

The image features two whales swimming in deep blue water. One whale is in the foreground, larger and more detailed, while another is behind it. Large, semi-transparent letters 'IHW' are overlaid on the background. The text 'Science & Education Report' is centered in white.

Science & Education Report

MS FRIDTJOF NANSEN

08th - 18th
March 2024

FNANT2407





Science & education program

During this voyage, we ran **5 citizen science** projects: Nasa Cloud Globe Observer, eBird, HappyWhale, FjordPhyto and SecchiDisk. You were able to enrich your mind with **21 lectures** on different topics from birds to rocks. You also took part in the **11 discovery sessions** we put on.

We also helped our guest scientists from Polar Watch Program to gather data to assess the state of the humpback whales population in Antarctica and were able to assist the Friedlander Lab in collecting samples from different whales along the Peninsula.

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

21 Lectures
11 Discovery sessions



Wildlife watch

37 Species:
10 Mammals
27 Birds
Out of 43 species



NASA cloud observer

You were quite a few to assist during our observations. We did 1 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. We have not received a satellite match for this observation

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



Choose your protocol:

Clouds

Mosquito
Habitat Mapper

Land Cover

Trees

- One Observation training Session

Six Observations Submitted

No Satellite Matches due to timing

Our observations this trip:



Date	Location	Match
10.03.24	Drake Passage	-



Total observations: 1

eBird

During this voyage, our ornithologist Júlia, did **12 surveys** between the Drake Passage and the Western Antarctic Peninsula. A total of **9 species** were observed and **89 individuals** counted. The top observed species were Soft-plumaged Petrel, Black-browed Albatross and Black-bellied Storm Petrel. Find the trip report for the voyage and the checklists [here](#).

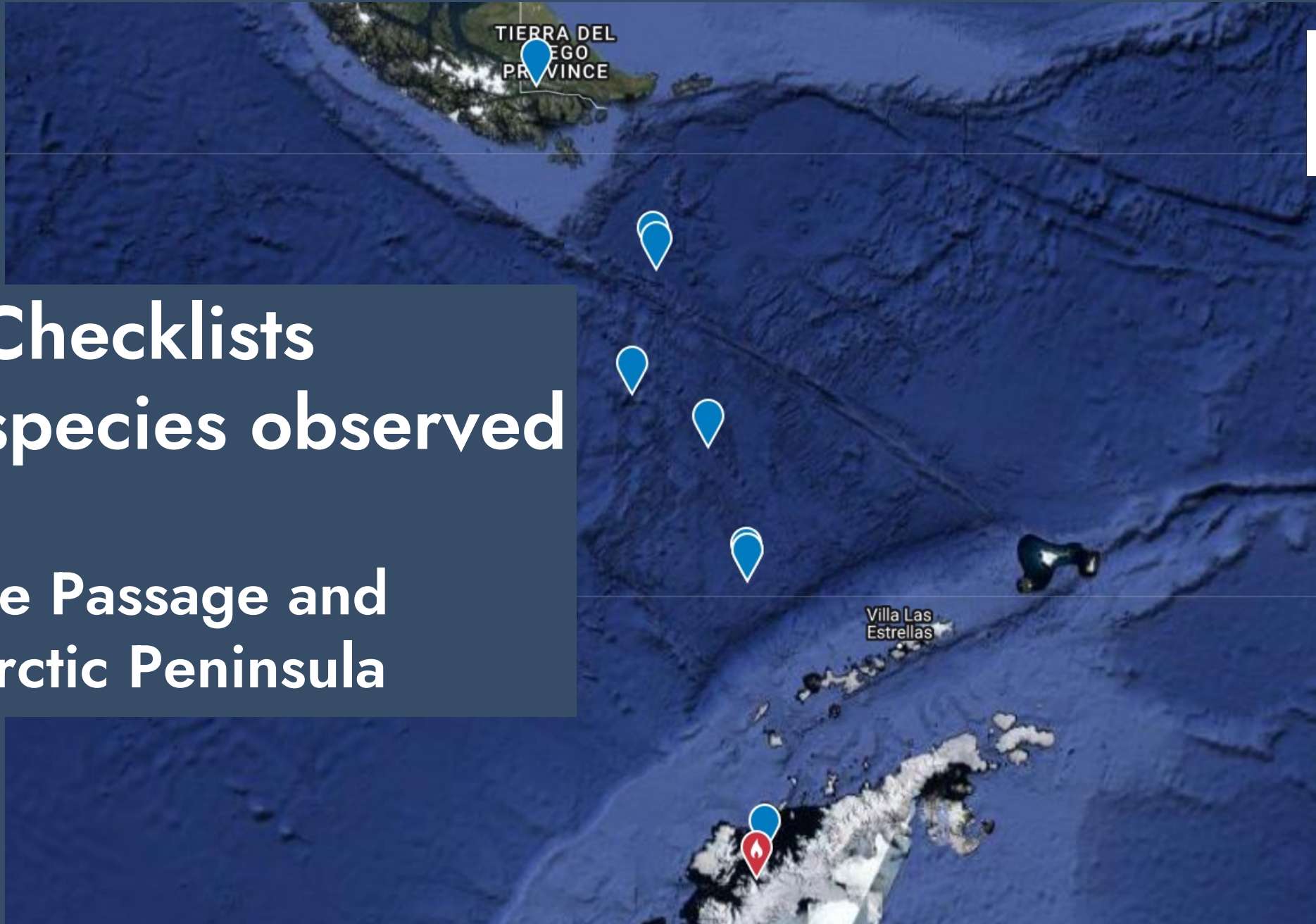


Fridtjof Nansen eBird Surveys 8 to 18th of March 2024

eBird

12 Checklists
19 species observed

Drake Passage and
Antarctic Peninsula



32 bird species seen altogether on trip

1. Gentoo Penguin	16. Wandering Albatross	31. Antarctic Prion
2. Adelie Penguin	17. Grey-headed Albatross	32. Blue Petrel
3. Chinstrap Penguin	18. Black-browed Albatross	
4. Magellanic Penguin	19. Light-mantled Albatross	
5. Antarctic Shag/Cormorant	20. Southern Fulmar	
6. Imperial Cormorant	21. Southern Giant Petrel	
7. Chilean Skua	22. White-chinned Petrel	
8. Subantarctic/Brown Skua	23. Soft-plumaged Petrel	
9. South Polar Skua	24. Sooty Shearwater	
10. Kelp Gull	25. Wilson's Storm Petrel	
11. Dolphin Gull	26. Black-bellied Storm Petrel	
12. Antarctic Tern	27. Kerguelen Petrel	
13. South American Tern	28. Diving Petrel	
14. Snowy Sheathbill	29. Snow Petrel	
15. Southern Royal Albatross	30. Cape Petrel	

**At least 206
individuals
of 19 species
logged into
eBird**

	Beagle Channel
	Drake Passage
	Antarctica

Most abundant species on eBird surveys



82

Sooty Shearwater



44

Southern Giant Petrel



26

Soft-plumaged Petrel





Secchi Disk

We had 3 science boat sessions during this trip in: Neko Harbour and Mikkelsen Harbour. On each of them we did perform a secchi disk measurement to document the clarity of the water and assess the abundance of phytoplankton.

Date	Location	Depth (m)
12.03.24	Neko Harbour	12.2
14.03.24	Mikkelsen Harbour	9.8

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



If you like to help us make
the project a success



FjordPhyto

This project aims to monitor the changes in abundance and distribution of phytoplankton in Antarctic waters in relation with glacial ice melting. We sampled 2 locations during this voyage, at Neko Harbour and Mikkelsen Harbour. We towed a plankton net of 20 um mesh size to gather water samples, deployed our CTD sensor to understand the oceanographical parameters of the water (temperature, salinity, chlorophyll a) and preserved meltwater samples to measure later on dissolved oxygen. The whole mission was a success, thank you for participating with us!

