

The background of the slide features a photograph of two humpback whales swimming in deep blue water. A large, semi-transparent watermark with the letters 'HIX' is overlaid on the left side of the image. The text 'Science & Education Report' is centered in the middle of the slide.

Science & Education Report

MS Fridtjof Nansen

07 – 17 Jan 2025

Highlights of Antarctica





Science & education program

During this voyage, we ran **6 citizen** science projects in total: eBird, HappyWhale, Inaturalist, Nasa Cloud observer, SecchiDisk project & Fjord Phyto project. You were able to enrich your mind with **23 lectures** on different topics from birds to rocks. You also took part in the **13 discovery sessions** we put on.

We had guest scientist on from two different projects that were collecting data whilst you were onboard. The Freidlander lab was collecting biopsies and drone footage. Where the Ocean watchers were collecting data on sightings made during the voyage.

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

- 23 Lectures
- 13 Discovery sessions
- 6 Citizen science projects
- 13 Science boats
- 2 Guest Scienti projects



Wildlife Watch

41 Species:

12 Mammals

29 Birds



NASA cloud observer

On this Highlights of Antarctica Expedition we conducted 4 Cloud Observation sessions matched to satellite flyovers, submitting 25 observations. We have received 22 Satellite Matching reports

Thank you to the 75 Cloud Observers who participated in the program, and remember you can continue to do this at home!



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

4 Observation Locations recorded.

Total Sessions: 4

Total Submissions: 25

Matches Received: 22





GLOBE Cloud Observations Paired with NASA Satellite D

Total Satellite Comparisons: 125

Useful Resources: [How to Read My NASA GLOBE Clouds Satellite Comparison Table](#), [How to Compare My Cloud \(Satellite Data, Cloud Cover, Cloud Type, Cloud Opacity, Satellites\)](#)

Observation	GLOBE	GOES-16 Satellite	NOAA-20
Universal Date/Time	2025-01-08 19:05:00	2025-01-08 19:07	2025-01-08 19:00
Latitude	-58.57	-58.89 to -58.25	-59.01 to -58.21
Longitude	-64.48	-64.8 to -64.16	-64.91 to -64.11
Total Cloud Cover	Overcast (>90%)	Overcast 100.00%	Overcast 100.00%
High Clouds		Cover: Overcast 100.00% Altitude: 7.3 (km) Phase: Ice 238.14 (K) Opacity: Opaque	Cover: Broken 5: Altitude: 6.39 (km) Phase: Ice/Water Opacity: Opaque
Mid Clouds			Cover: Scattered Altitude: 4.9 (km) Phase: Ice/Water Opacity: Opaque
Low Clouds	Stratus Cover: Overcast (>90%) Opacity: Opaque		
GLOBE Cloud Photos and Corresponding NASA Satellite Images.	GLOBE Photos North East South West Up Down 	GOES-16 Visible Infrared GEO Tutorial	VIIRS NOAA-20 Worldview Worldview Tutorial
Click image to view -->			
Note: Photos submitted though GLOBE need approval before being displayed, this may take a few days.			
Sky Conditions,	Sky Conditions Sky Visibility : no report	Are there any comments you would like to add? Be sure to the satellite for our record.	



GLOBE Cloud Observations Paired with NASA Satellite D

Total Satellite Comparisons: 125

Useful Resources: [How to Read My NASA GLOBE Clouds Satellite Comparison Table](#), [How to Compare My Cloud \(Satellite Data, Cloud Cover, Cloud Type, Cloud Opacity, Satellites\)](#)

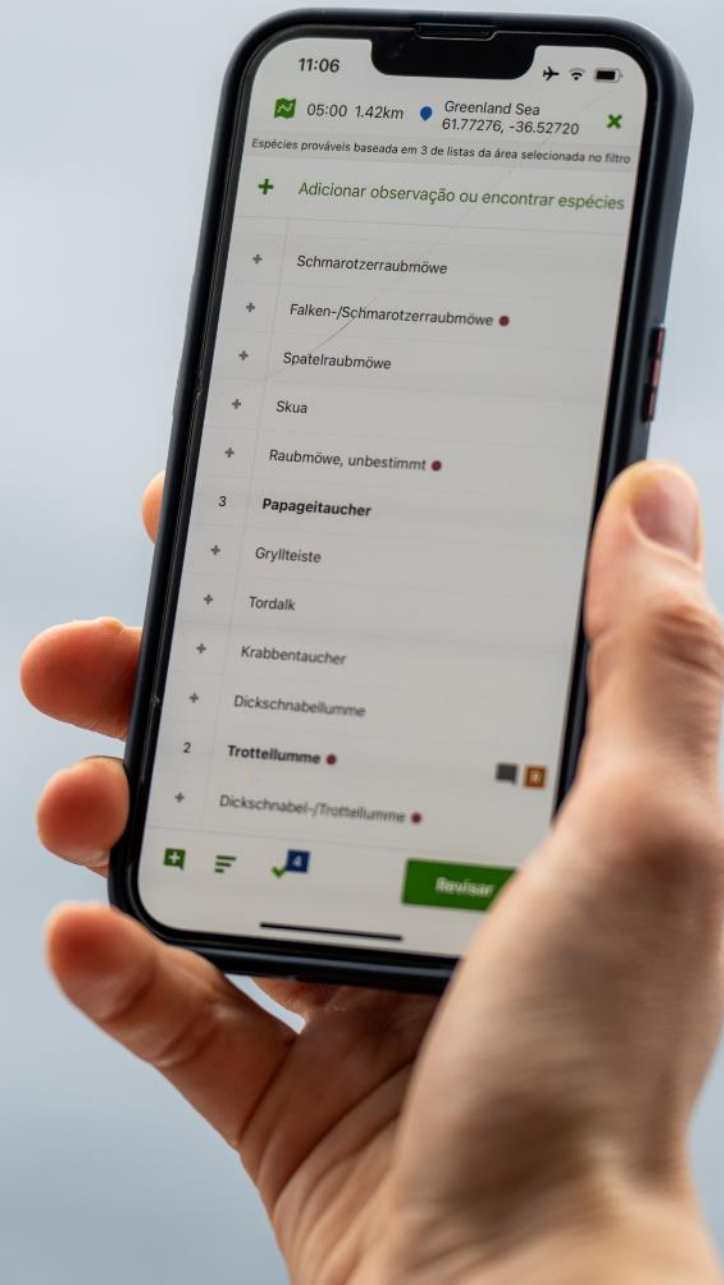
Observation	GLOBE	NOAA-20 Satellite
Universal Date/Time	2024-12-26 17:47:00	2024-12-26 18:02
Latitude	-60.24	-60.78 to -59.98
Longitude	-63.53	-63.93 to -63.13
Total Cloud Cover	Scattered (25-50%)	Isolated 14.58%
High Clouds	Cirrus Cirrocumulus Cover: Isolated (10-25%) Opacity: Translucent	Cover: Few (1.98%) Altitude: 9.59 (km) Phase: Ice/Water Mix 228.62 (K) Opacity: Transparent
Mid Clouds	Altostratus Cover: Isolated (10-25%) Opacity: Opaque	Cover: Few (1.53%) Altitude: 5.19 (km) Phase: Water 249.89 (K) Opacity: Transparent
Low Clouds		Cover: Isolated 11.06% Altitude: 0.57 (km) Phase: Ice/Water Mix 270.87 (K) Opacity: Transparent
GLOBE Cloud Photos and Corresponding NASA Satellite Images.	GLOBE Photos North East South West Up Down 	VIIRS NOAA-20 Worldview Worldview Tutorial
Click image to view -->		
Note: Photos submitted though GLOBE need approval before being displayed, this may take a few days.		



The eBird project

During this voyage, our ornithologists, did **35 surveys**. At least **29 species** were observed. The most frequently observed species were the Wilson's Storm Petrel, Southern Giant Petrel, Blue Petrel and the Gentoo Penguin. Find the trip report for the voyage and the checklists here:

<https://ebird.org/tripreport/317567>



Trip Report on eBird

FNANT2411F - MS Fridtjof Nansen - Highlights of Antarctica - 7th to 17th of January 2025

7 – 17 Jan 2025 (11 days)

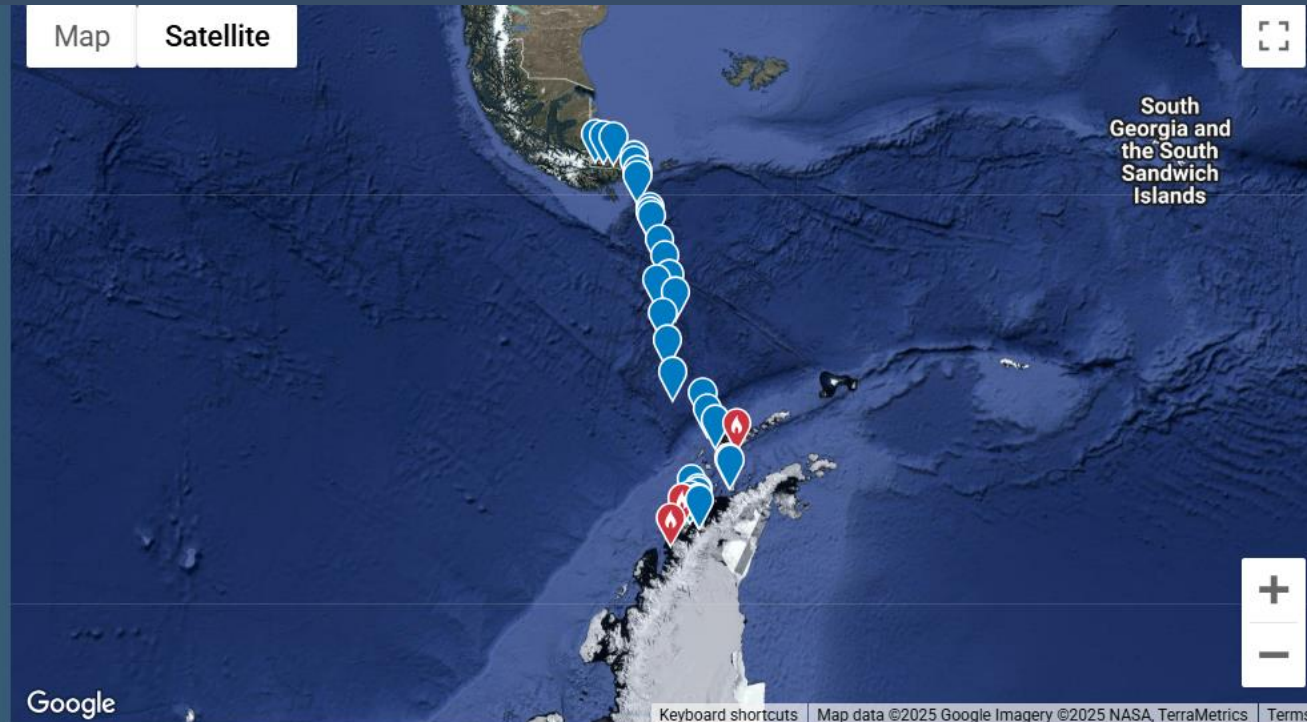
Link-only

Antarctica | Argentina | Chile |
High Seas | Subregions

Ingvild Riska, Liam Northfield,
Science Coordinator

Share

Edit



A HX - Hurtigruten Expeditions
voyage to the Antactic Peninsula on
board MS Fridtjof Nansen.

