor and Pleneau. On each of them we performed a secchi disk measurement to document the clarity of the water and assess the abundance of phytoplankton.

Date	Location	Depth (m)
10.01.24	Cuverville	9,6
11.01.24	Neko Harbour	8,6
12.02.24	Pleneau	9,3

[View our data](#) submitted to the Secchi Disk Project

Hélène Dubrasquet/HX



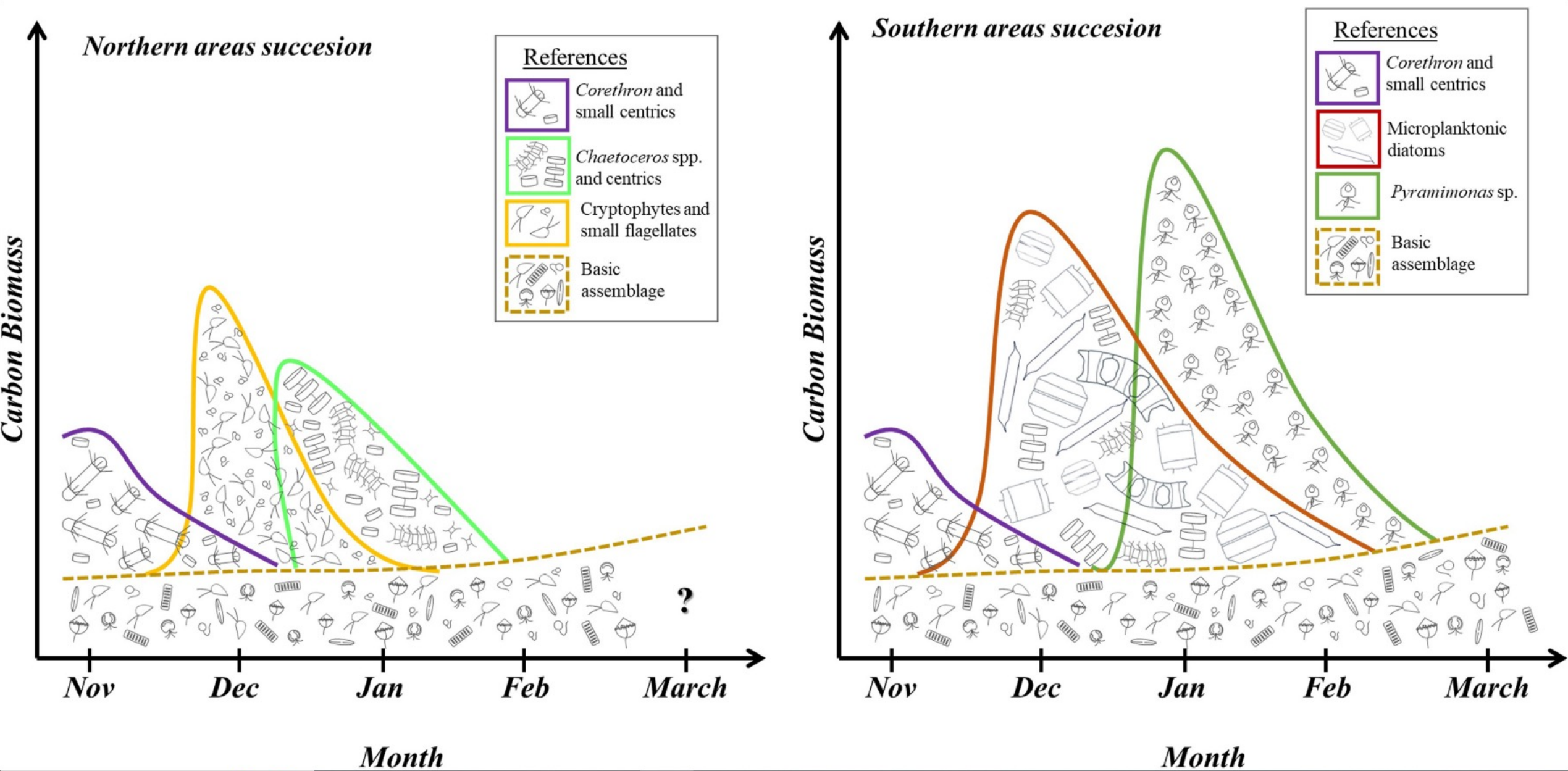
FjordPhyto

This project aims to monitor the changes in abundance and distribution of phytoplankton in Antarctic waters in relation with glacier ice melting. We sampled 2 locations during this voyage, at Cuverville & Neko Harbour. We towed a plankton net of 100 um mesh size to gather water samples, deployed our CTD sensor to understand the oceanographic parameters of the water (temperature, salinity, chlorophyll a) and preserved melt water samples to measure later on dissolved oxygen. The whole mission was a success, thank you for participating with us!

[Visit FjordPhyto website to find out more](#)



Hélène Dubrasquet/HX



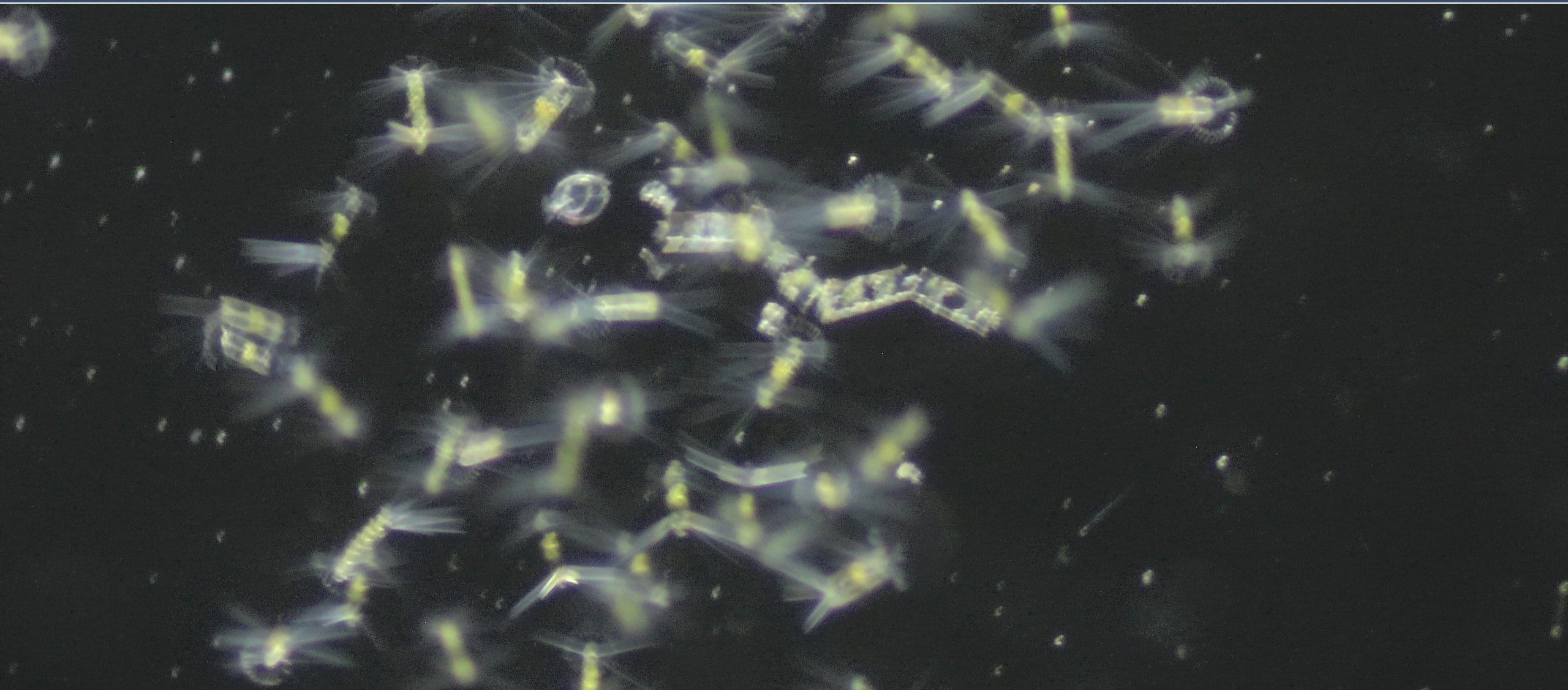
Here is a diagram that explains the temporal succession of phytoplankton communities. Our voyage allowed us to visit both the Northern and Southern areas of the Gerlache Strait. We observed big differences in the abundance and diversity of species between the north (Lemaire) and the south (Marguerite Bay), with higher and richer waters towards the south, matching those results. Data obtained thanks to the FjordPhyto project participants. Marscioni et al 2023.