Follow us on social media @fjordphyto

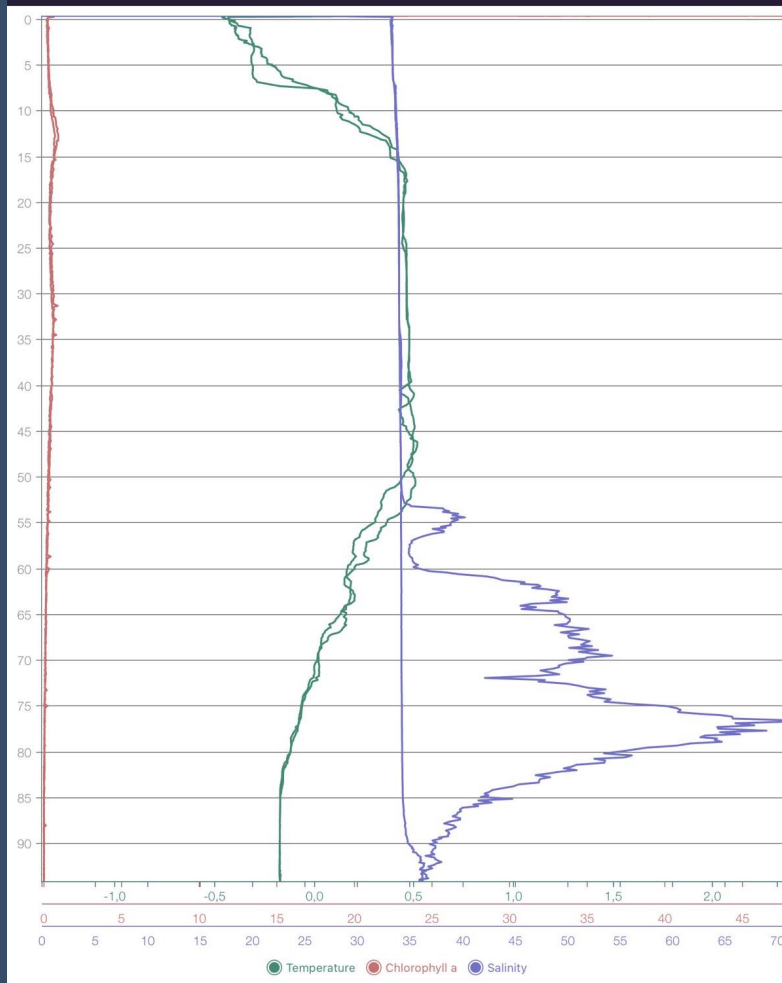


©Hélène Dubrasquet

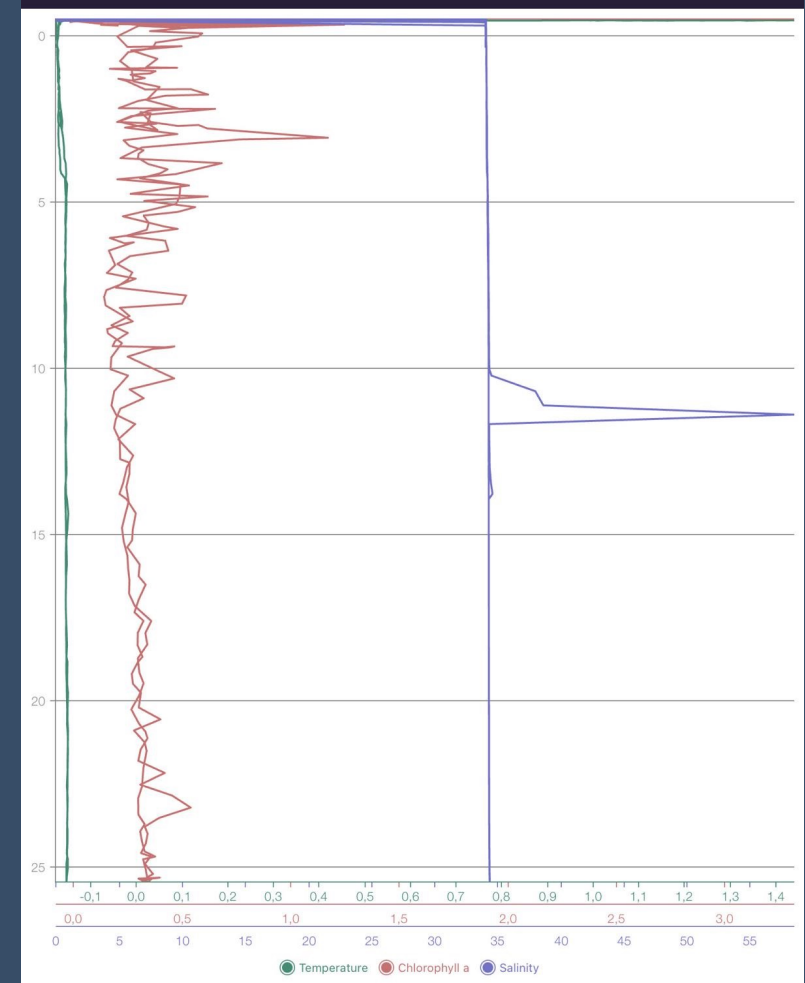
CTD Profile



Neko Harbour



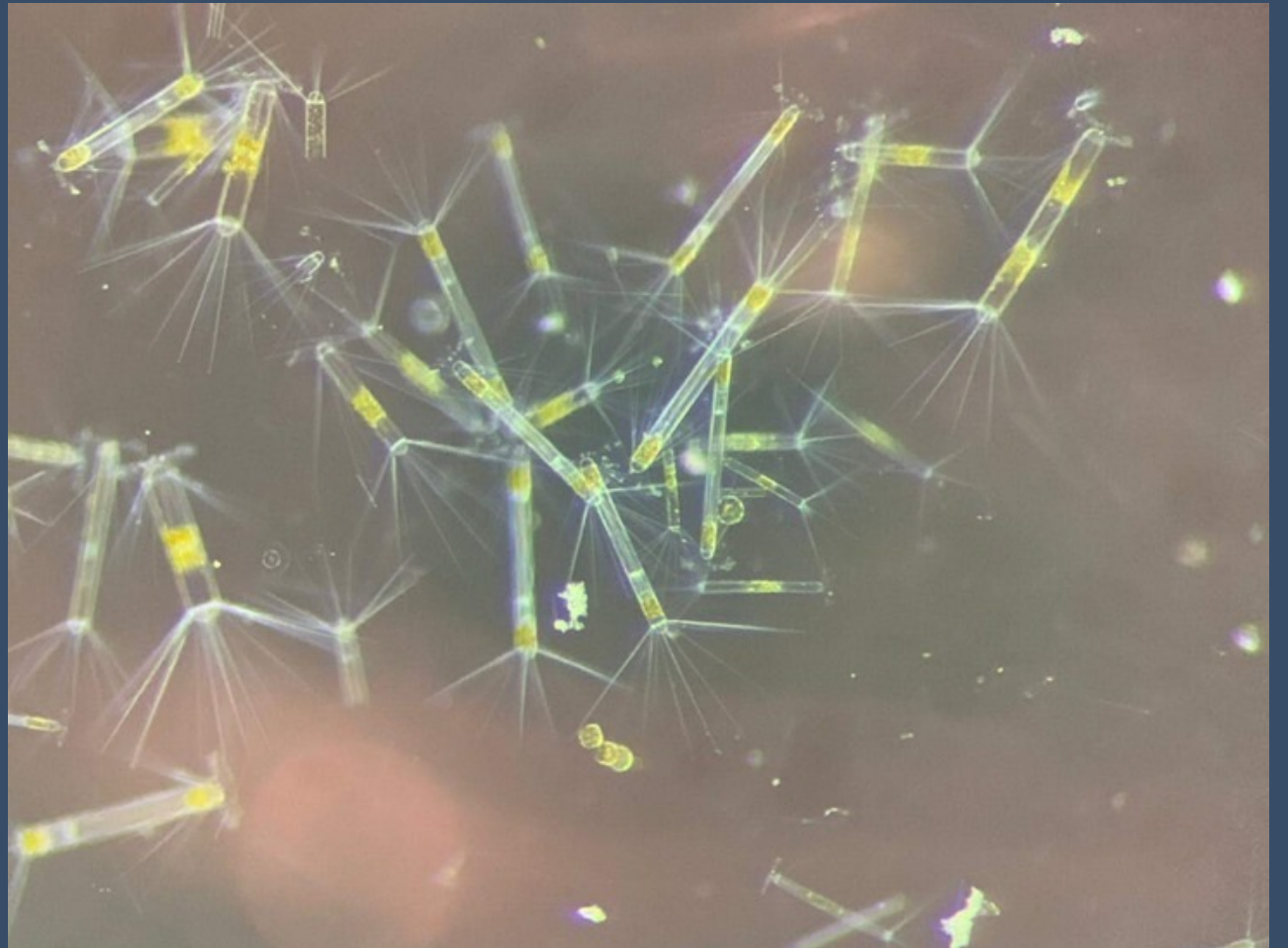
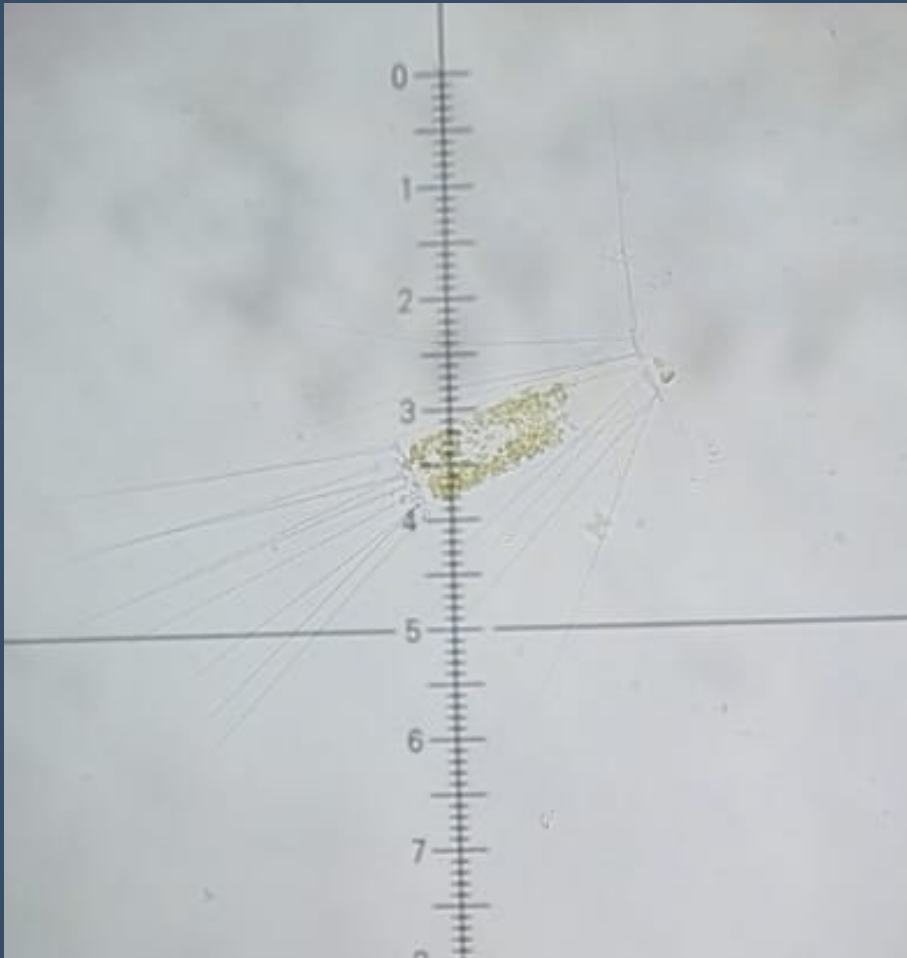
Mikkelsen Harbour