Edit narrative

DATA FOR: Group (all people) ▾

29
Species Observed
+6 other taxa

35
Checklists

Species Observed

[Show all details](#)

eBird

2	Snowy Sheathbill <i>Chionis albus</i>	1
12	Chilean Skua <i>Stercorarius chilensis</i>	3
8	Brown Skua <i>Stercorarius antarcticus</i>	1
15	South Polar Skua <i>Stercorarius maccormicki</i>	6
88	Kelp Gull <i>Larus dominicanus</i>	7
6	South American Tern <i>Sterna hirundinacea</i>	1
37	Antarctic Tern <i>Sterna vittata</i>	10
3	Adelie Penguin <i>Pygoscelis adeliae</i>	3
55	Gentoo Penguin <i>Pygoscelis papua</i>	11
72	Chinstrap Penguin <i>Pygoscelis antarcticus</i>	7
44	Magellanic Penguin <i>Spheniscus magellanicus</i>	2
2	Southern Royal Albatross <i>Diomedea epomophora</i>	1
1	Snowy Albatross <i>Diomedea exulans</i>	1
1	Light-mantled Albatross <i>Phoebastria palpebrata</i>	1
4	Gray-headed Albatross <i>Thalassarche chrysostoma</i>	4
72	Black-browed Albatross <i>Thalassarche melanophris</i>	15
69	Wilson's Storm-Petrel <i>Oceanites oceanicus</i>	17

2	Black-bellied Storm-Petrel <i>Fregetta tropica</i>	1
32	Southern Giant-Petrel <i>Macronectes giganteus</i>	7
14	Southern Fulmar <i>Fulmarus glacialis</i>	3
36	Pintado Petrel <i>Daption capense</i>	4
6	Snow Petrel <i>Pagodroma nivea</i>	2
1	Soft-plumaged Petrel <i>Pterodroma mollis</i>	1
97	Blue Petrel <i>Halobaena caerulea</i>	12
5	White-chinned Petrel <i>Procellaria aequinoctialis</i>	4
3	Great Shearwater <i>Ardenna gravis</i>	2
3	Great Shearwater <i>Ardenna gravis</i>	2
214	Sooty Shearwater <i>Ardenna grisea</i>	4
13	Imperial Cormorant <i>Leucocarbo atriceps</i>	4
23	Antarctic Shag <i>Leucocarbo bransfieldensis</i>	8

Event in progress



About

Members  26

Shared observations from guests and Expedition Team onboard MS Fridtjof Nansen during the expedition cruise "Highlights of Antarctica" from 07th - 17th Jan 2025, aiming to collect data on the local biodiversity

[Read More >](#)

Project Members Only

 [Project Journal](#)



iNaturalist

We submitted more than 280 observations identifying 68 species from plankton to marine mammals and birds. The most observed species were the Gentoo penguin followed by the Humpback whale and Chinstrap penguin.

There is still time to join our project once you are back home and have time to go review your photos. Helping us document the local biodiversity will allow researchers worldwide to monitor changes of distribution and abundance of biodiversity and the most iconic Antarctic species.

View our data submitted on our [iNaturalist project](#)

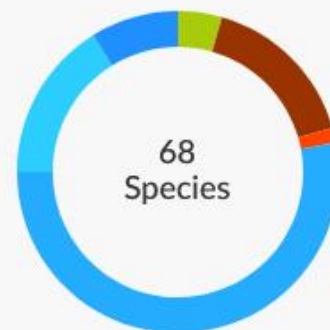


Weddell seal, © Charlotte Kirchner / HX

Stats



- Research Grade
- Needs ID
- Casual



- Unknown
- Protozoans
- Fungi
- Plants
- Chromista
- Mollusks
- Insects
- Arachnids
- Ray-Finned F...
- Amphibians
- Reptiles
- Birds
- Mammals
- Other Animals



- Improving
- Supporting
- Leading
- Maverick

Most Comments and Faves





28 observations

Gentoo Penguin
Pygoscelis papua



18 observations

Humpback Whale
Megaptera novaeangliae



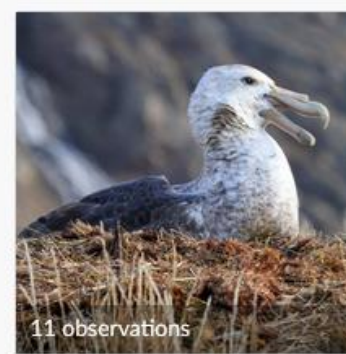
17 observations

Chinstrap Penguin
Pygoscelis antarcticus



15 observations

Crabeater Seal
Lobodon carcinophaga



11 observations

Southern Giant Petrel
Macronectes giganteus



10 observations

Kelp Gull
Larus dominicanus



9 observations

Adelie Penguin
Pygoscelis adeliae



9 observations

Pintado Petrel
Daption capense



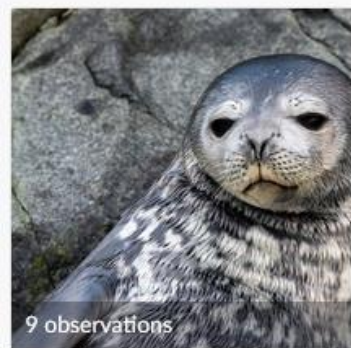
9 observations

Sei Whale
Balaenoptera borealis



9 observations

Leopard Seal
Hydrurga leptonyx



9 observations

Weddell Seal
Leptonychotes weddellii



9 observations

Black-browed Albatross
Thalassarche melanophris



8 observations

Antarctic Tern
Sterna vittata



5 observations

Wilson's Storm-Petrel
Oceanites oceanicus



5 observations

Mosses
Phylum Bryophyta



Map ▾

South
Georgia and
the South
Sandwich
Islands

Recent Observations

Keyboard shortcuts Map data ©2025 Google 200 km  Terms





© Photo Credit: Timo Heinz / HX

HappyWhale

This voyage was a success in terms of whale sightings. We submitted more than 10 Humpback whale flukes photos for identification, dorsal fins of Killer whales, Leopard and Weddell seals. You can follow any updates of the trip by clicking this link [Happywhale](https://happywhale.com/)

If you find you have any fluke photo's when you go over your photo's, do not hesitate to upload them your self to Happywhale (<https://happywhale.com/>)

Thank you so much for helping us gathering amazing pictures and moments!

Thank you for your support!



HW-MN1300525



Humpback Whale

Drake Selah Rose (Antarctica)

ID: BTBEL-Mn_1c_043



MS Fridtjof Nansen

Images 636
Encounters 354
Identified 194

Individuals 187
Species 26

Following: Users 0 Orgs 0 Individuals 1

Followers 4

Organizations



HX (Hurtigruten Expeditions)



Map Info

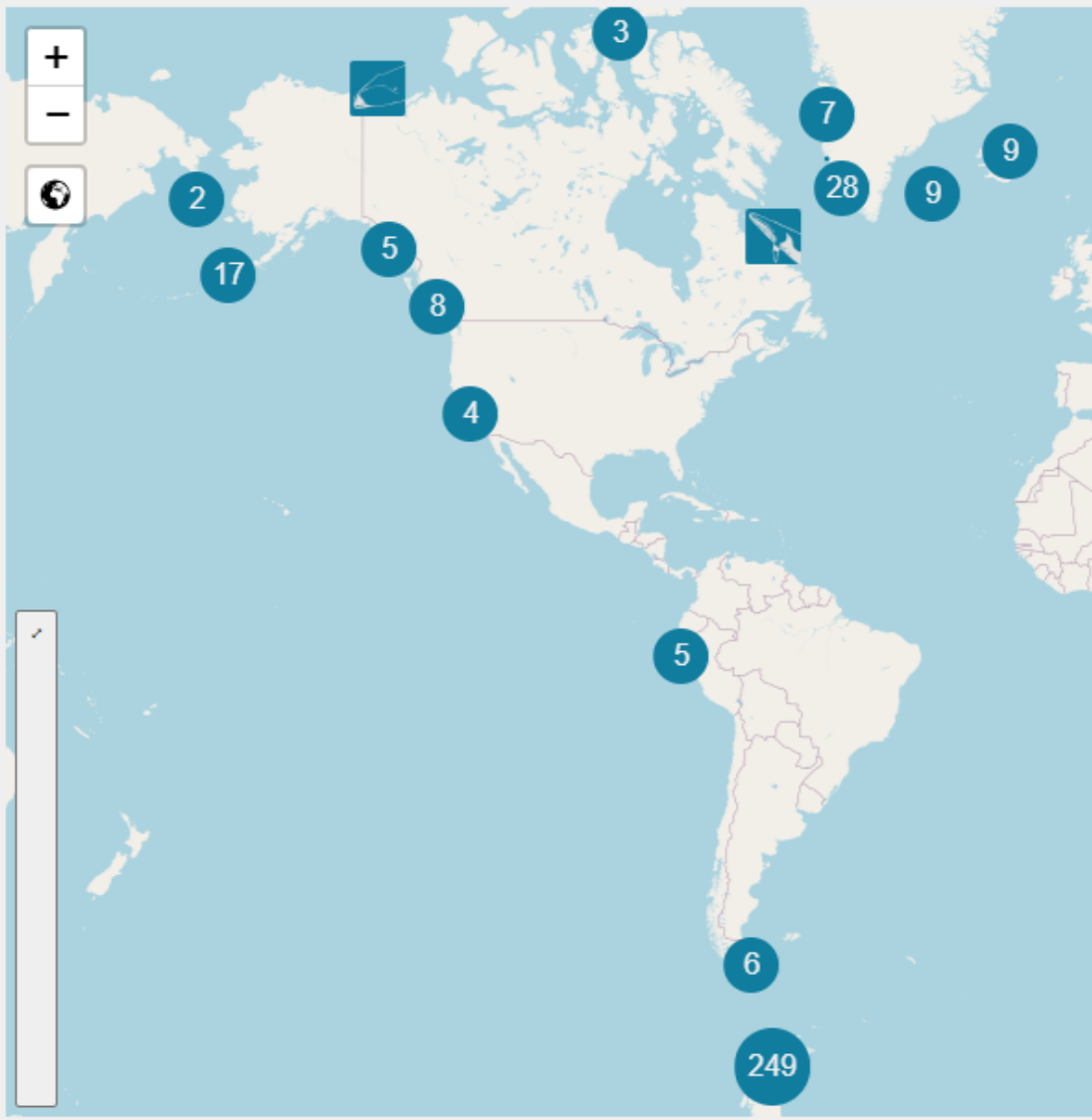
Total		Visible
354	Encounters	354
187	Individuals	187
26	Species	26