Plankton samples

Our samples allowed us to describe the plankton community from the south of the Peninsula up to the far north, noticing an unusually low abundance during our Science Boat sampling. Here is a photo to illustrate some of the diatoms we observed.

Phytoplankton : Diatom chain





HappyWhale

This voyage was a total success in terms of whale and seal sightings:

- We had an abundance of opportunities to obtain fluke shots
- We got a MATCH from Leith Cove
- We have 5 more humpback flukes to submit
- Multiple leopard seal sightings to submit

In parallel, we submitted our data to the VCAPS- IAATO program, with more than 30+ humpback whales, 15+ fin whales, 10 leopard seals and 100+ Antarctic fur seals sighted! Thank you so much for helping us gathering amazing pictures and moments!

Marine Mammal Data

Submissions for Individual Identification:

- 6 Humpback Whale Flukes
- 5 Leopard Seals
- 2 Weddell Seals

Sighting Submissions to IAATO:

- 40+ Humpback Whales
 - 15+ Fin Whales
 - 10 Leopard Seals
 - 5 Crabeater Seal
 - 3 Weddell Seals
 - 100+ Antarctic Fur Seals
- *The VCAPs data are still an underestimate of the wildlife we saw since we did not have accurate GPS and counts for every encounter





[Unnamed]

ID HW-MN1300525
SEX Unknown
Humpback Whale

Also Known As:
BTBEL-Mn_02_117

Sightings: 11

First: 2016-01-16
Antarctica

Last: 2024-02-10
Antarctica

Followers 0 [Follow](#)

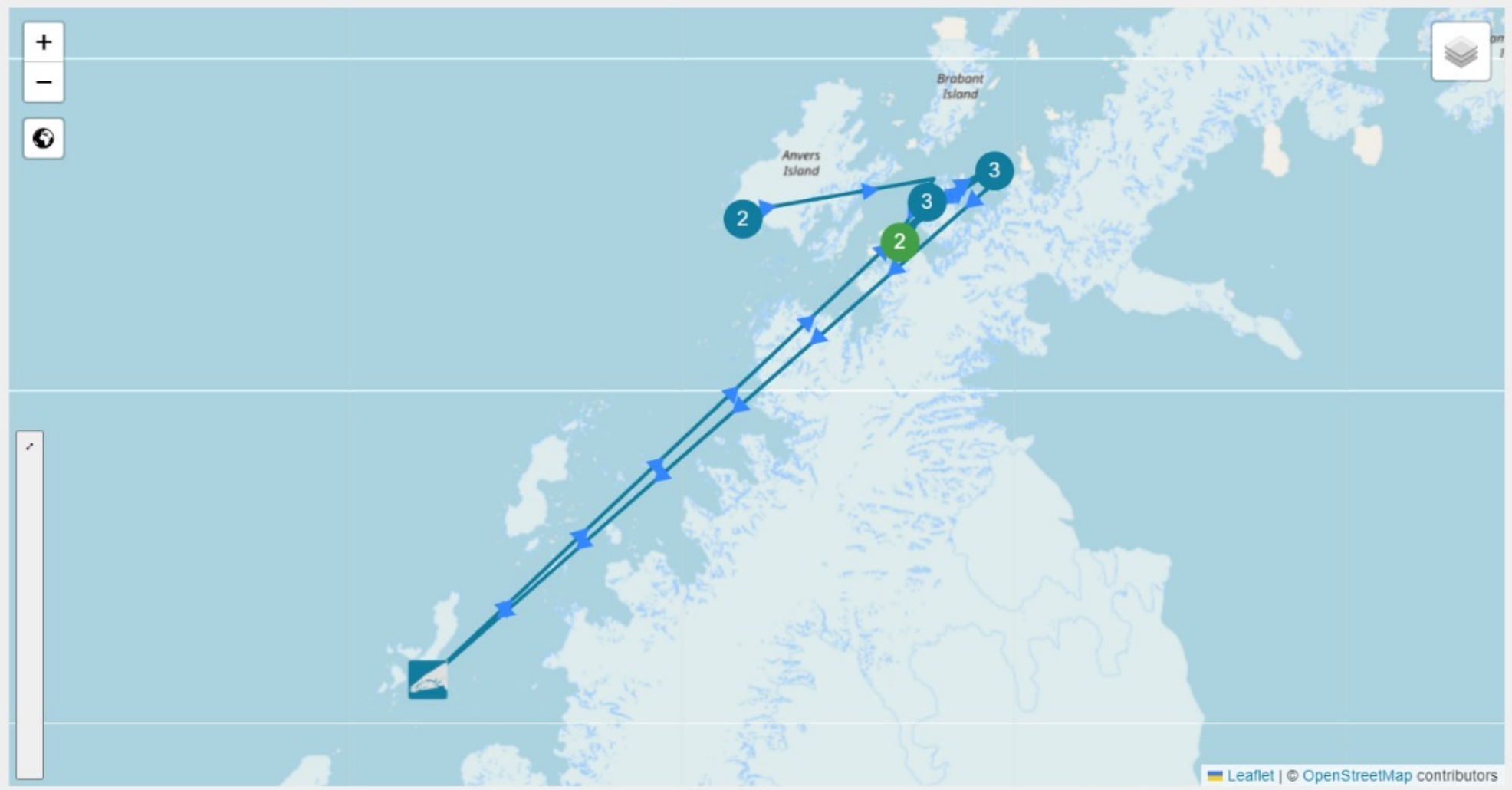
Seen this individual?

[Share Your Experience](#)

Show My Encounters Only

Bio

Also sighted as HW-MN1301080, BTBEL-Mn02120 and BTBEL-Mn20030DL.



Leaflet | © OpenStreetMap contributors

Use shift key to zoom by rectangle



2018

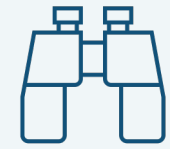
As you can see, there is a large contrast in the amount of diatoms or bacteria on this whale's fluke in 2018 compared to 2024. This is another reason why humpback whales migrate. It can be an effective method of skin care — whereby the diatoms do not survive in warmer waters and fall off!