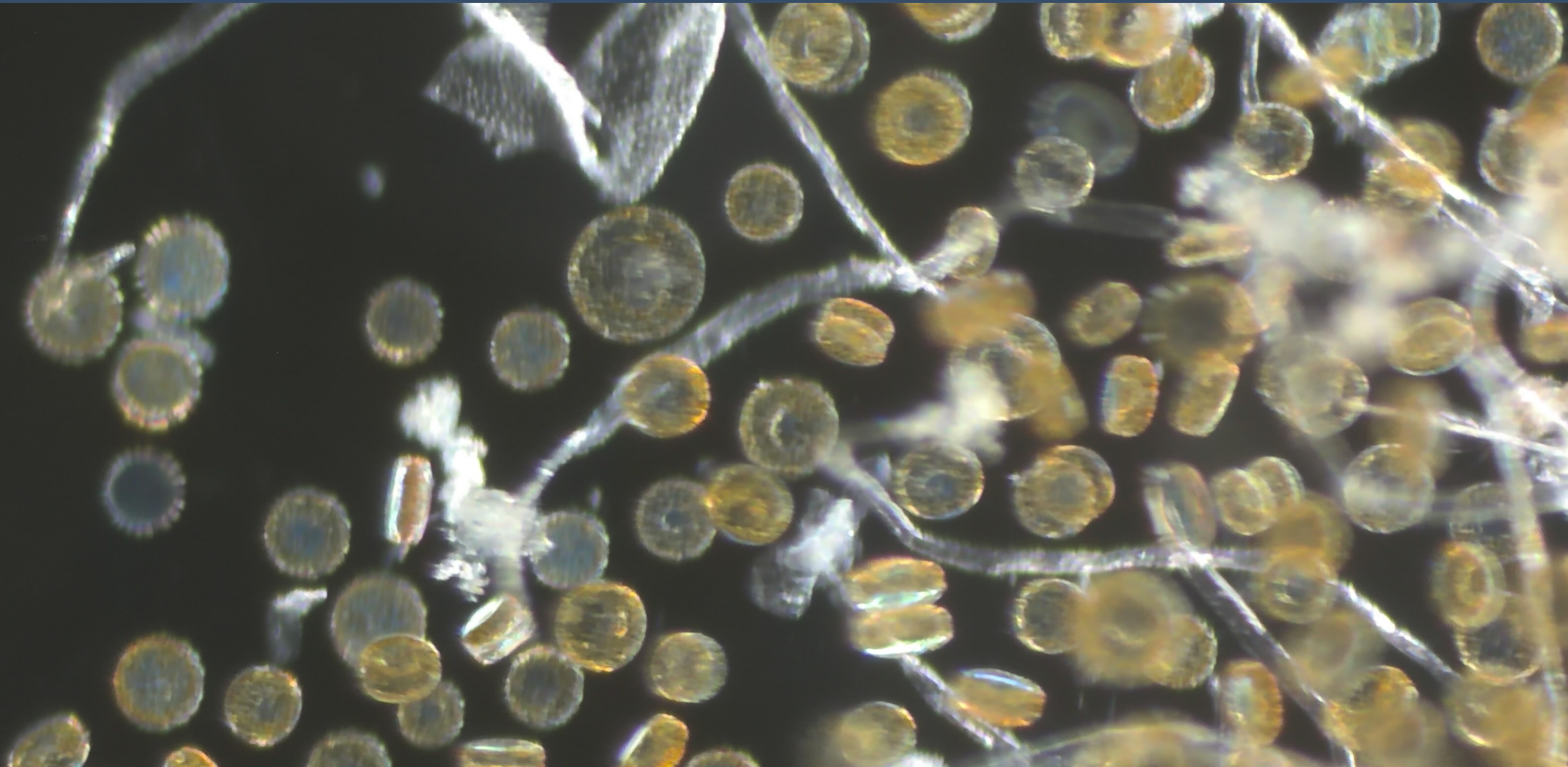


Plankton samples

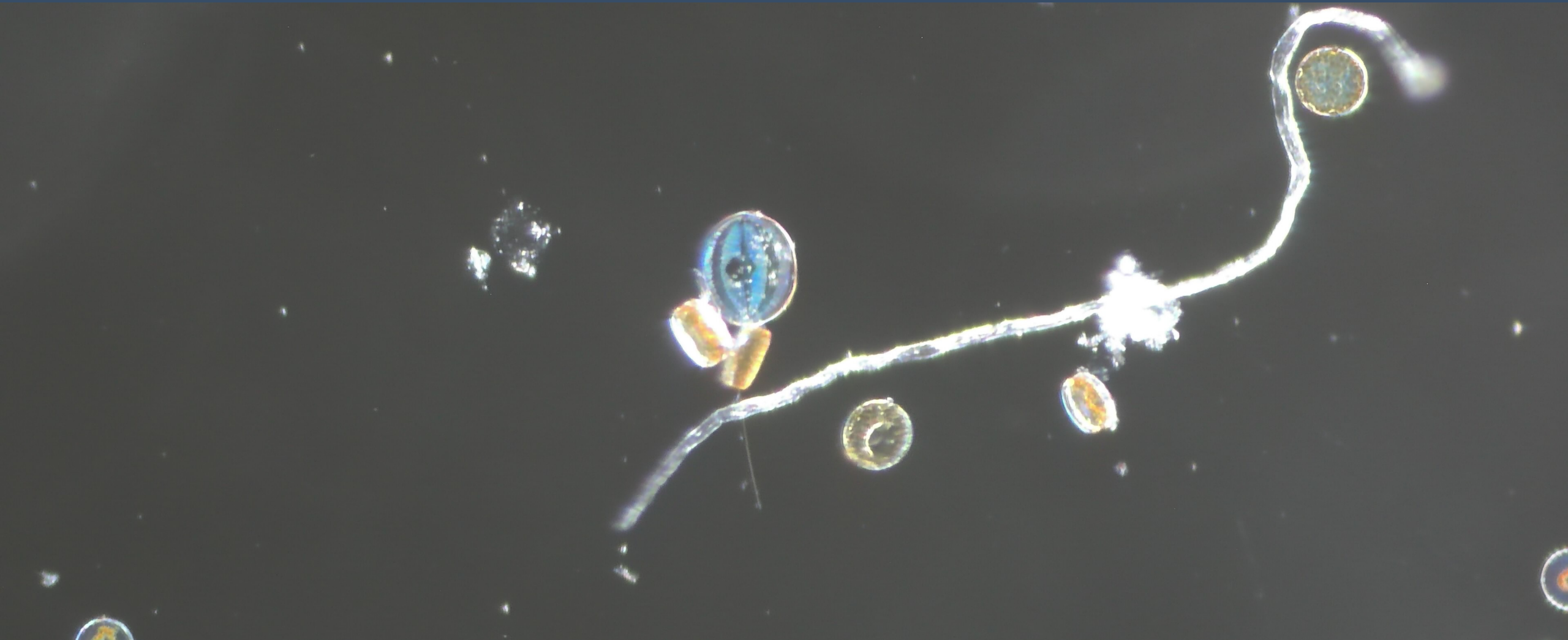
Phytoplankton: *Corethron pennatum*



Diatoms : Centrics

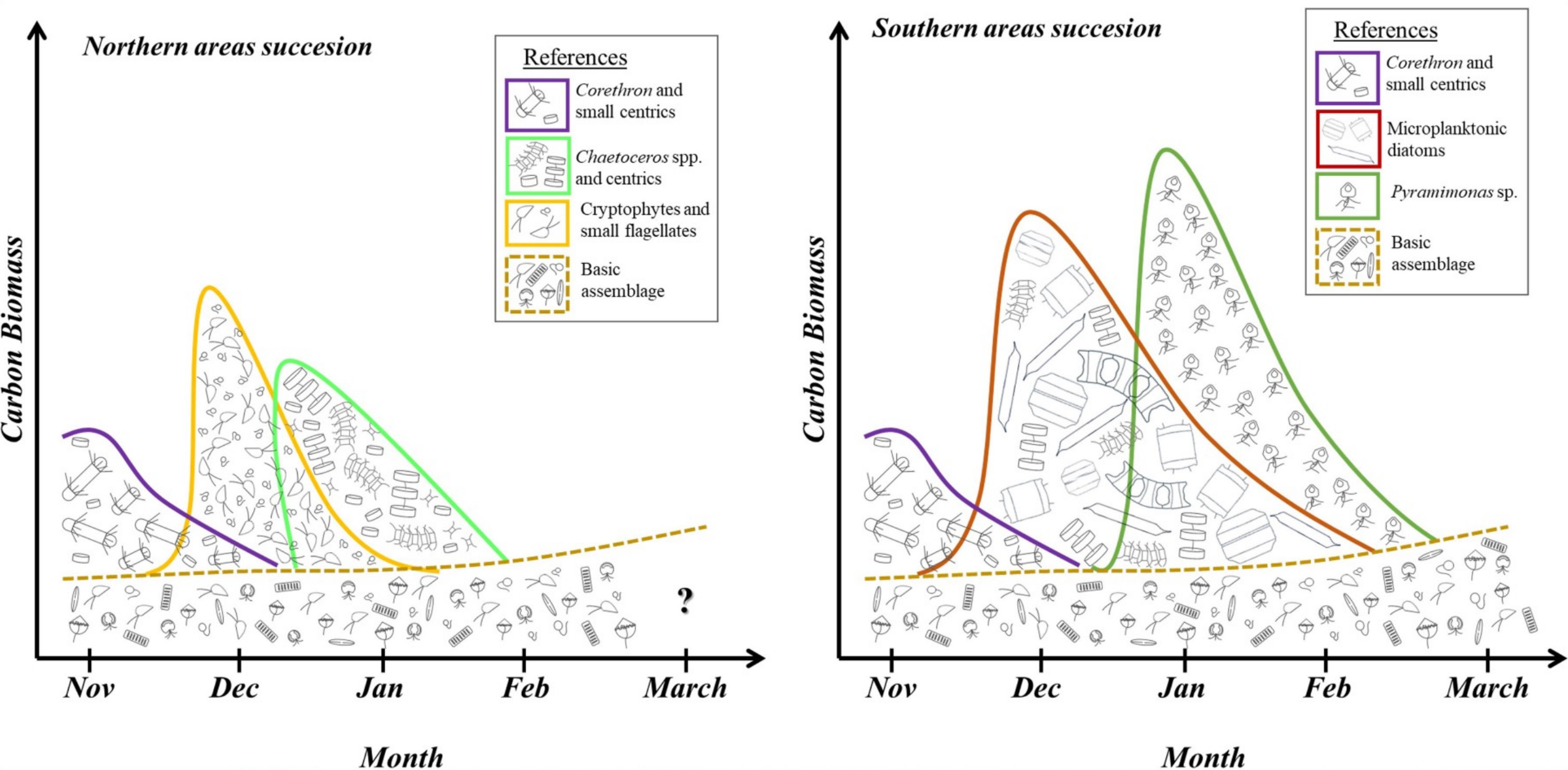


Diatoms : *Cocconeis*



Diatom: *Pleurosigma*





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.



- Global citizen science
- Increasing global understanding
- Largest individual identification resource

Humpback Whales



© Ted Cheeseman

Leopard Seal



SEAL SPECIES	Sightings
SOUTH AMERICAN SEALION	Beagle Channel
SOUTH AMERICAN FUR SEALS	Beagle Channel
CRABEATER SEAL	Peninsula
WEDDELL SEAL	Peninsula
LEOPARD SEAL	Peninsula
ANTARCTIC FUR SEAL	Peninsula / South Shetlands
SOUTHERN ELEPHANT SEAL	Peninsula

NOTABLE SIGHTINGS:

- Leopard Seal at Yalour Islands socialising with zodiacs
- All FIVE species sighted on the Peninsula
- 10+ Weddell hauled out at Mikkelson Harbour

WHALE SPECIES	Sightings
FIN WHALE	Drake Passage / Peninsula
HUMPBACK WHALE	Peninsula
ANTARCTIC MINKE WHALE	Peninsula
SEI WHALE	Beagle Channel
PEALES DOLPHINS	Beagle Channel