Show User Photographed Only



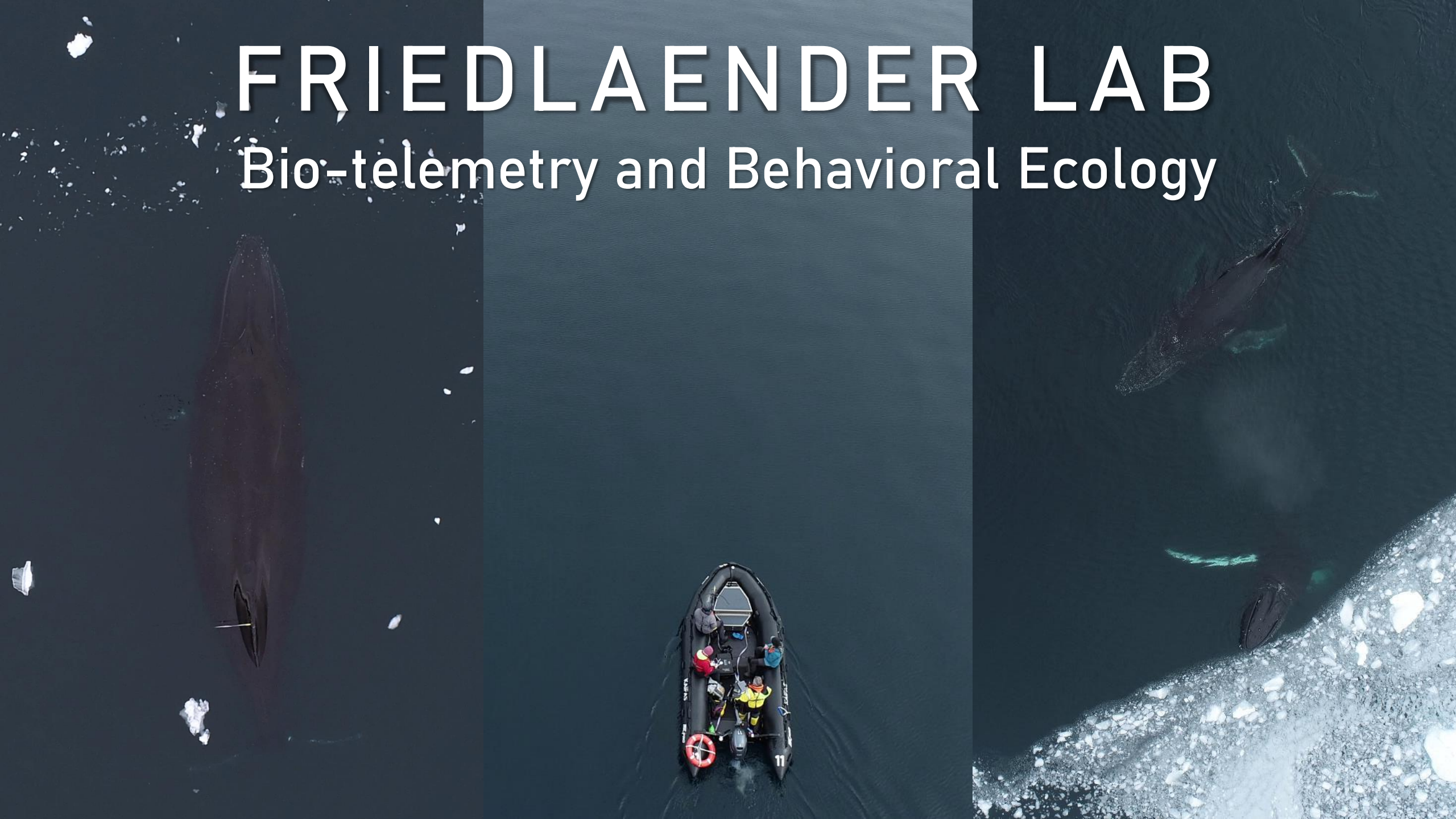
Show Individual Connections



You can take a closer
look into the MS Fridtjof
Nansen encounters in
the different destinations
we sail through.
(Happywhale)

FRIEDLAENDER LAB

Bio-telemetry and Behavioral Ecology



11 Humpback whales

Minke & killer whales:
Unofficial sightings

4 fluke photographs



Surveys

and Photo-ID

Remote Biopsy

6

skin + blubber samples

35



Permit ACA 2025-020

UAS Operations

11

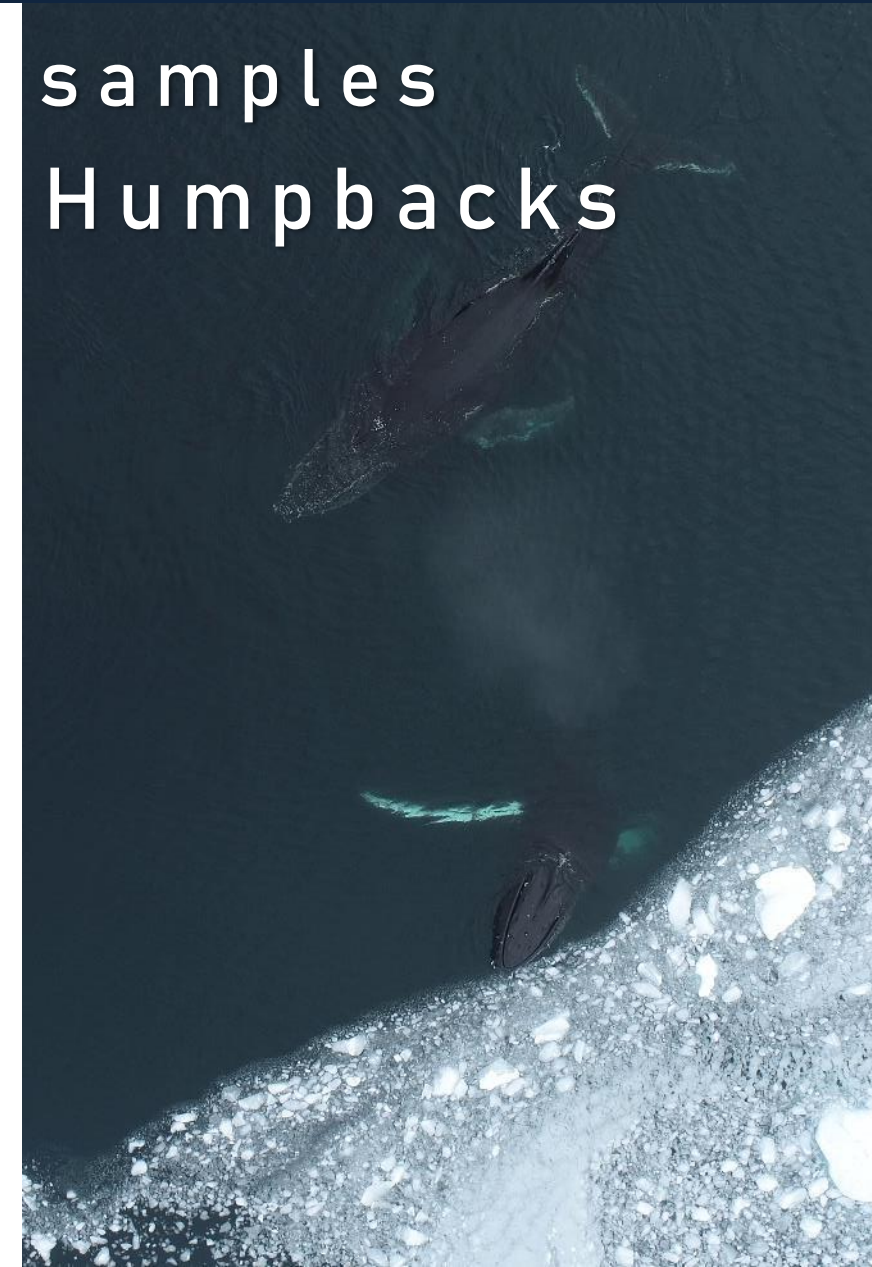
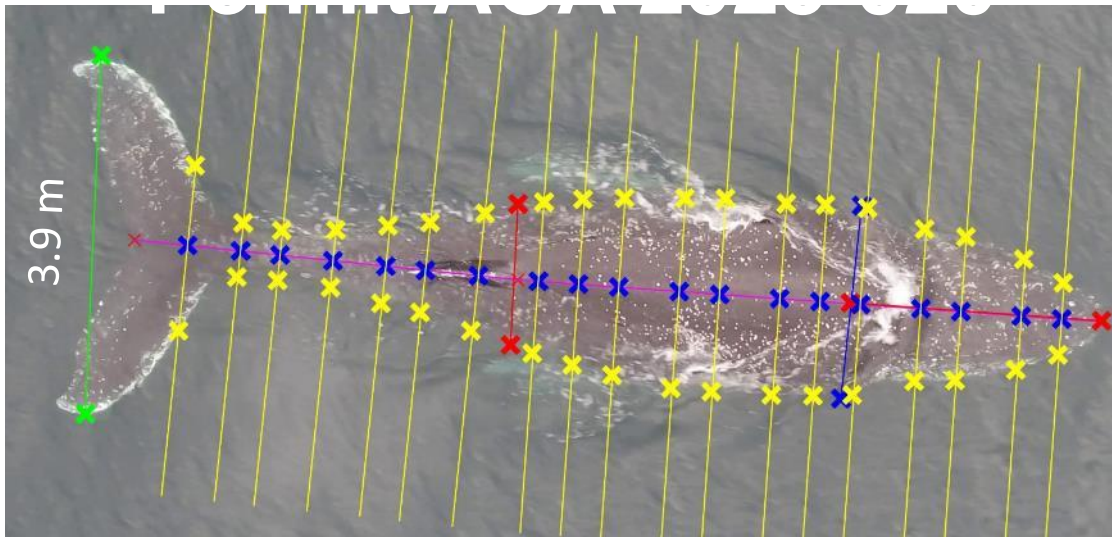
photogrammetry