**2024
(our submission)**



Photo-identification of humpback whales



13 February – cruising Wilhelmina Bay



 **[Unnamed]**
ID HW-MN1301956
SEX Unknown
Humpback Whale

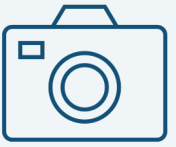
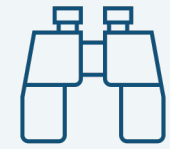
Sightings: 9

First:  2018-12-12
Antarctica

Last:  2024-02-13
Antarctica



Photo-identification of humpback whales



13 February – cruising Wilhelmina Bay



[Unnamed]
ID PWF-EC_3280
SEX Unknown
Humpback Whale

Sightings: 2

First:  2016-09-13
Manabí, Ecuador

Last:  2024-02-13
Antarctica

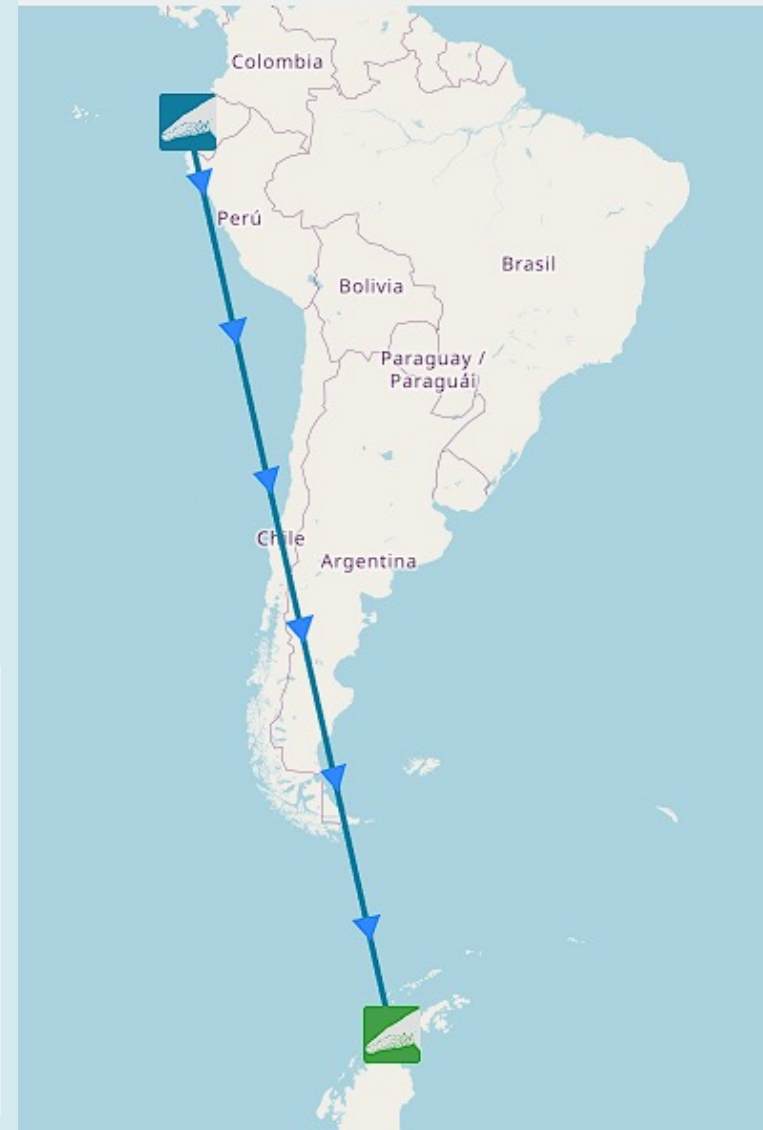
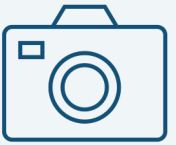
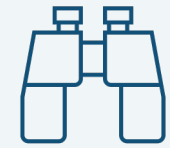
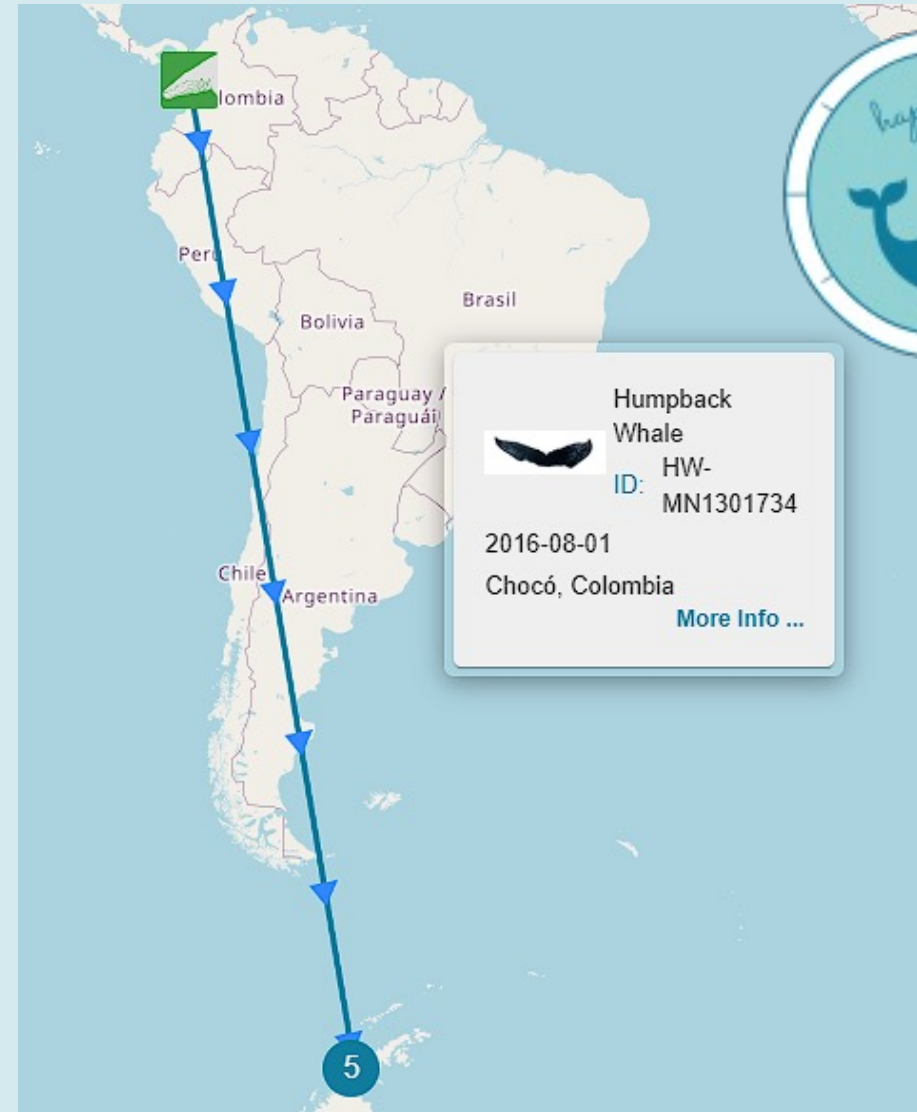
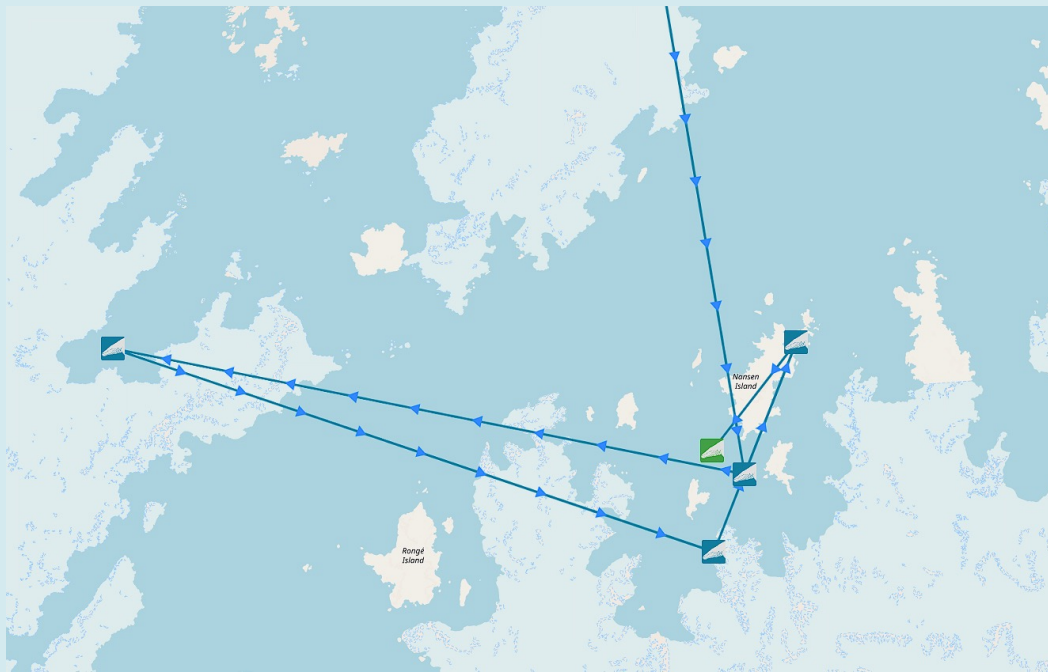