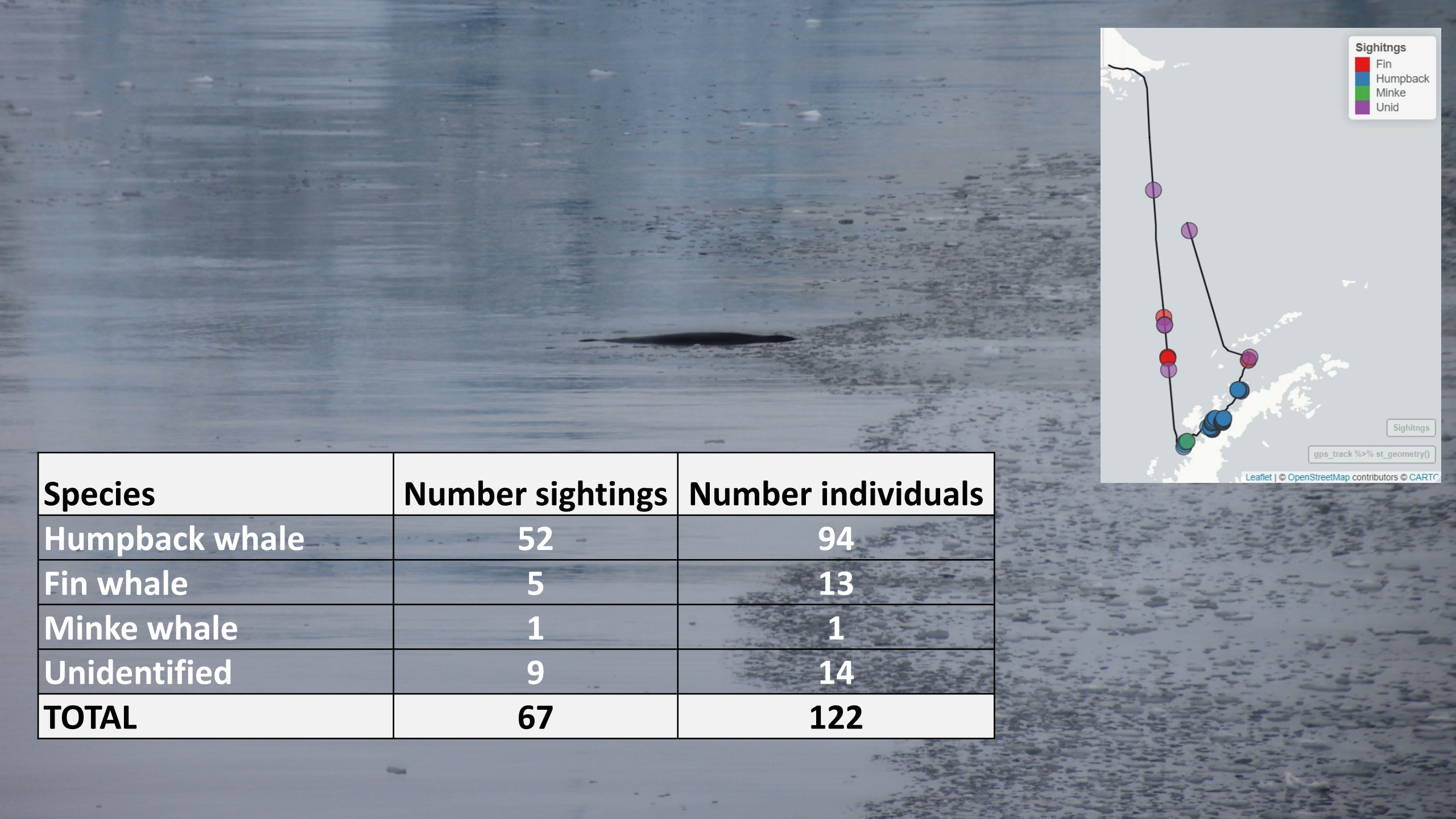
NOTABLE SIGHTINGS:

- Fin Whale surging next to ship in the Drake
- Whale soup at Wilhemina Bay
- Multiple groups of Peales Dolphins in the Beagle

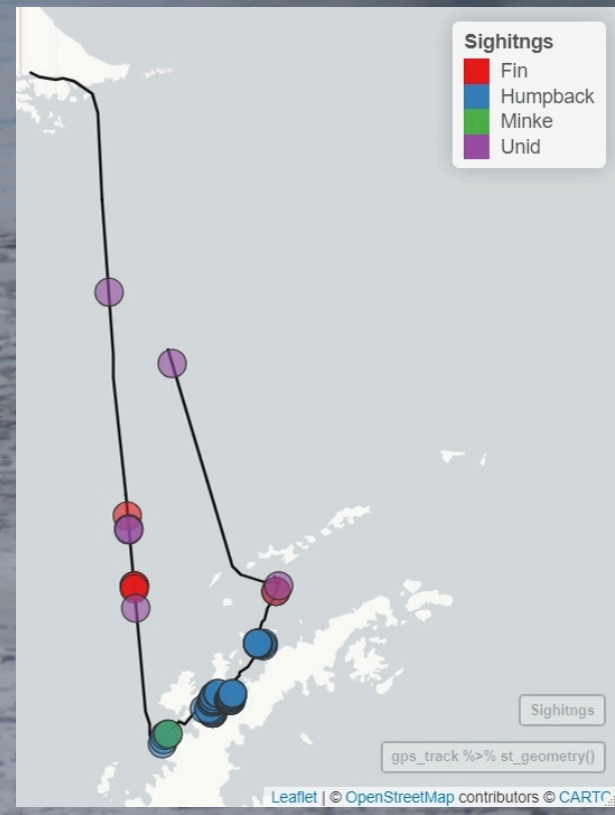
Guest scientists: Adrian & Paola, Polar Whale Watch.

Our guest scientists joined us during this voyage to continue the effort of monitoring whales species distribution and abundance around the Antarctic Peninsula with the aim of gathering key information about the position of the whales feeding grounds. They spent **40hrs** observing from the bridge summarizing **67** sightings. **122** individuals, . The underlying purpose is to identify the key area for krill aggregation and see what is the interaction with human activities, including tourism and fisheries.





Species	Number sightings	Number individuals
Humpback whale	52	94
Fin whale	5	13
Minke whale	1	1
Unidentified	9	14
TOTAL	67	122



- The observations made on this trip will be added to a database
- Data passed to CCAMLR - Shared with krill fishery managers & Convention for the conservation of Antarctic living resources
- Results will be analysed as part of a PhD, University of Tasmania, Angus Henderson



November

Sightings

- Fin
- Humpback
- Unid

January

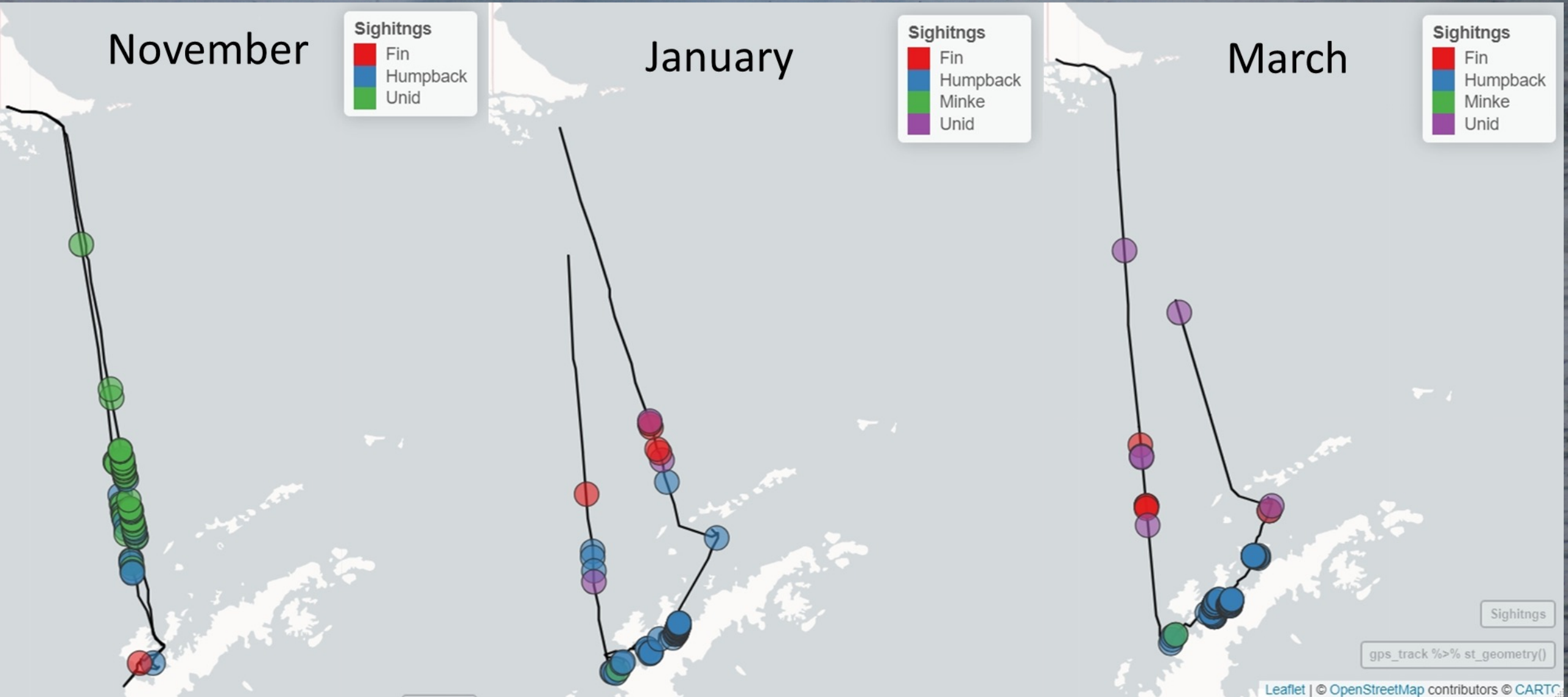
Sightings

- Fin
- Humpback
- Minke
- Unid

March

Sightings

- Fin
- Humpback
- Minke
- Unid



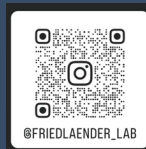
Sightings

gps_track %>% st_geometry()