samples

Humpbacks



Permit ACA 2025-020



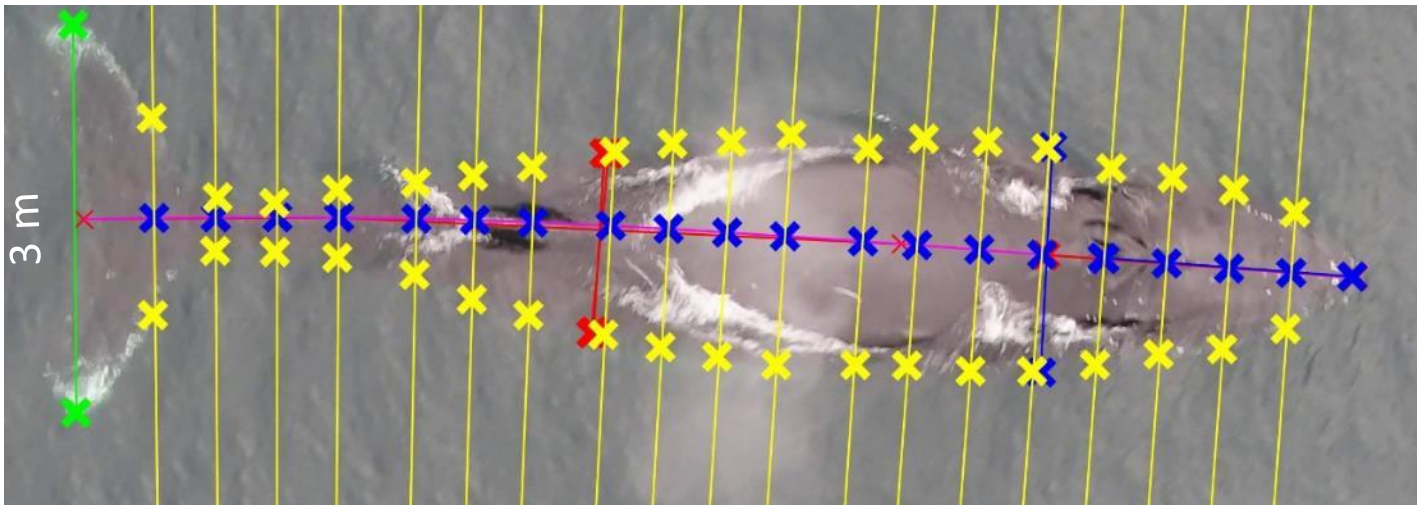
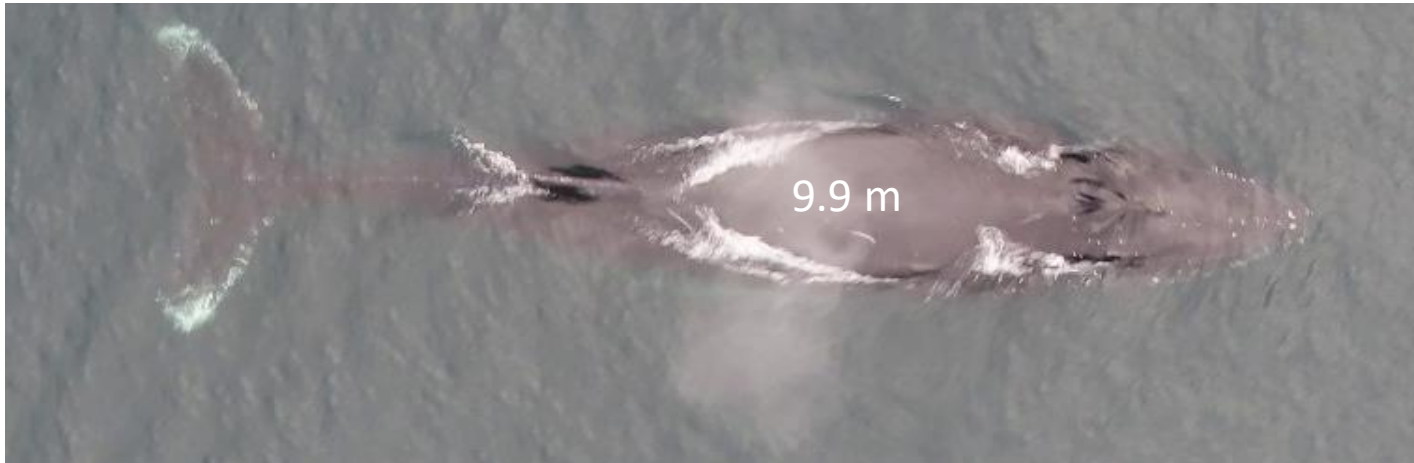
UAS Operations

11

photogrammetry

samples

Humpbacks



Permit ACA 2025-020

FRIEDLAENDER LAB

Bio-telemetry and Behavioral Ecology



**HURTIGRUTEN
EXPEDITIONS**

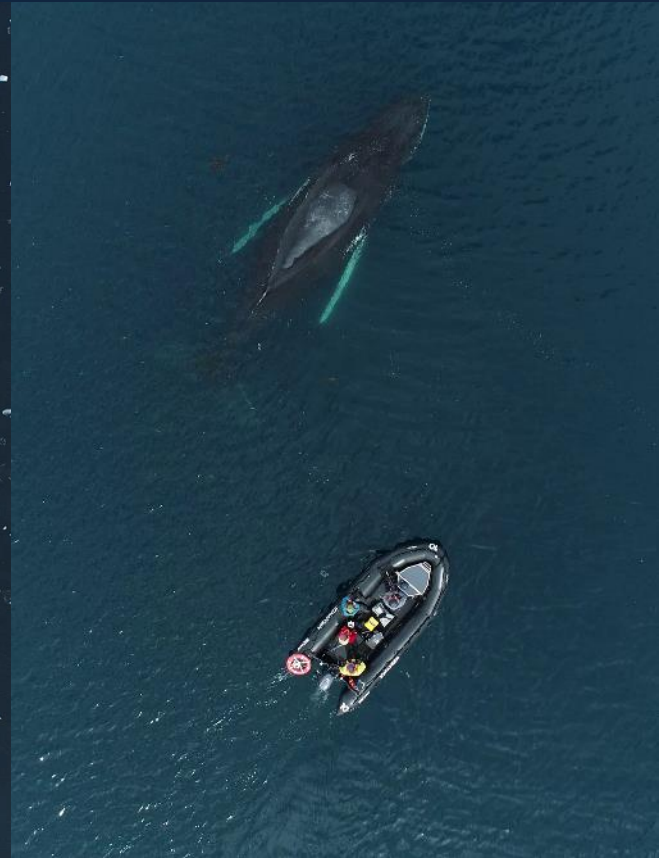
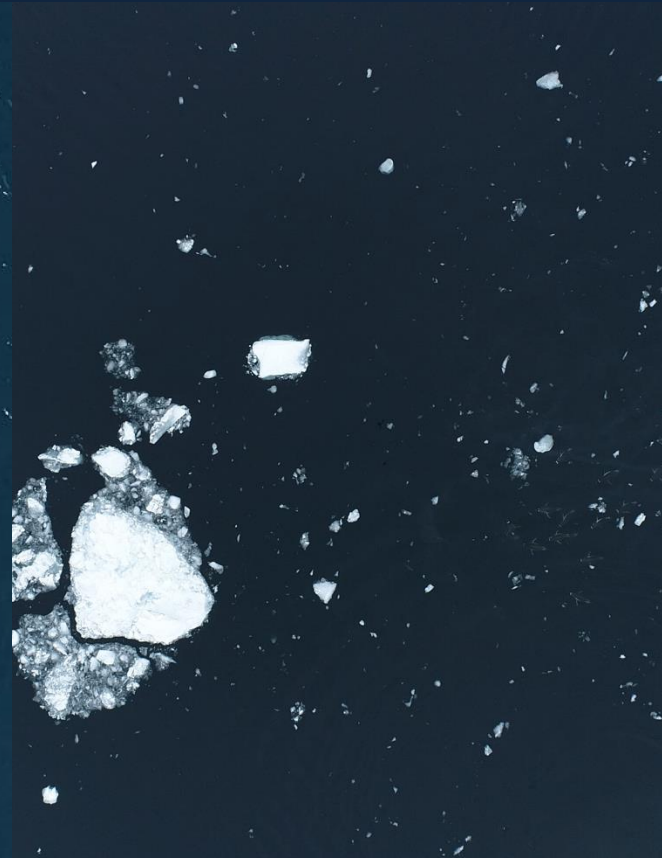
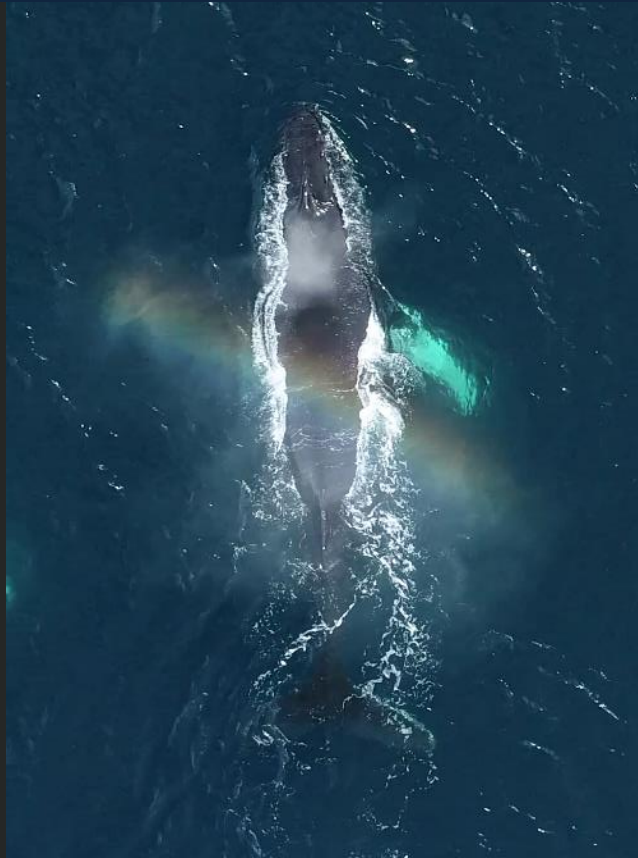
FRIEDLAENDER LAB