Photo-identification of humpback whales



13 February – cruising Wilhelmina Bay



Summary

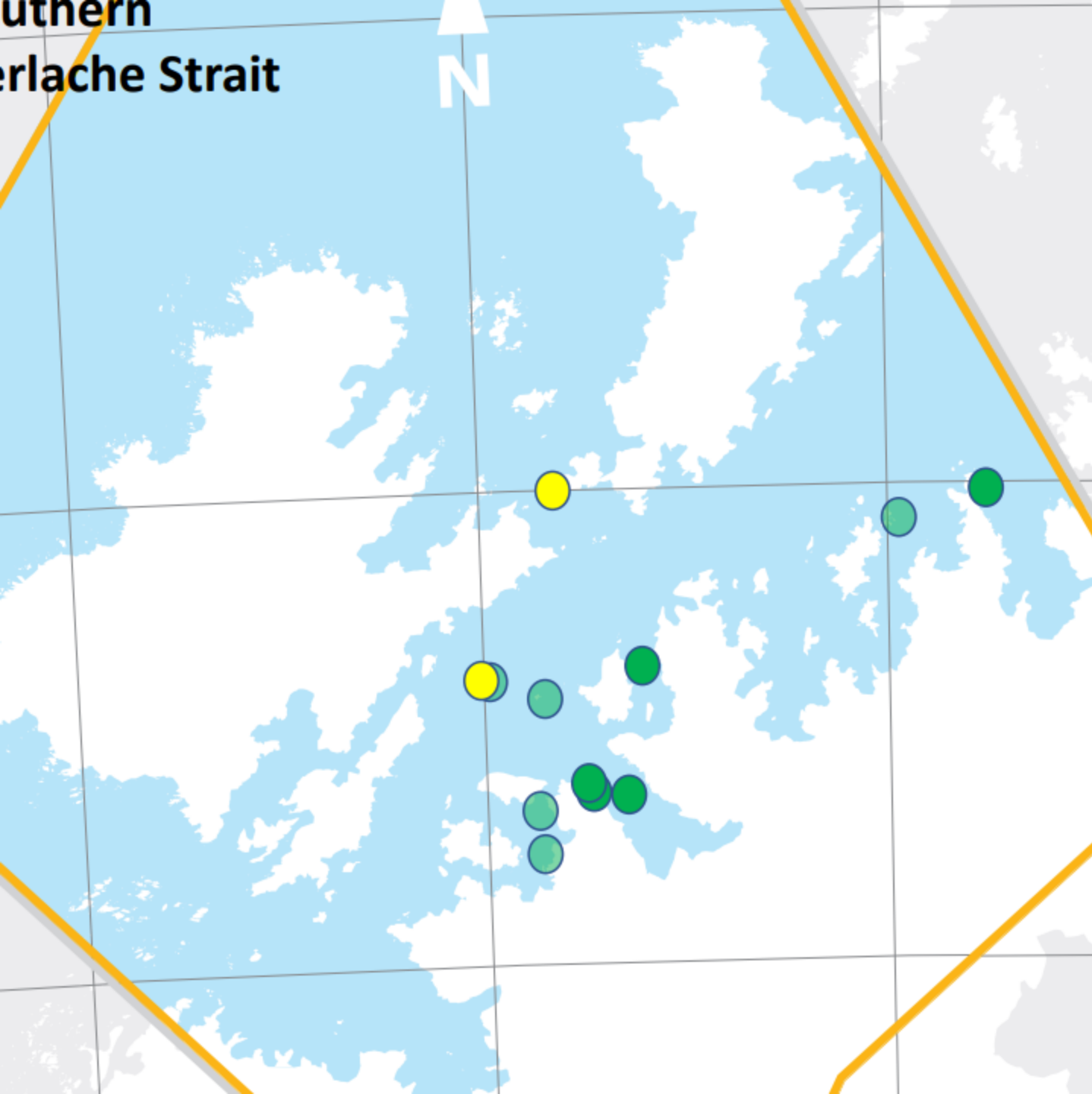
Species	Sightings on Western Antarctic Peninsula	Sightings ON and OFF the Peninsula
Humpback whales	17	17
Fin whales	2	5
Minke whales	3	3
Orcas (killer whales)	3	3
Blue whales	0	0
Other whales	0	6
Total	25	34

This week, there were a total of 34 cetacean sightings, 25 of which were on the Peninsula.

One southern right whale was traveling between the Falklands and South Georgia.

50 fin whales were traveling south in the Drake Passage.

One beaked whale surfaced close to a ship in the Drake Passage and then quickly swam away.