Guest scientists: Chloe & Lauren from COA

Our whale scientists had a very successful voyage: 26 individual whales were biopsied and 29 photogrammetry images were collected using the drone during our 4 days in the Antarctic. Chloe and Lauren are happy with these results and look forward to their next 2 voyages on Nansen to continue this data collection. Thank you all for your interest and enthusiasm regarding the research and helping to sight whales! And don't hesitate to follow up with these conservation efforts through their Instagram account. .

Friedlander Lab – COA
(California Ocean Alliance)



31 unique humpback whales

27 adults + juveniles

4 calves



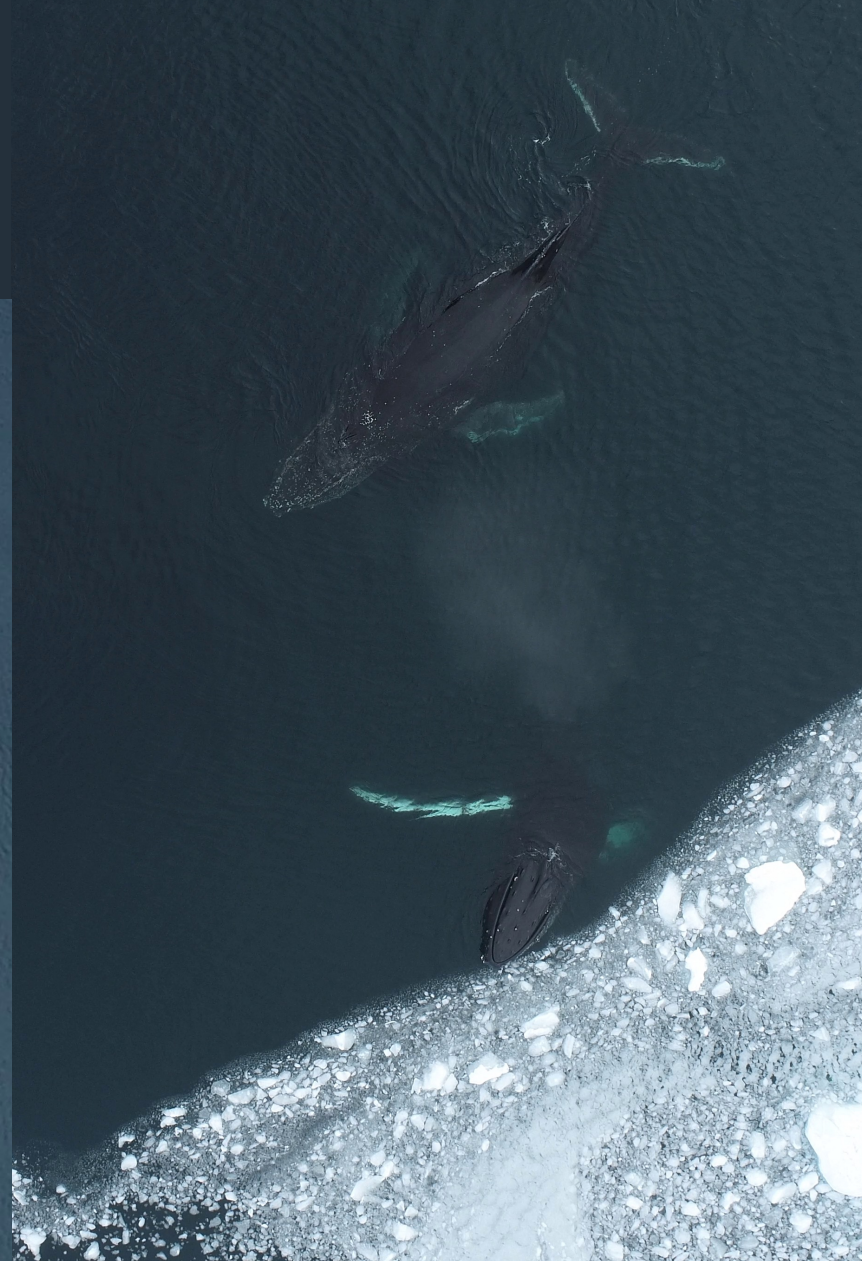
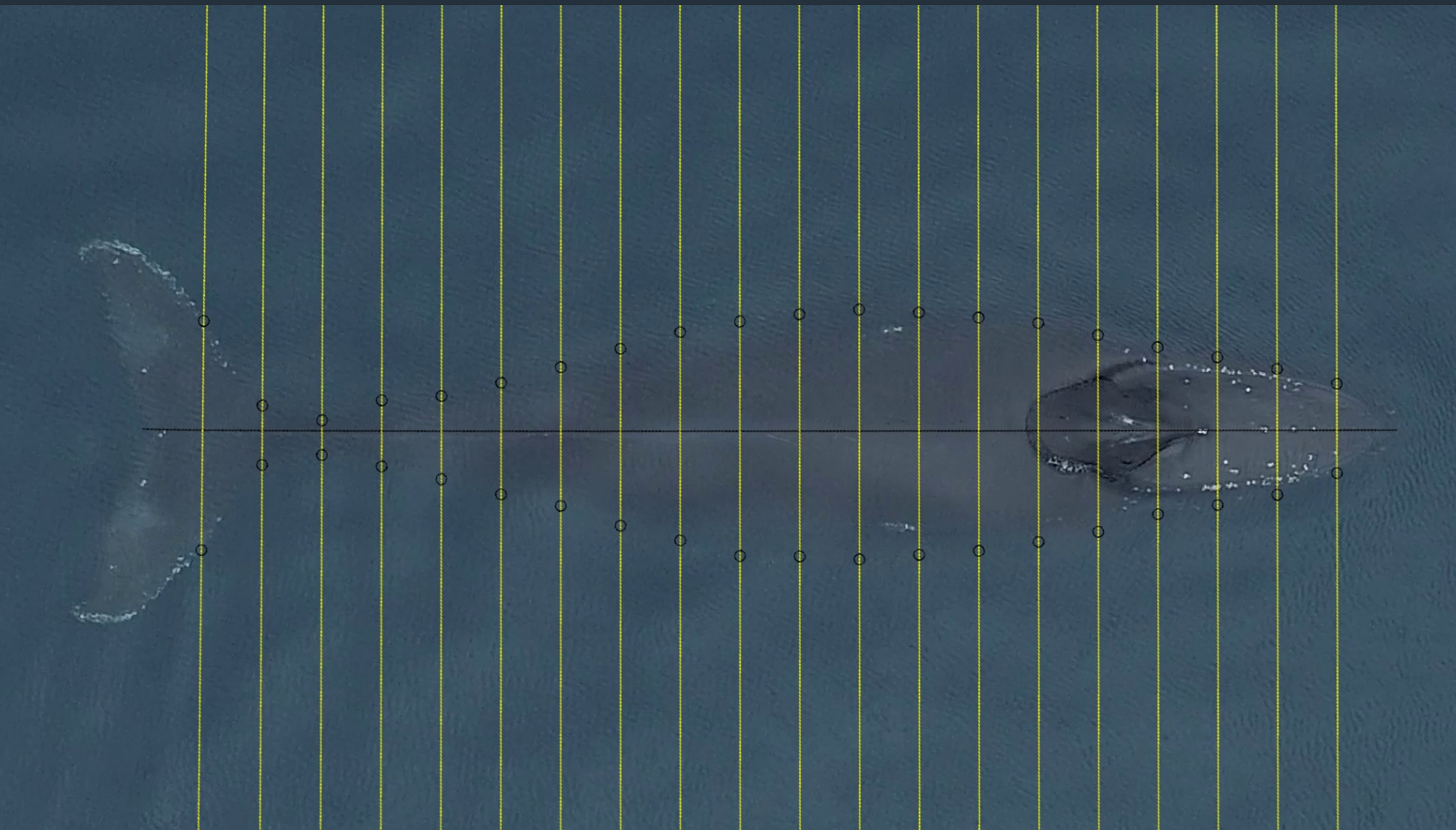
Remote Biopsy