Bio-telemetry and Behavioral Ecology

Follow along with our operations...



@FRIEDLAENDER_LAB

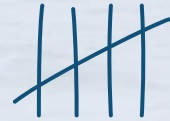




POLAR WHALE WATCH



Trip summary



Observations

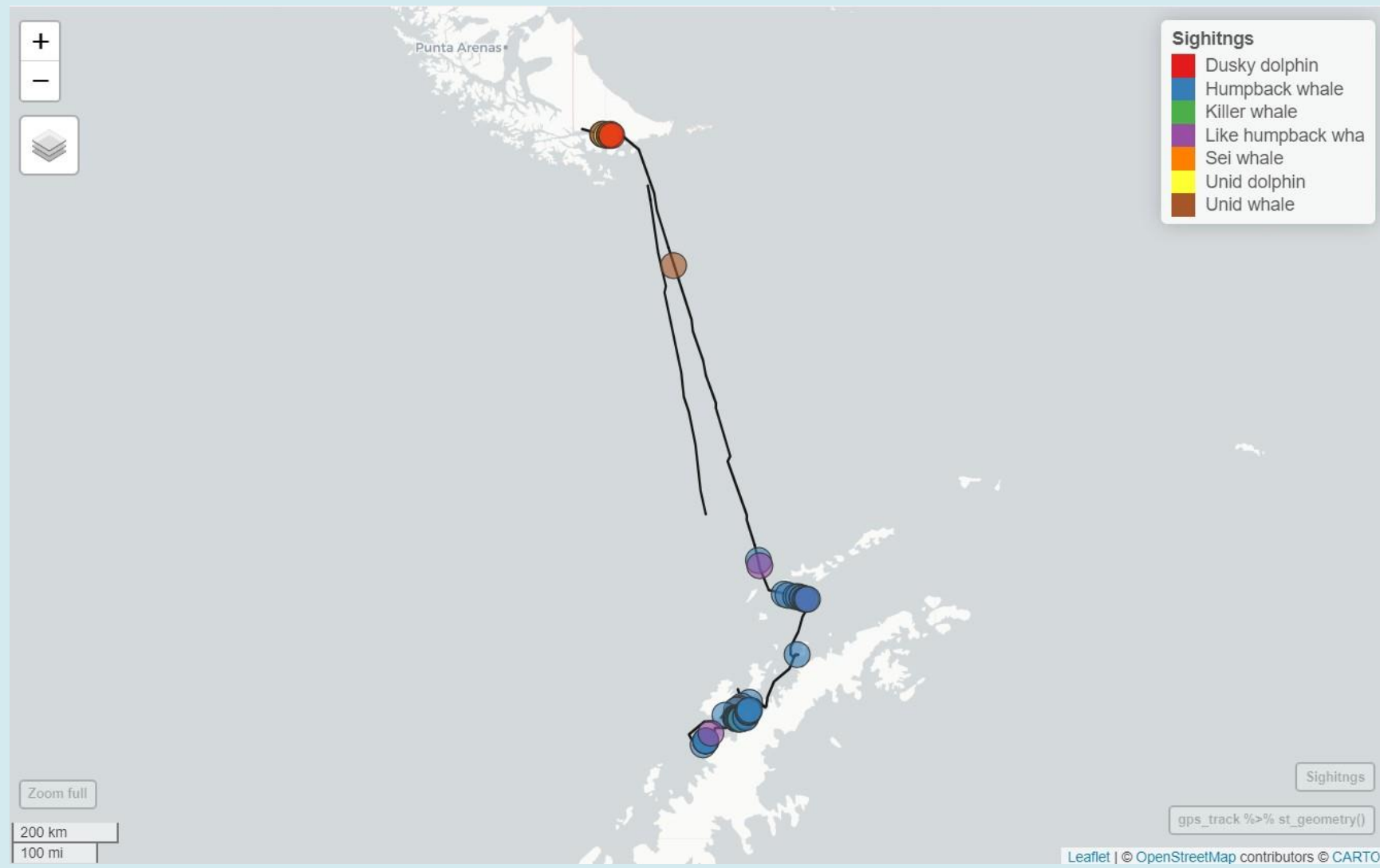


SpeciesName	Number_of_sightings	Number_of_animals
Dusky dolphin	1	14
Humpback whale	33	49
Killer whale	1	5
Like humpback wha	3	4
Sei whale	2	7
Unid dolphin	1	1
Unid whale	5	7

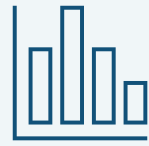
46
Sightings

87
Individuals

Observations



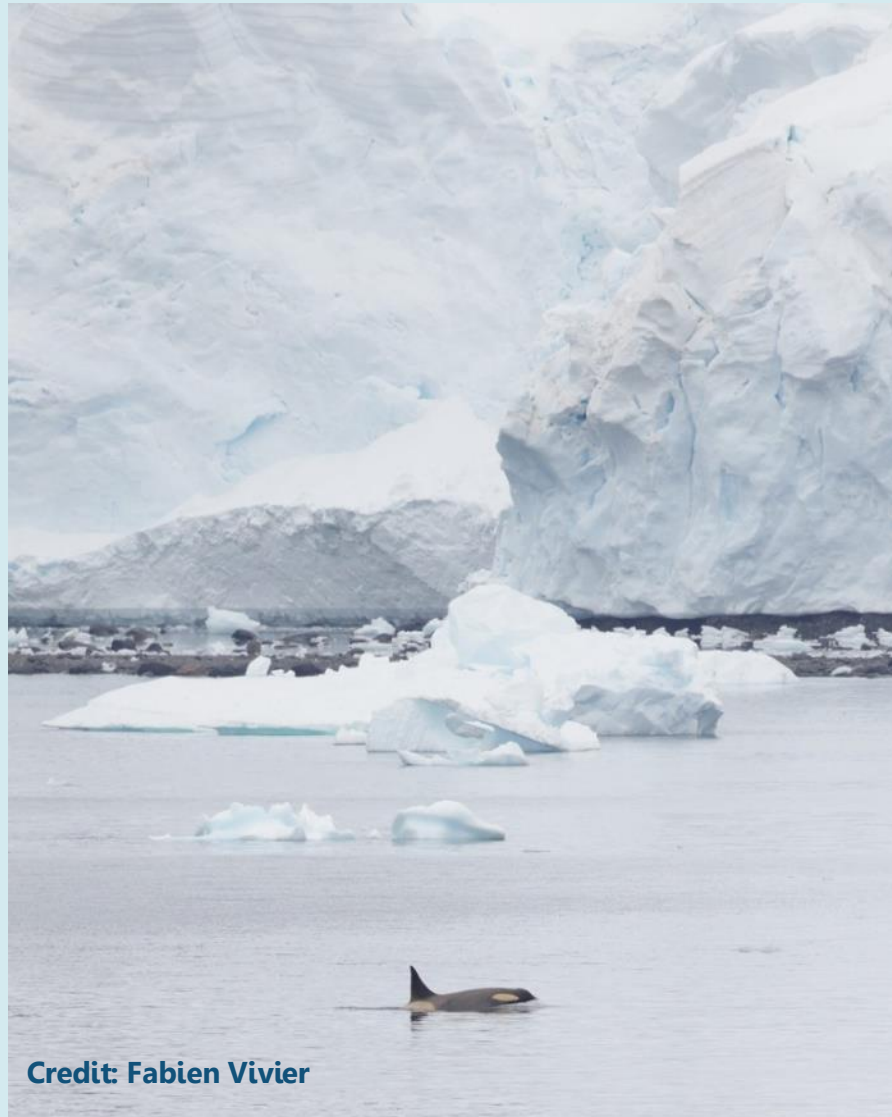
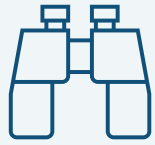
Observations



**53% Humpback or
like humpback**



Photos





Science Boat

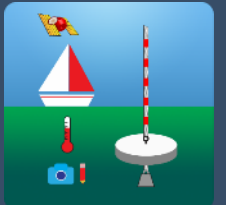
We had 13 science boat sessions during this trip in: Spert Island, Neko Harbour, Yalour Islands & Orne Islands. We sampled for different projects. With the secchi disk measurements to document the turbidity/clarity of the water and assess the abundance of phytoplankton. And for the fjord phyto project. This project aims to monitor the changes in abundance and distribution of phytoplankton in Antarctic & Arctic waters in relation with glacial ice melting. 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!