Key

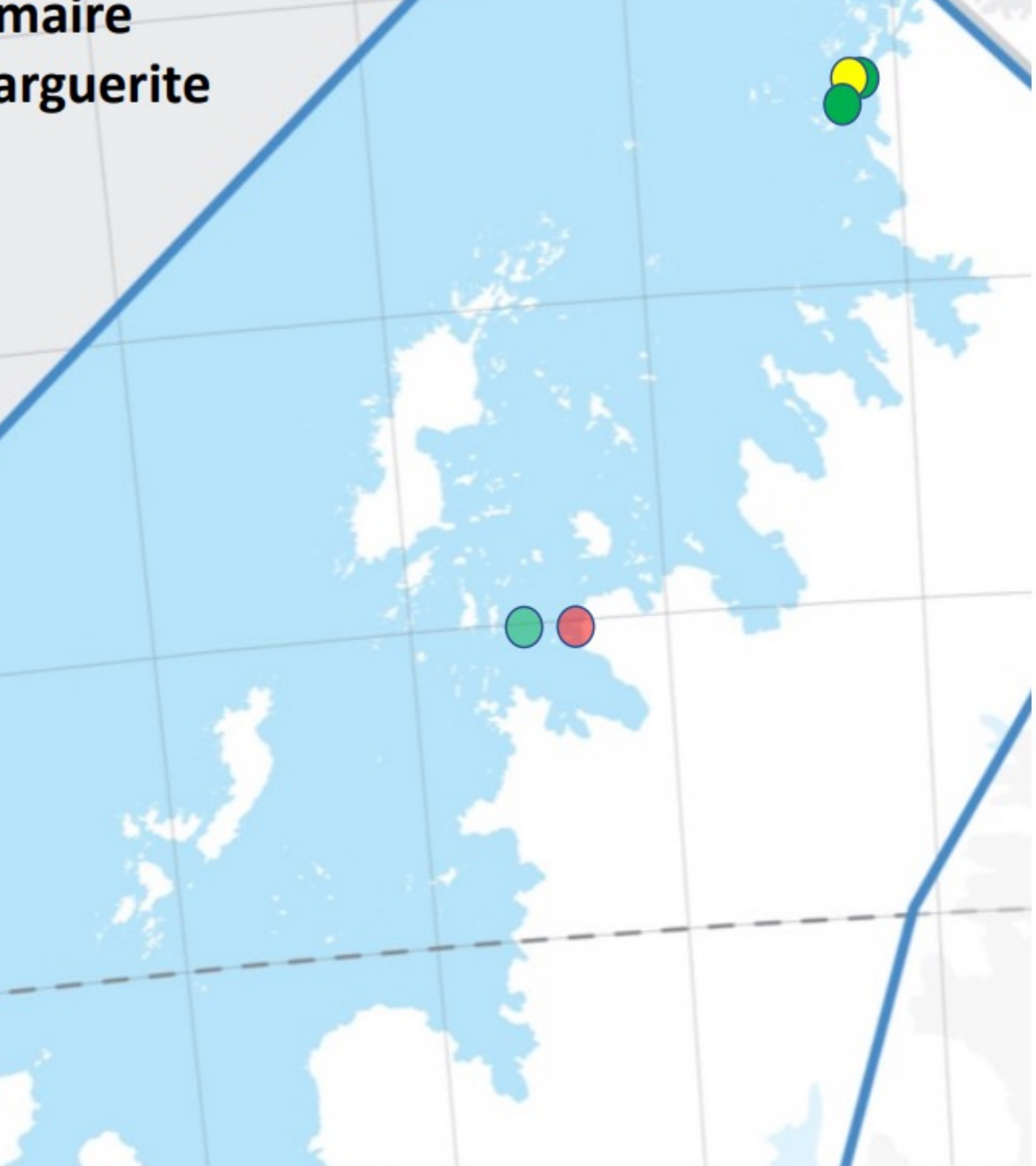
- Humpback Whales
- Fin Whales
- Minke Whales
- Orca (Killer Whales)
- Blue Whales
- Other Whales

*Note: Light circles 2 or less whales;
dark circles 3 or more*

Orca Ecotypes:

- B2 (15) near Anvers

In around Leith Cove, Paradise Bay and Brown Station we saw humpbacks, as well as at Cuverville and orca were sighted in the Errara Channel



Key

- Humpback Whales
- Fin Whales
- Minke Whales
- Orca (Killer Whales)
- Blue Whales
- Other Whales

*Note: Light circles 2 or less whales;
dark circles 3 or more*

Orca Ecotypes:
- B2 (5+ individuals)

At Pleaneau, at the top just south
of the Lemaire Channel, we had
sightings of orca and humpbacks

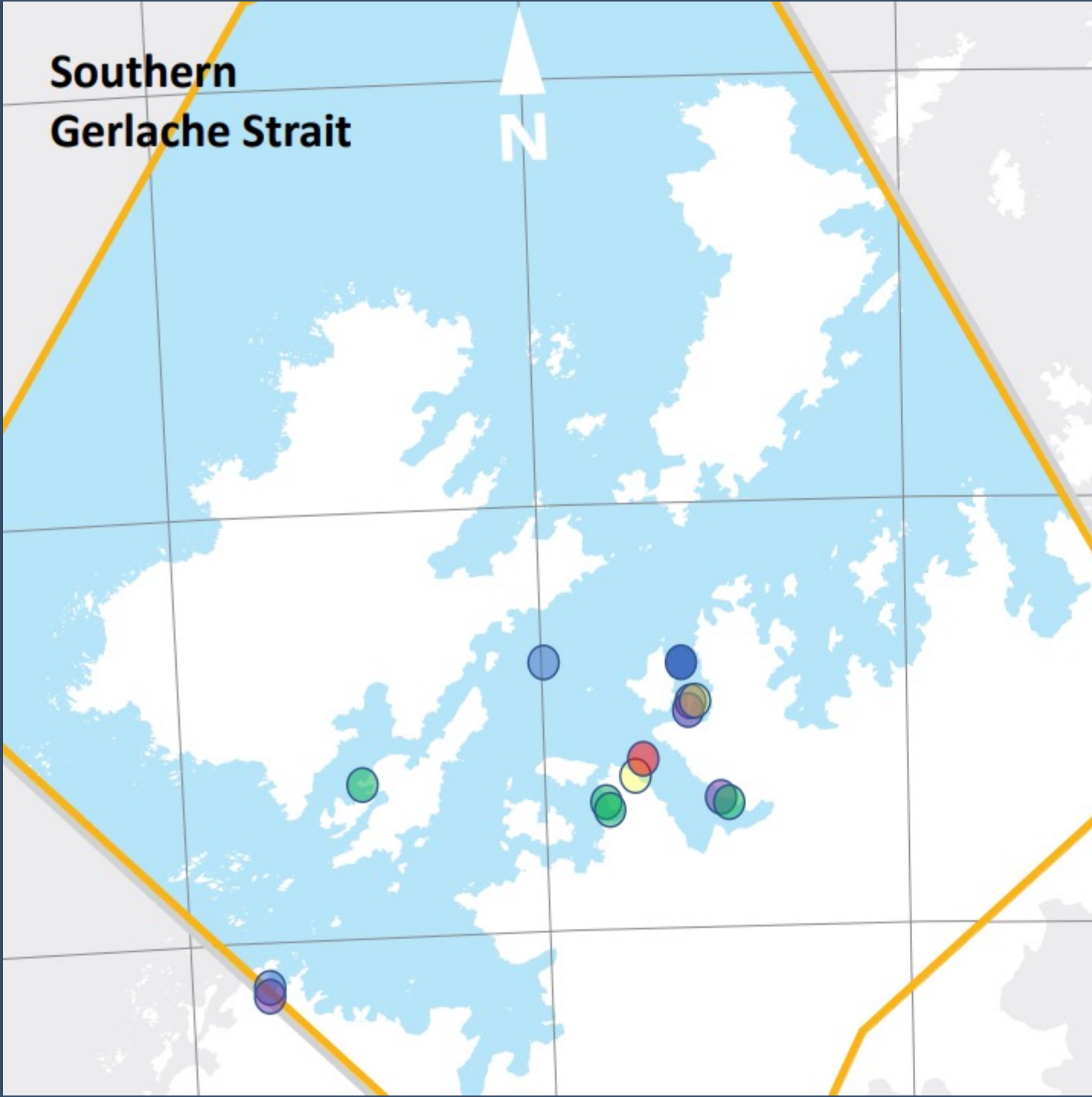
Summary

Species	Sightings on Western Antarctic Peninsula	Sightings ON and OFF Peninsula
Weddell seals	10	10
Leopard seals	12	12
Crabeater seals	5	5
Elephant seals	3	4
Fur seals	13	14
Other pinnipeds	0	0
Total	43	45