15 skin + blubber samples



sUAS Operations

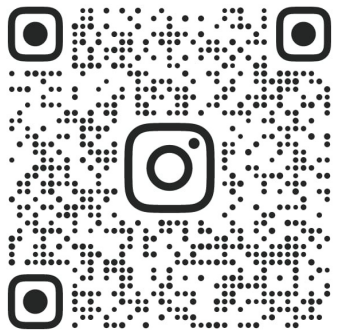
18 photogrammetry samples



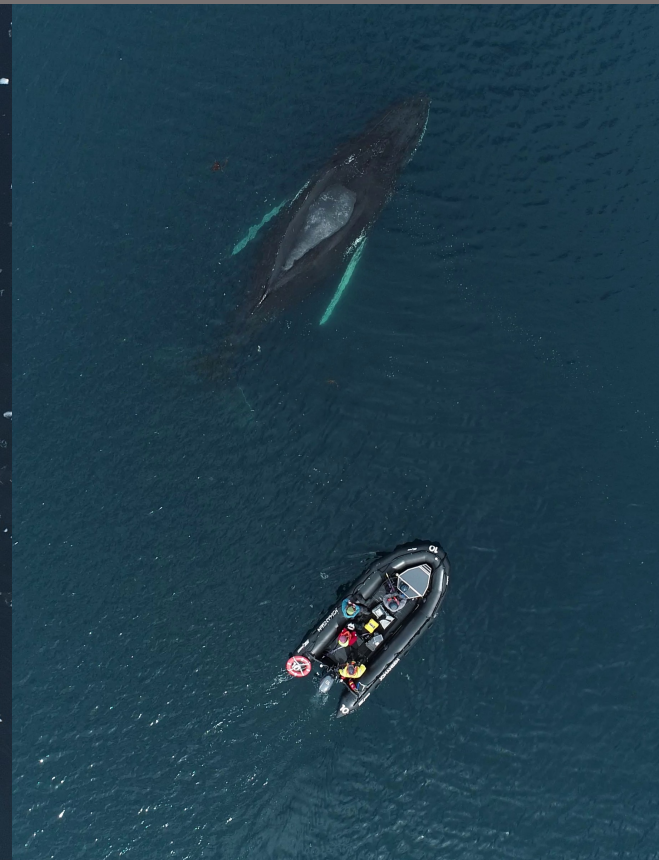
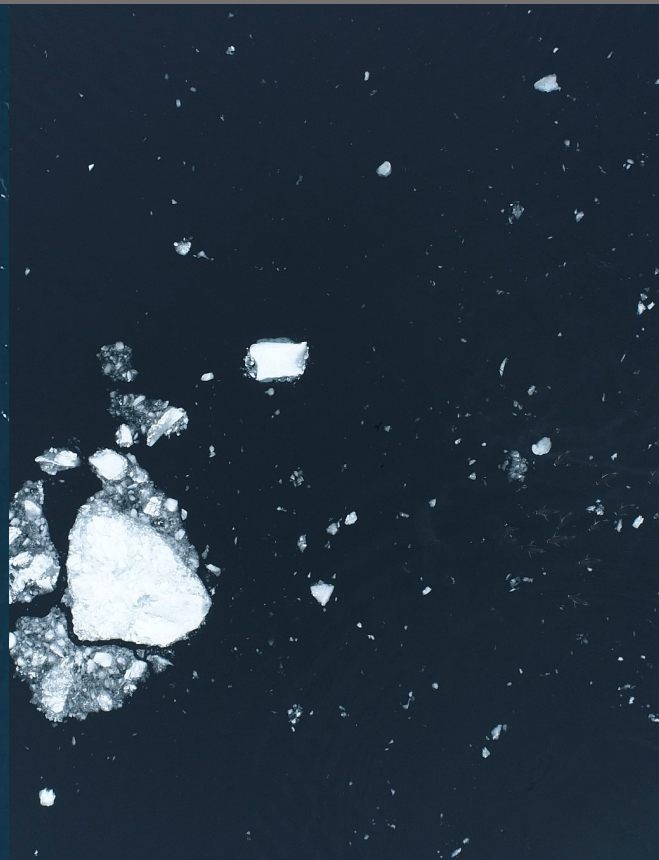
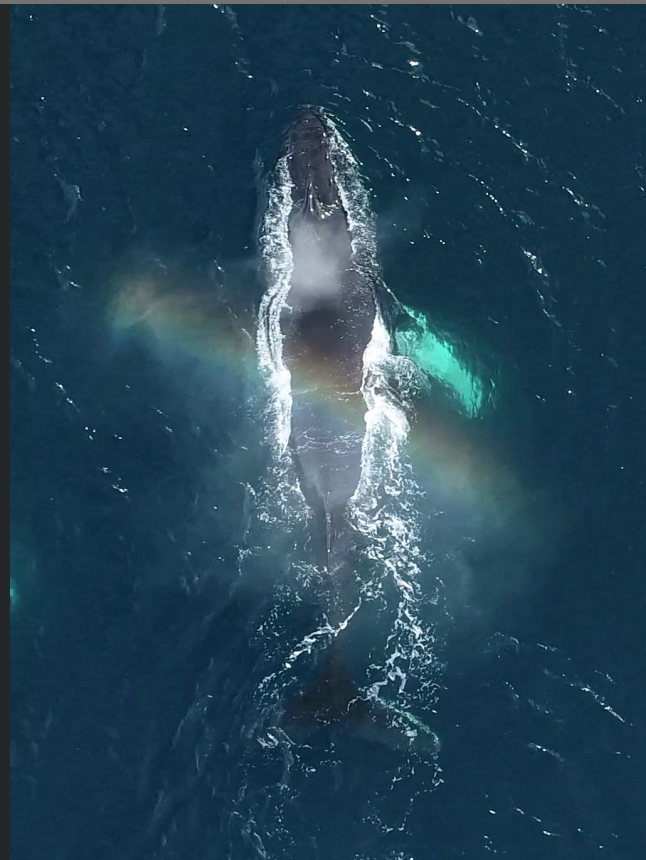
FRIEDLAENDER LAB

Bio-telemetry and Behavioral Ecology

Follow along with our operations...







@FRIEDLAENDER_LAB



Wildlife List - Birds



Bird species list: Drake Passage and Antarctic Peninsula – 8th to 17th of March 2024

Species	March																				
	8	9	10	11	12	13	14	15	16	17											
<p><i>Pygoscelis papua</i> EN: <u>Gentoo Penguin</u> FR: <u>Manchot papou</u> DE: <u>Eselspinguin</u> NO: <u>Bøylepingvin</u> CHI: <u>白眉企鵝</u></p>														●	●	●	●				
<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>														●							
<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>																	●	●	●		
<p><i>Spheniscus magellanicus</i> EN: <u>Magellanic Penguin</u> FR: <u>Manchot de Magellan</u> DE: <u>Magellanpinguin</u> NO: <u>Magellanpingvin</u> CHI: <u>南美企鵝</u></p>																				●	

Leucocarbo bransfieldensis
 EN: Antarctic (Blue-eyed) Shag
 FR: Cormoran antarctique
 DE: Antarktisscharbe
 NO: Antarktisskarv
 CHI: 南极鸬鹚



Stercorarius chilensis
 EN: Chilean Skua
 FR: Labbe du Chili
 DE: Chileskua
 NO: Kaneljo
 CHI: 智利贼鸥



Stercorarius antarcticus
 EN: Subantarctic Brown Skua
 FR: Labbe antarctique
 DE: Subantarktiskua
 NO: Sørhavsjo
 CHI: 大贼鸥













Stercorarius maccormicki
 EN: South Polar Skua
 FR: Labbe de McCormick
 DE: Antarktiskua
 NO: Sørio
 CHI: 麦氏贼鸥