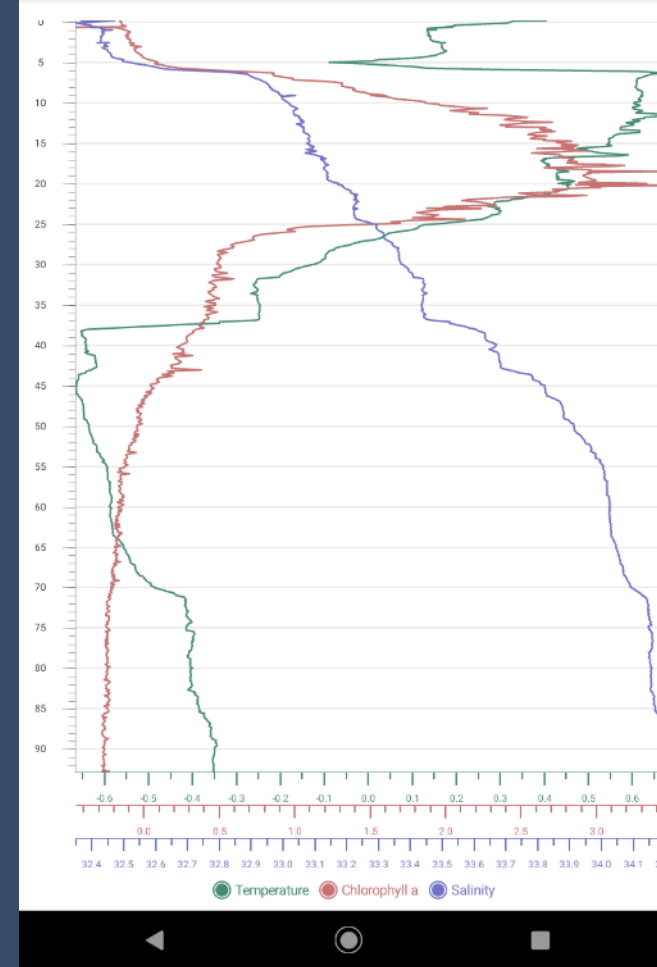
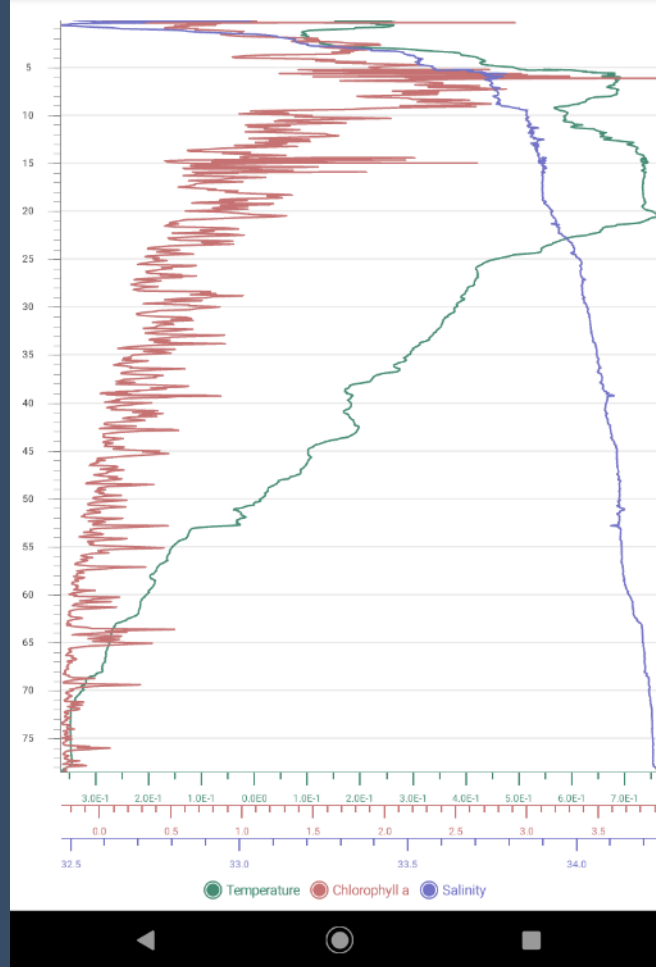
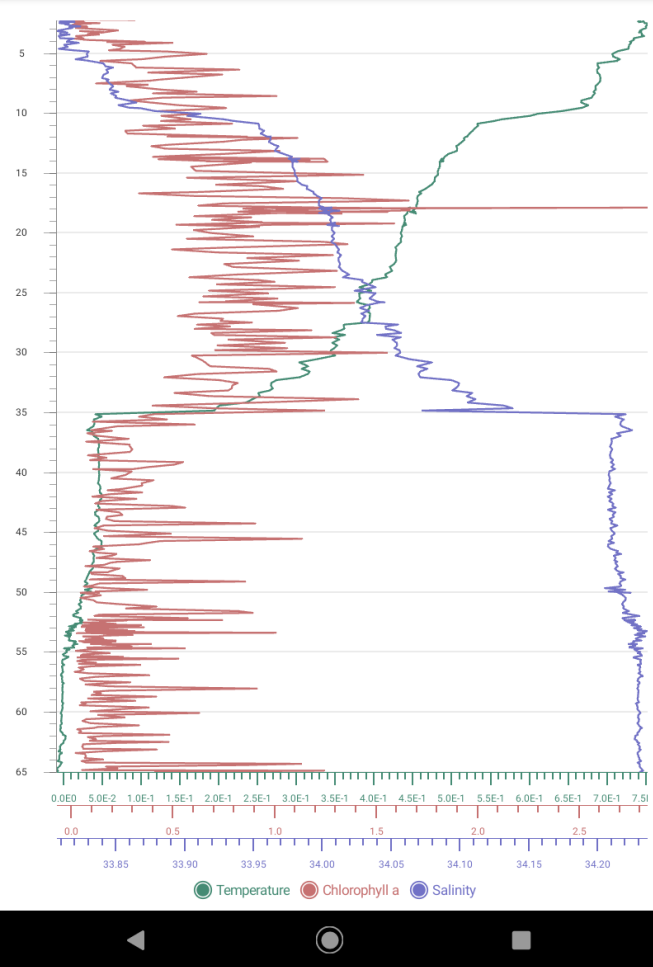
If you like to help us make the project a success