- This week, we received 45 pinniped sightings, 43 of which were on the Peninsula.
- Six Weddell seals were singing on an ice floe near Detaille Island.
- 40+ crabeaters were in groups of up to 14 individuals at Detaille Island.
- One curious leopard seal near the Yalour Islands was checking out several zodiacs and biting the pontoon. The seal repeatedly hauled out and slid off the ice and even did several full body breaches while in the water. At the end of the interaction, the seal followed two zodiacs for hundreds of meters.
 - Two days later, an observer reported seeing the same seal again at Port Charcot. The seal was jumping out of the water repeatedly, rubbing against and biting the pontoon, and then chasing another zodiac.



Southern Gerlache Strait



Key

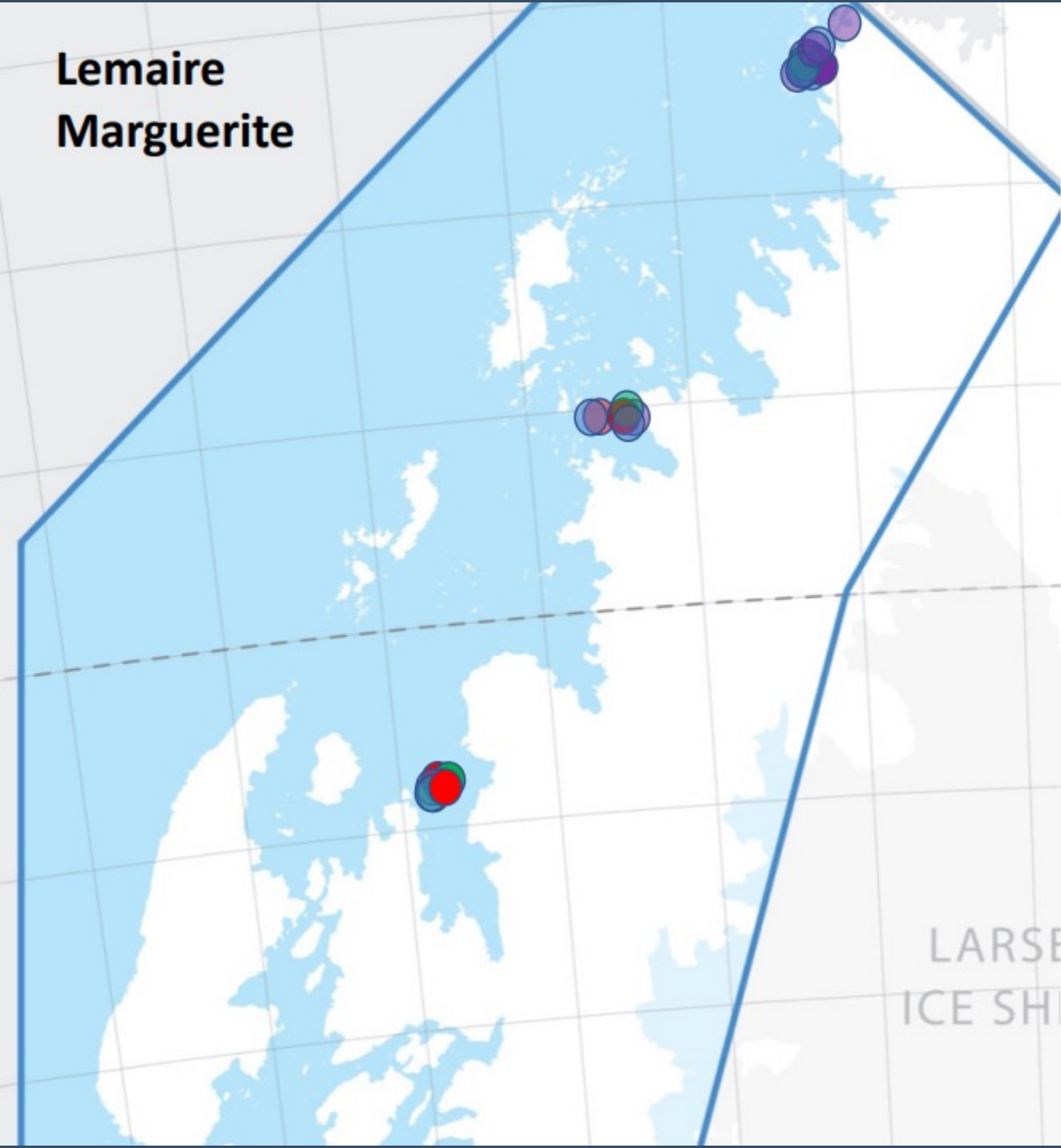
- Weddell Seal
- Leopard Seals
- Crabeater Seal
- Elephant Seal
- Fur Seals
- Other Seals

*Note: Light circles 2 or less seals;
dark circles 3 or more*

Here we can see our leopard and weddell seal sightings from Neko Harbour, as well as our elephant seals at Cuverville



Lemaire
Marguerite



Key

- Weddell Seal
- Leopard Seals
- Crabeater Seal
- Elephant Seal
- Fur Seals
- Other Seals

*Note: Light circles 2 or less seals;
dark circles 3 or more*

At the top is Planeau, where it is
gives a good representation of
what we saw



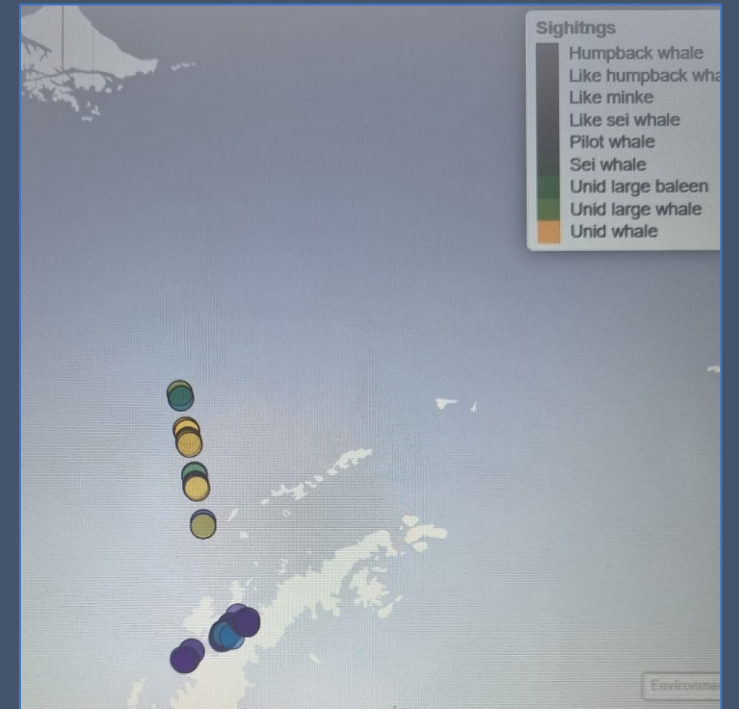
Guest Scientists: Carolina & Cecilia, Polar Watch

Our guest scientists joined us during this voyage to continue the effort of monitoring whale species distribution and abundance around the Antarctic Peninsula with the aim of gathering key information about the position of the whale's feeding grounds. They spent **21hrs** observing from the bridge summarizing **56** sightings. In total they observed **122** individuals. The underlying purpose is to identify the key area for krill aggregations and see what is the interaction with human activities, including tourism and fisheries.