Larus dominicanus
 EN: Kelp Gull
 FR: Goéland dominicain
 DE: Dominikanermöwe
 NO: Taremake
 CHI: 黑背鸥



<p><i>Sterna vittata</i> EN: Antarctic Tern FR: Sterne couronnée DE: Antarktiseeschwalbe NO: Sørhavsterne CHI: <u>南极燕鸥</u></p>						●	●	●		
<p><i>Sterna hirundinacea</i> EN: South American Tern FR: Sterne hirundinacée DE: Falklandseeschwalbe NO: Svaleterne CHI: <u>南美燕鸥</u></p>		●								
<p><i>Chionis albus</i> EN: Snowy Sheathbill FR: Chionis blanc DE: Weißgesicht-Scheidenschnabel NO: Antarktisslirenebb CHI: <u>白鞘嘴鸥</u></p>							●		●	
<p><i>Diomedea epomophora</i> EN: Southern Royal Albatross FR: Albatros royal DE: Königsalbatros NO: Kongealbatross CHI: <u>南方皇信天翁</u></p>										●
<p><i>Diomedea exulans</i> EN: Wandering Albatross FR: Albatros hurleur DE: Wanderalbatros NO: Vandrealbatross CHI: <u>漂泊信天翁</u></p>										●

<p><i>Thalassarche chrysostoma</i> EN: Grey-headed Albatross FR: Albatros à tête grise DE: Graukopfalbatros NO: Gråhodealbatross CHI: 灰头信天翁</p>										●	
<p><i>Thalassarche melanophris</i> EN: Black-browed Albatross FR: Albatros à sourcils noirs DE: Schwarzbrauenalbatros NO: Svartbrynalbatross CHI: 黑眉信天翁</p>		●	●	●						●	●
<p><i>Phoebastria palpebrata</i> EN: Light-mantled Albatross FR: Albatros fuligineux DE: Graumantelalbatros NO: Gråalbatross CHI: 灰背信天翁</p>										●	●
<p><i>Macronectes giganteus</i> EN: Southern Giant Petrel FR: Pétrel géant DE: Riesensturmyogel NO: Sørkjempetrell CHI: 巨鹱</p>		●	●	●	●	●	●	●	●		●
<p><i>Macronectes halli</i> EN: Northern Giant Petrel FR: Pétrel de Hall DE: Hallsturmyogel NO: Nordkiempetrell CHI: 霍氏巨鹱</p>											

<p><i>Fulmarus glacialisoides</i> EN: Southern Fulmar FR: Fulmar argenté DE: Silbersturmvogel NO: Sørflyhest CHI: 银灰暴风鹱</p>					●			●			
<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: Hvithakepetrell CHI: 白颊风鹱</p>											●
<p><i>Pterodroma mollis</i> EN: Soft-plumaged Petrel FR: Pétrel soyeux DE: Weichfeder-Sturmvogel NO: Silkepetrell CHI: 柔羽圆尾鹱</p>				●	●				●	●	

Ardenna grisea
EN: Sooty Shearwater
FR: Puffin fuligineux
DE: Dunkelsturmtaucher
NO: Grålire
CHI: 灰鸛



Halobaena caerulea
EN: Blue Petrel
FR: Prion bleu
DE: Blausturmvogel
NO: Blåpetrell
CHI: 蓝鸛



Pachyptila desolata
EN: Antarctic Prion
FR: Prion de la Désolation
DE: Taubensturmvogel
NO: Antarktishvalfugl
CHI: 鸽锯鸛





Pachyptila belcheri
EN: Slender-billed Prion
FR: Prion de Belcher
DE: Dünnschnabel-Sturmvogel
NO: Smalnebbhvalfugl
CHI: 细嘴锯鸛



Pagodroma nivea
EN: Snow Petrel
FR: Pétrel des neiges
DE: Schneesturmvogel
NO: Snøpetrell
CHI: 雪鸛








<p><i>Oceanites oceanicus</i> EN: Wilson's Storm Petrel FR: Océanite de Wilson DE: Buntfuß-Sturmschwalbe NO: Wilsonstormsvale CHI: 黃蹼洋海燕</p>						●	●	●	●			●
<p><i>Fregatta tropica</i> EN: Black-bellied Storm Petrel FR: Océanite à ventre noir DE: Schwarzbauch-Sturmschwalbe NO: Svartbukstormsvale CHI: 黑腹舰海燕</p>				●							●	
<p>Rock Shag</p>												
<p>Imperial Cormorant <i>Leucocarbo atriceps</i></p>		●										
<p>Dolphin Gull <i>Leucophaeus scoresbii</i></p>		●										
<p>Diving Petrel <i>Pelecanoides</i> sp.</p>			●									

A photograph of a whale breaching the water in a snowy, mountainous landscape. The whale's dark, curved back and tail are visible above the water's surface. The background features snow-covered mountains and a clear sky. The text "Wildlife List - Marine Mammals" is overlaid on the image in a white, sans-serif font.

Wildlife List - Marine Mammals

Whale & Dolphin species list: Drake Passage and Antarctic Peninsula - 8th to 17th of March 2024

Species	March									
	8	9	10	11	12	13	14	15	16	17
<p><i>Balaenoptera musculus</i> EN: Blue Whale FR: Baleine bleue DE: Blauwal NO: Blahval CHI: 蓝鲸</p>										
<p><i>Balaenoptera physalus</i> EN: Fin Whale FR: Rorqual commun DE: Finnwal NO: Finhval CHI: 长须鲸</p>										
<p><i>Megaptera novaeangliae</i> EN: Humpback Whale FR: Baleine a bosse DE: Buckelwal NO: Knolhval CHI: 座头鲸</p>										
<p><i>Balaenoptera borealis</i> EN: Sei Whale FR: Rorqual de Rudolphi DE: Seiwal NO: Seihval CHI: 塞鲸</p>										
<p><i>Balaenoptera bonaerensis</i> EN: Antarctic Minke Whale FR: Petit rorqual de l'Antarctique DE: Antarktischer Zwergwal NO: Antarktisk vågehval CHI: 南极小须鲸</p>										

Eubalaena australis
EN: Southern Right Whale
FR: Baleine franche australe
DE: Südkaper
NO: Sørkaper
CHI: 南露脊鲸



Orcinus orca
EN: Killer Whale
FR: Orque
DE: Orca o Schwertwal
NO: Spekkhogger
CHI: 虎鲸



Cephalorhynchus eutropia
EN: Chilean dolphin
FR: Céphalorhynque noir
DE: Weißbauchdelfin
NO: Chiledelfin
CHI: 智利矮海豚



Cephalorhynchus commersonii
EN: Commerson's dolphin
FR: Céphalorhynque de Commerson
DE: Commerson-Delfin
NO: Commersondelfin
CHI: 康氏矮海豚



Lagenorhynchus obscurus
EN: Dusky dolphin
FR: Lagenorhynque obscur
DE: Schwarzdelfin
NO: Morkdelfin
CHI: 暗色斑纹海豚



Lagenorhynchus cruciger
EN: Hourglass dolphin
FR: Lagénorhynque sablier
DE: Stundenglasdelfin
NO: Timeglassdelfin
CHI: 沙漏斑纹海豚



Globicephala melas
EN: Long-finned pilot whale
FR: Globicéphale noir
DE: Grindwal
NO: Grindhval
CHI: 长肢领航鲸



Lissodelphis peronii
EN: Southern Right Whale Dolphin
FR: Dauphin de Peron
DE: Südlicher Glattwaldelfin
CHI: 南露脊海豚



Lagenorhynchus australis
EN: Peale's dolphin
FR: Lagénorhynque de Peale
DE: Peale-Delfin
NO: Peales delfin
CHI: 皮氏斑纹海豚



Hyperoodon planifrons
EN: Southern Bottlenose Whale
FR: Hyperoodon austral
DE: Südlicher Entenwal
CHI: 南瓶鼻鲸



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



Arctocephalus australis
 EN: South American Fur Seal
 FR: Otarie à fourrure australe
 DE: Südamerikanischer Seebär
 NO: Søramerikansk pelssel
 CHI: 南美毛皮海狮



Otaria flavescens
 EN: South American Sea Lion
 FR: Lion de mer d'Amérique du Sud
 DE: Mähnenrobbe
 NO: Søramerikansk sjøløve
 CHI: 南海狮





HAX

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