Follow us on social media @fjordphyto



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

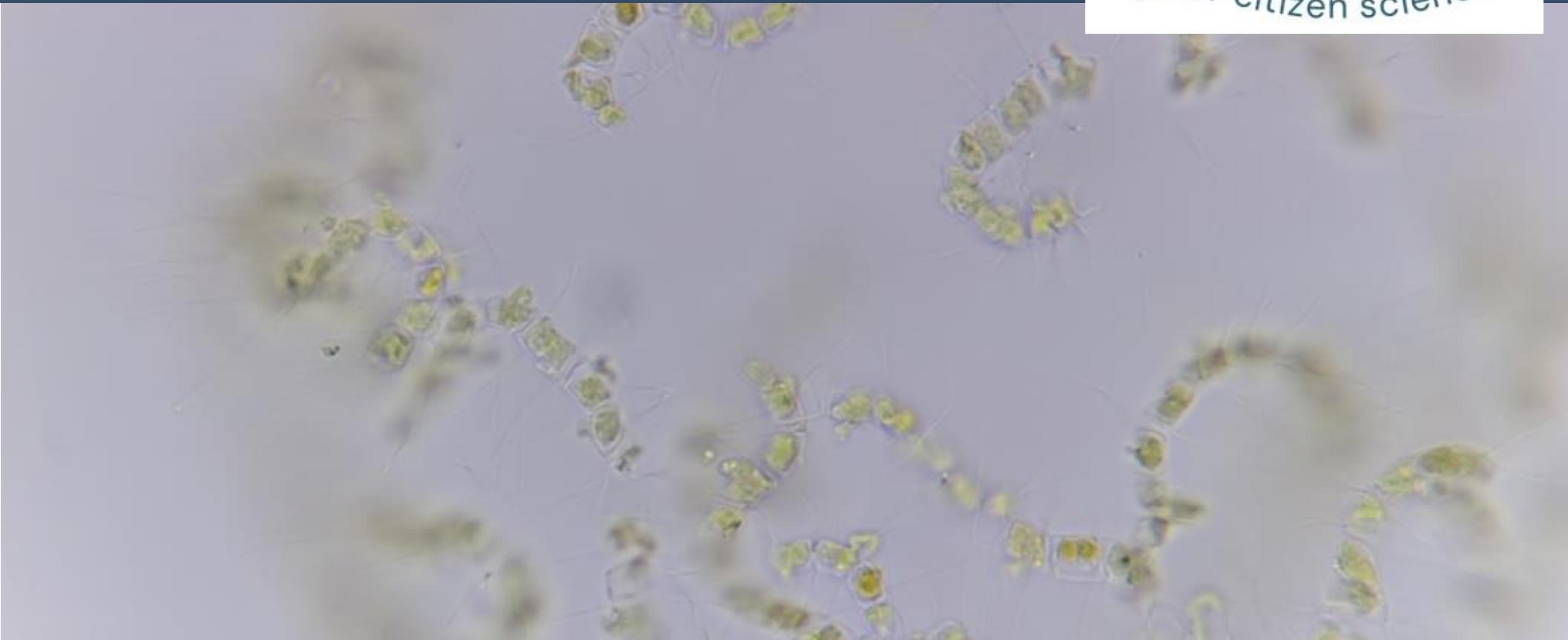


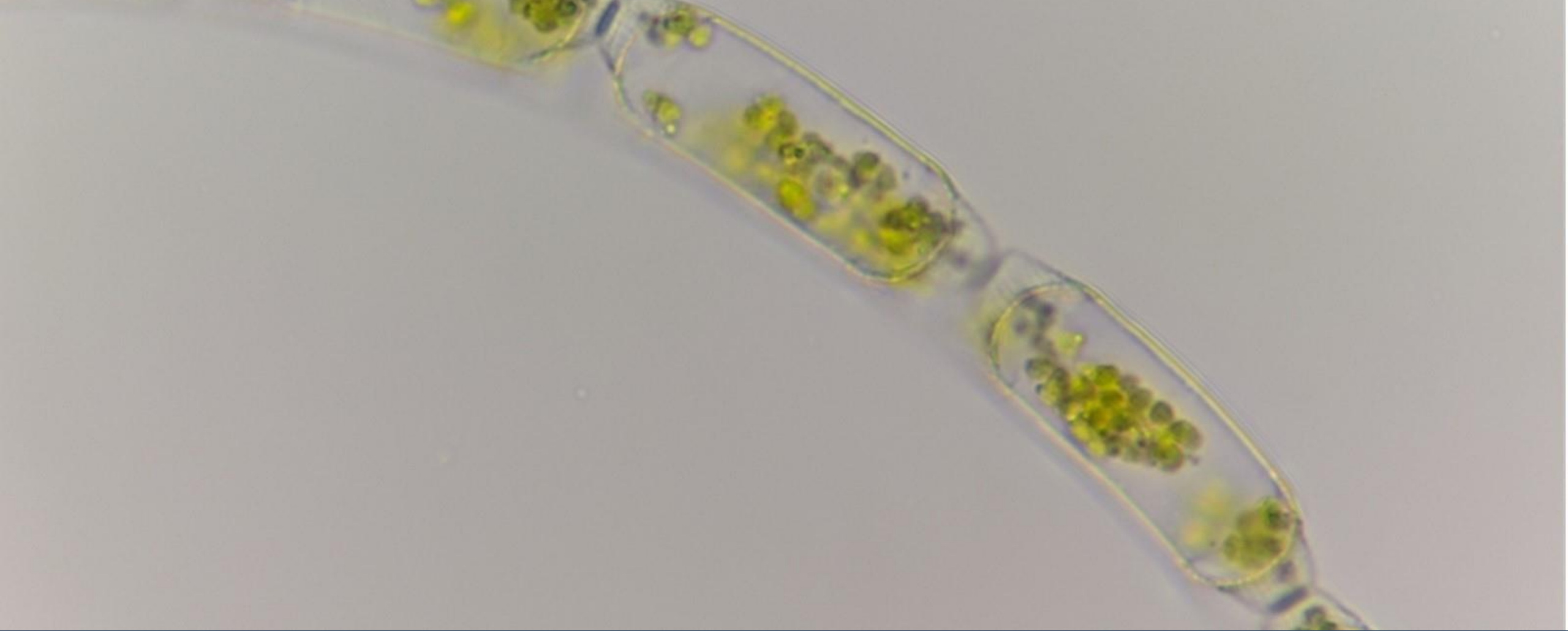
CTD Profiles



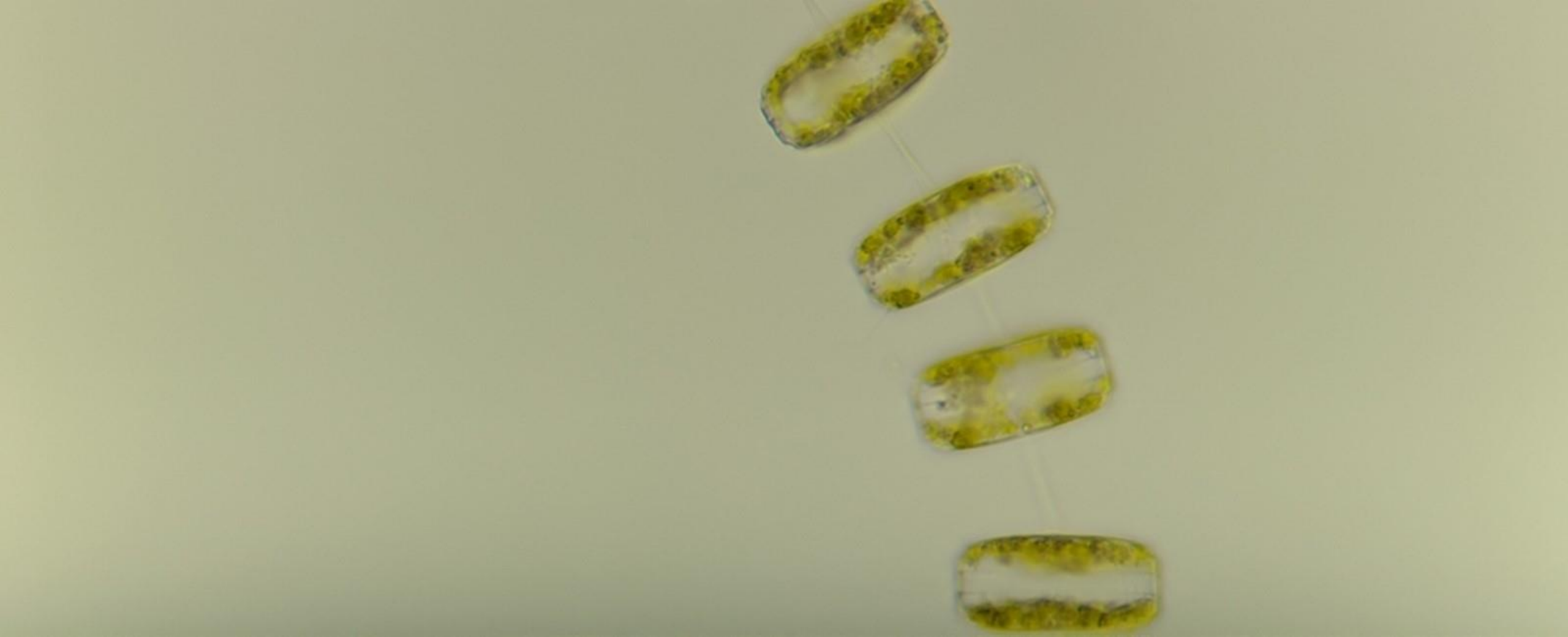
Plankton samples

Phytoplankton: *Chaetoceros socialis*





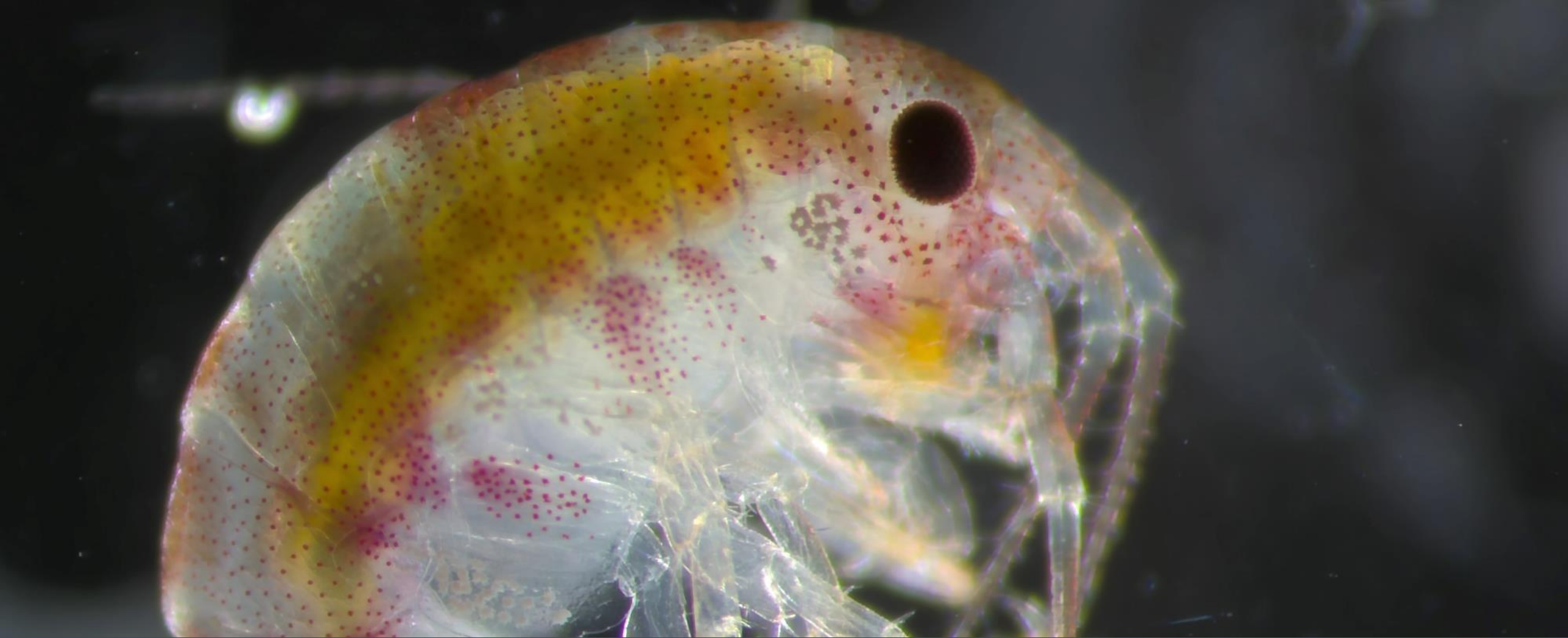
Phytoplankton: Class Bacillariophyceae



Phytoplankton: Family Thalassiosiraceae



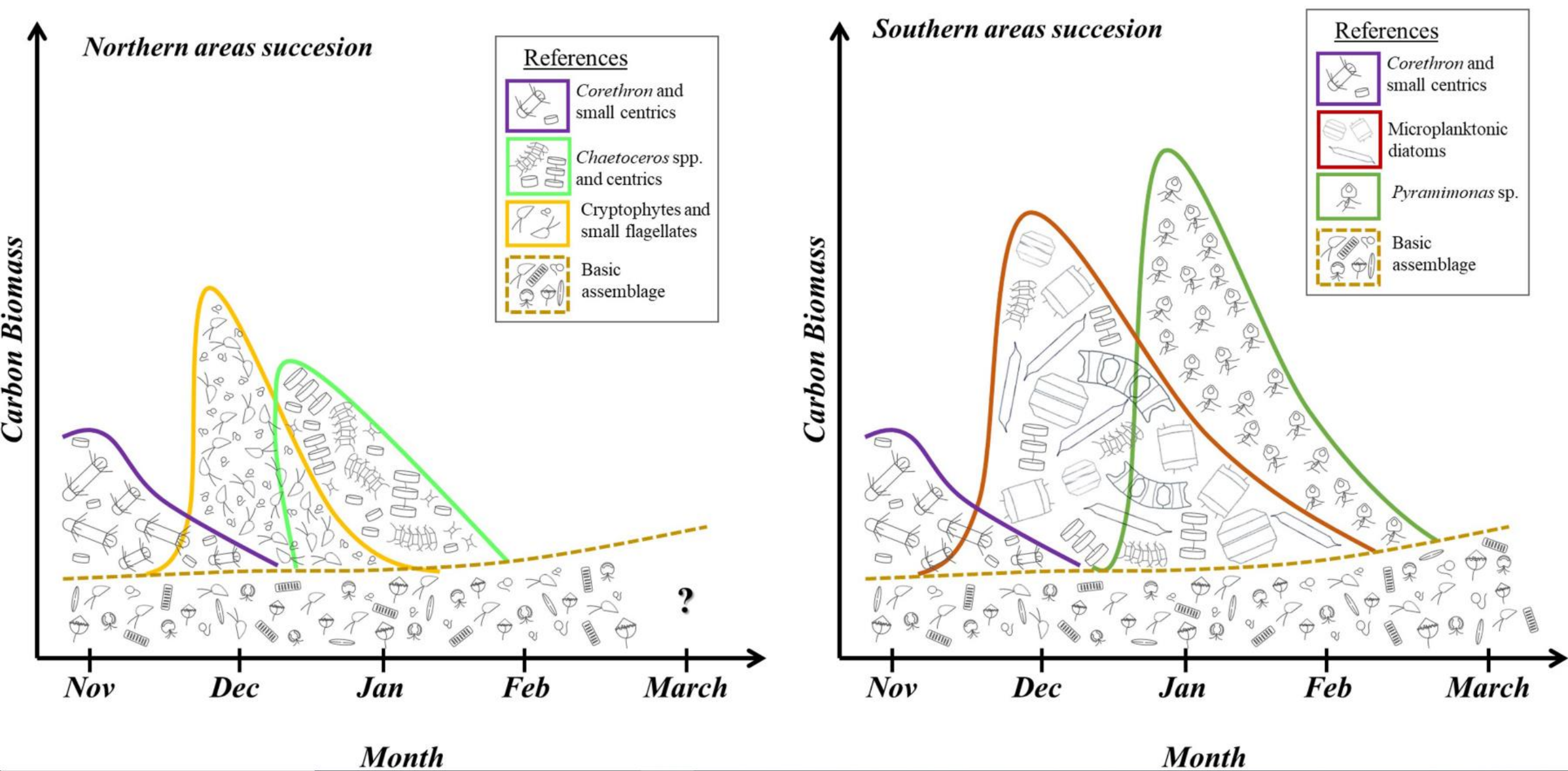
Phytoplankton: *Rhizosolenia styliformis*



Zooplankton: Family Pontogeneiidae



Zooplankton: *Salpa thompsoni*








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.

Wildlife List - Birds



Species		7	8	9	10	11	12	13	14	15	16
<i>Macronectes giganteus</i> EN: Southern Giant Petrel FR: Pétrel géant DE: Riesensturmvogel NO: Serkjempepetrell 中文: 南方巨鹱	 <small>Credit: Kay Tachmann & Ted Galla/HK</small>	●	●	●	●	●	●	●	●	●	
<i>Fulmarus glacialis</i> EN: Southern Fulmar FR: Fulmar argenté DE: Silbersturmvogel NO: Serhavhest 中文: 银灰暴风鹱	 <small>Credit: Kay Tachmann/HK</small>			●					●		
<i>Daption capense</i> EN: Pintado Petrel FR: Damier du Cap DE: Kapsturmvogel NO: Flekkpetrell 中文: 花斑鹱	 <small>Credit: Jula Finger/HK</small>			●						●	
<i>Thalassoica antarctica</i> EN: Antarctic Petrel FR: Pétrel antarctique DE: Antarktissturmvogel NO: Antarktispetrell 中文: 南极鹱	 <small>Credit: Jula Finger/HK</small>										
<i>Procellaria aequinoctialis</i> EN: White-chinned Petrel FR: Puffin à menton blanc DE: Weißkinn-Sturmvogel NO: Hvithakepetrell 中文: 白颈风鹱	 <small>Credit: J. Hamaar/Wikipedia</small>		●	●						●	●