Species	Number sightings	Number individuals
Humpback whale	35	73
Sei whale	2	3
Minke whale	1	1
Pilot whale	1	20
Unidentified baleen whale	5	10
Unidentified whale	12	15
Total general	56	122










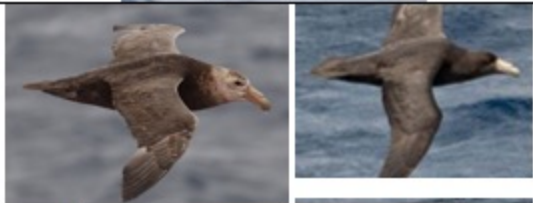


Wildlife List - Birds













Species	February										
	7	8	9	10	11	12	13	14	15	16	
<p><i>Pygoscelis papua</i> EN: <u>Gentoo Penguin</u> FR: <u>Manchot papou</u> DE: <u>Eselspinguin</u> NO: <u>Boylepingvin</u> CHI: <u>白眉企鵝</u></p> 				X	X	X	X	X			
<p><i>Pygoscelis adeliae</i> EN: <u>Adelie Penguin</u> FR: <u>Manchot d'Adélie</u> DE: <u>Adeliepinguin</u> NO: <u>Adeliepingvin</u> CHI: <u>阿德利企鵝</u></p> 			X		X						
<p><i>Pygoscelis antarcticus</i> EN: <u>Chinstrap Penguin</u> FR: <u>Manchot à jugulaire</u> DE: <u>Zügelpinguin</u> NO: <u>Ringpingvin</u> CHI: <u>纹颊企鵝</u></p> 				X				X			
<p><i>Spheniscus magellanicus</i> EN: <u>Magellanic Penguin</u> FR: <u>Manchot de Magellan</u> DE: <u>Magellanninguin</u> NO: <u>Magellanningvin</u> CHI: <u>南美企鵝</u></p> 											
<p><i>Leucocarbo bransfieldensis</i> EN: <u>Antarctic (Blue-eyed) Shag</u> FR: <u>Cormoran antarctique</u> DE: <u>Antarktisscharbe</u> NO: <u>Antarktisskarv</u> CHI: <u>南极鸬鹚</u></p> 				X	X	X	X	X			


<p><i>Stercorarius chilensis</i> EN: Chilean Skua FR: Labbe du Chili DE: Chileskua NO: Kaneljo CHI: <u>智利贼鸥</u></p>				X									
<p><i>Stercorarius antarcticus</i> EN: Subantarctic Brown Skua FR: Labbe antarctique DE: Subantarktiskua NO: Sørbavsjo CHI: <u>大贼鸥</u></p>							X				X		
<p><i>Stercorarius maccormicki</i> EN: South Polar Skua FR: Labbe de McCormick DE: Antarktiskua NO: Sørio CHI: <u>麦氏贼鸥</u></p>							X	X	X	X	X		
<p><i>Larus dominicanus</i> EN: Kelp Gull FR: Goéland dominicain DE: Dominikanermöwe NO: Taremåke CHI: <u>黑背鸥</u></p>				X			X	X	X	X	X		
<p><i>Sterna vittata</i> EN: Antarctic Tern FR: Sterne couronnée DE: Antarktiseeschwalbe NO: Sørbavsterne CHI: <u>南极燕鸥</u></p>							X	X	X	X	X		

<p><i>Sterna hirundinacea</i> EN: South American Tern FR: <u>Sterne hirundinacée</u> DE: <u>Falklandseeschwalbe</u> NO: <u>Syaleterne</u> CHI: <u>南美燕鸥</u></p>				X									
<p><i>Chionis albus</i> EN: Snowy Sheathbill FR: <u>Chionis blanc</u> DE: <u>Weißgesicht-Scheidenschnabel</u> NO: <u>Antarktisslirenebb</u> CHI: <u>白鞘嘴鸥</u></p>							X						
<p><i>Diomedea epomophora</i> EN: Southern Royal Albatross FR: Albatros royal DE: <u>Königsalbatros</u> NO: <u>Kongealbatross</u> CHI: <u>南方皇信天翁</u></p>													
<p><i>Diomedea exulans</i> EN: Wandering Albatross FR: <u>Albatros hurleur</u> DE: <u>Wanderalbatros</u> NO: <u>Vandrealbatross</u> CHI: <u>漂泊信天翁</u></p>													X
<p><i>Thalassarche chrysostoma</i> EN: Grey-headed Albatross FR: Albatros à tête grise DE: <u>Graukopfalbatros</u> NO: <u>Gråhodealbatross</u> CHI: <u>灰头信天翁</u></p>													X

<p><i>Thalassarche melanonhris</i> EN: Black-browed Albatross FR: Albatros à sourcils noirs DE: Schwarzbraunalbatros NO: Svartbrynalbatross CHI: 黑眉信天翁</p>		X	X	X						X	X	X
<p><i>Phoebastria palpebrata</i> EN: Light-mantled Albatross FR: Albatros fuligineux DE: Graumantelalbatros NO: Gråalbatross CHI: 灰背信天翁</p>				X								
<p><i>Macronectes giganteus</i> EN: Southern Giant Petrel FR: Pétrel géant DE: Riesensturmvogel NO: Sørkjempepetrell CHI: 巨鹱</p>												
<p><i>Macronectes halli</i> EN: Northern Giant Petrel FR: Pétrel de Hall DE: Hallsturmvogel NO: Nordkjempepetrell CHI: 霍氏巨鹱</p>		X	X	X	X	X	X			X	X	X
<p><i>Fulmarus glacialisoides</i> EN: Southern Fulmar FR: Fulmar argenté DE: Silbersturmvogel NO: Sørbayhest CHI: 银灰暴风鹱</p>				X					X			






<p><i>Daption capense</i> EN: Cape Petrel FR: Damier du Cap DE: Kapsturmvogel NO: Flekkpetrell CHI: 花斑鹱</p>													
<p><i>Thalassoica antarctica</i> EN: Antarctic Petrel FR: Pétrel antarctique DE: Antarktissturmvogel NO: Antarktispetrell CHI: 南极鹱</p>													
<p><i>Procellaria aequinoctialis</i> EN: White-chinned Petrel FR: Puffin à menton blanc DE: Weißkinn-Sturmvogel NO: Hvitthakepetrell CHI: 白颈风鹱</p>					X	X						X	
<p><i>Pterodroma mollis</i> EN: Soft-plumaged Petrel FR: Pétrel soyeux DE: Weichfeder-Sturmvogel NO: Silkepetrell CHI: 柔羽圆尾鹱</p>					X							X	
<p><i>Ardenna grisea</i> EN: Sooty Shearwater FR: Puffin fuligineux DE: Dunkelsturmtaucher NO: Grålire CHI: 灰鹱</p>													