<i>Oceanites oceanicus</i> EN: Wilson's Storm Petrel FR: Océanite de Wilson DE: Buntfuß-Sturmschwalbe NO: Wilsonstormsvale 中文: 黄腿洋海燕	 <small>Credit: Ekur Rudniko/Wikipedia</small>		●	●	●	●	●	●	●		●
<i>Fregata tropica</i> EN: Black-bellied Storm Petrel FR: Océanite à ventre noir DE: Schwarzbauch-Sturmschwalbe NO: Svartbukstormsvale 中文: 黑腹肌海燕	 <small>Credit: Kay Tachmann/HK</small>			●							

Species		7	8	9	10	11	12	13	14	15	16
<i>Ardenna grisea</i> EN: Sooty Shearwater FR: Puffin fuligineux DE: Dunkelsturmtaucher NO: Grålire 中文: 灰鹱	 <small>Credit: Marcus Bergsten/HK</small>		●								●
<i>Halobaena caerulea</i> EN: Blue Petrel FR: Prion bleu DE: Blausturmvogel NO: Blåpetrell 中文: 蓝鹱	 <small>Credit: Kim Damshak/HK</small>		●							●	●
<i>Pachyptila desolata</i> EN: Antarctic Prion FR: Prion de la Désolation DE: Taubensturmvogel NO: Antarktishvalfugl 中文: 鸽鹱	 <small>Credit: Jula Finger/HK</small>										
<i>Pachyptila belcheri</i> EN: Slender-billed Prion FR: Prion de Belcher DE: Dünnschnabel-Sturmvogel NO: Smalnebbhvalfugl 中文: 细嘴鹱	 <small>Credit: Marcus Bergsten/HK</small>										
<i>Pagodroma nivea</i> EN: Snow Petrel FR: Pétrel des neiges DE: Schneesturmvogel NO: Snøpetrell 中文: 雪鹱	 <small>Credit: Marcus Bergsten/HK</small>						●		●		

Wildlife List - Marine Mammals



CETACEANS - WHALES & DOLPHINS

[illegible][illegible]

SEALS – TRUE AND EARED SEALS

[illegible]



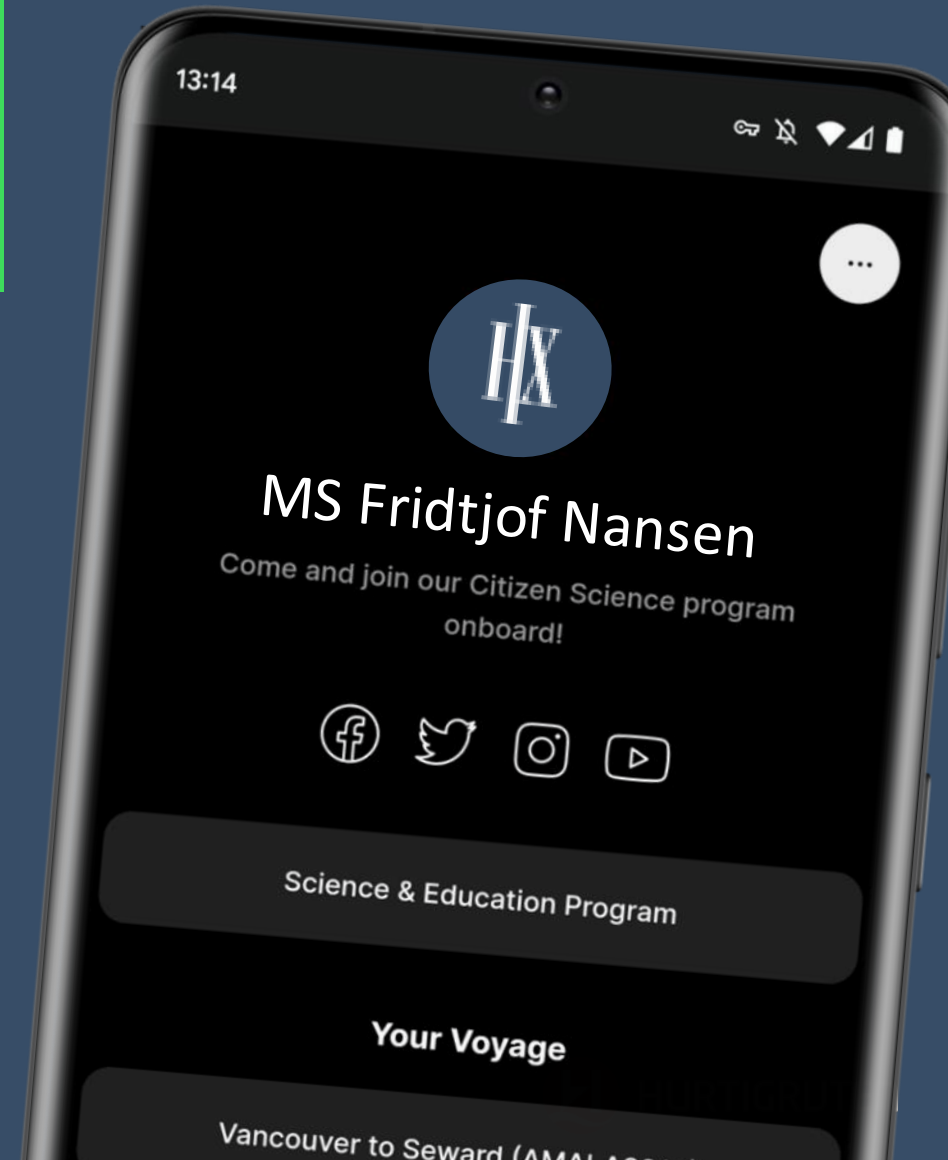
Linktree*

Linktree

Citizen Science Program

Find all information about the projects, downloads and our digital wildlife list here:

linktr.ee/msfridtjofnansen



IX

Connect with your inner scientist