<p><i>Halobaena caerulea</i> EN: Blue Petrel FR: Prion bleu DE: Blausturmvogel NO: Blåpetrell CHI: 蓝鹱</p>								
<p><i>Pachyptila desolata</i> EN: Antarctic Prion FR: Prion de la Désolation DE: Taubensturmvogel NO: Antarktishvalfugl CHI: 鸽锯鹱</p>								
<p><i>Pachyptila belcheri</i> EN: Slender-billed Prion FR: Prion de Belcher DE: Dünschnabel-Sturmvogel NO: Smalnebbhvalfugl CHI: 细嘴锯鹱</p>								X
<p><i>Pagodroma nivea</i> EN: Snow Petrel FR: Pétrel des neiges DE: Schneesturmvogel NO: Snøpetrell CHI: 雪鹱</p>						X		
<p><i>Oceanites oceanicus</i> EN: Wilson's Storm Petrel FR: Océanite de Wilson DE: Buntfuß-Sturmschwalbe NO: Wilsonstormsvale CHI: 黄蹼洋海燕</p>				X	X	X	X	X





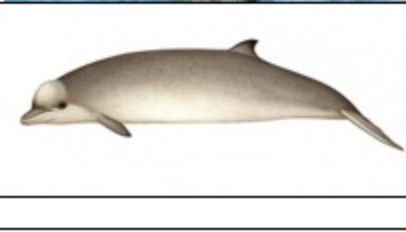
<p><i>Fregatta tropica</i> EN: Black-bellied Storm Petrel FR: <u>Océanite à ventre noir</u> DE: <u>Schwarzbauch-Sturmschwalbe</u> NO: <u>Svartbukstormsvale</u> CHI: <u>黑腹舰海燕</u></p>				X	X	X						X	
<i>Rock Shag</i>		X											
<i>Imperial Cormorant</i>		X											
<i>Dolphin Gull</i>		X											





A photograph of a whale breaching the water in a snowy, mountainous landscape. The whale's dark, curved back is visible above the water's surface, with a splash of white water. The background features a large, snow-covered mountain range under a pale sky. The water is a deep blue-grey color.

Wildlife List - Marine Mammals

Species		February									
		7	8	9	10	11	12	13	14	15	16
<p><i>Balaenoptera musculus</i> EN: Blue Whale FR: Baleine bleue DE: Blauwal NO: Blahval CH: 藍鯨</p>											
<p><i>Balaenoptera physalus</i> EN: Fin Whale FR: Rorqual commun DE: Finnwal NO: Finhval CH: 長須鯨</p>			X							X	X
<p><i>Megaptera novaeangliae</i> EN: Humpback Whale FR: Baleine a bosse DE: Buckelwal NO: Knølhval CH: 座頭鯨</p>				X	X	X	X	X	X		
<p><i>Balaenoptera borealis</i> EN: Sei Whale FR: Rorqual de Rudolphi DE: Seiwal NO: Seihval CH: 塞鯨</p>				X							
<p><i>Balaenoptera bonaerensis</i> EN: Antarctic Minke Whale FR: Petit rorqual de l'Antarctique DE: Antarktischer Zwergwal NO: Antarktisk vågehval CH: 南極小鬚鯨</p>					X						X

<p><i>Eubalaena australis</i> EN: Southern Right Whale FR: Baleine franche australe DE: Südkaper NO: Sørkaper</p>									
<p><i>Orcinus orca</i> EN: Killer Whale FR: Orque DE: Orca o Schwertwal NO: Spekkhogger CH: 虎鲸</p>									
<p><i>Cephalorhynchus eutropia</i> EN: Chilean dolphin FR: Céphalorhynque noir DE: Weißbauchdelfin NO: Chiledelfin CH: 智利矮海豚</p>									
<p><i>Cephalorhynchus commersonii</i> EN: Commerson's dolphin FR: Céphalorhynque de Commerson DE: Commerson-Delfin NO: Commersondelfin CH: 康氏矮海豚</p>									
<p><i>Lagenorhynchus obscurus</i> EN: Dusky dolphin FR: Lagenorhynque obscur DE: Schwarzdelfin NO: Morkdelfin CH: 暗色斑纹海豚</p>									

<p><i>Lagenorhynchus cruciger</i> EN: Hourglass dolphin FR: Lagénorhynque sablier DE: Stundenglasdelfin NO: Timeglassdelfin CH: 沙漏斑纹海豚</p>												
<p><i>Globicephala melas</i> EN: Long-finned pilot whale FR: Globicéphale noir DE: Grindwal NO: Grindhval CH: 长肢领航鲸</p>				<p>X</p>								
<p><i>Lissodelphis peronii</i> EN: Southern Right Whale Dolphin FR: Dauphin de Peron DE: Südlicher Glattwaldelfin NO: CH: 南露脊海豚</p>												
<p><i>Lagenorhynchus australis</i> EN: Peale's dolphin FR: Lagénorhynque de Peale DE: Peale-Delfin NO: Peales delfin CH: 皮氏斑纹海豚</p>												
<p><i>Hyperoodon planifrons</i> EN: Southern Bottlenose Whale FR: Hyperoodon austral DE: Südlicher Entenwal CH: 南瓶鼻鲸</p>												

Species	February									
	7	8	9	10	11	12	13	14	15	16
<p><i>Arctocephalus australis</i> EN: South American Fur Seal FR: <u>Otarie à fourrure australe</u> DE: <u>Südamerikanischer Seebär</u> NO: Søramerikansk pelssel CH: <u>南美毛皮海獅</u></p>										
<p><i>Otaria flavescens</i> EN: South American Sea Lion FR: Lion de mer d'Amérique du Sud DE: <u>Mähnenrobbe</u> NO: Søramerikansk sjøløve CH: <u>南海獅</u></p>										
<p><i>Lobodon carcinophaga</i> EN: Crabeater Seal FR: <u>Phoque crabier</u> DE: <u>Krabbenfresser</u> NO: <u>Krabbeetersel</u> CH: <u>食蟹海豹</u></p>										
<p><i>Hydrurga leptonyx</i> EN: Leopard Seal FR: <u>Léopard de mer</u> DE: <u>Seeleopard</u> NO: <u>Leopardsel</u> CH: <u>豹海豹</u></p>										

Mirounga leonina
 EN: Southern Elephant Seal
 FR: Eléphant de mer austral
 DE: Südlicher See-Elefant
 NO: Sydlig sjøelefant
 CH: 南象海豹



			X	X					
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Leptonychotes weddellii
 EN: Weddell Seal
 FR: Phoque de Weddell
 DE: Weddelrobbe
 NO: Weddellsel
 CH: 韋德爾氏海豹



				X	X	X		X	
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Arctocephalus gazella
 EN: Antarctic Fur Seal
 FR: Otarie à fourrure antarctique
 DE: Antarktischer Seebär
 NO: Antarktis pelsse
 CH: 南极毛皮海狮



			X	X		X	X	X	
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IX

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