

An aerial photograph of a glacier, showing a complex network of blue and white ice with prominent longitudinal and diagonal crevasses. The lighting creates a sense of depth and texture in the ice surface.

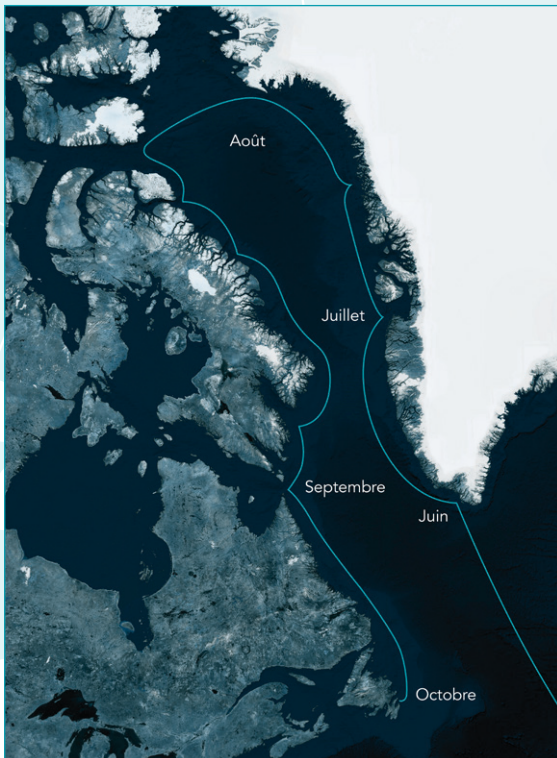
# EXPEDITION **GLACIALIS**

A SCIENTIFIC VENTURE INTO THE ARCTIC



# EXPEDITION GLACIALIS

[www.glacialis.ch](http://www.glacialis.ch)  
[info@glacialis.ch](mailto:info@glacialis.ch)



Seasonal changes and shorter winters  
Increased risk of collision with ships  
Entanglement in fishing gear  
Noise pollution due to traffic  
Change in prey availability  
Wildlife habitat changes  
Plastic pollution  
Oil spill



[ *Eubalaena glacialis* ]

## GLACIALIS 2021

Glacialis is an independent scientific expedition that aims to explore the Arctic seas while collecting valuable data concerning marine mammals and their habitats.

Glacialis will take place on board the ATLAS sailing boat. We will set sails from the Azores Archipelago towards Baffin Bay in June and July to work in the Davis Strait region. The expedition will then head south following the retreat of the ice along Baffin Island in August and September, covering a distance of more than 5000 nautical miles in 5 months.

A valuable source of data and experience, this pilot expedition will be followed by two seasons of studies on the Northwest Passage in 2022 and 2023.

## A particularly endangered environment

The Arctic is a region warming two to three times faster than the rest of our planet.

The Ocean is undergoing drastic changes, including water and air temperature, acidification due to the accumulation of CO<sub>2</sub>, acoustic, chemical and plastic pollution, and increase in maritime traffic - all consequences of human activities.

The melting ice opens new waterways and eases human access to the Arctic's natural resources, fuelling our insatiable hunger for gas and oil and in turn leading to wide-ranging destruction of ecosystems.

These multiple pressures have complex repercussions on both terrestrial and marine ecosystems. They threaten the health, abundance and distribution of species. However, they jeopardise not only biodiversity, but also the way of life of local populations who are culturally and spiritually linked to it.

## A need for knowledge

Documenting the current state of the Arctic marine ecosystem is crucial to developing effective conservation measures. This objective is at the heart of the Expedition Glacialis.

Our intention is to improve and promote knowledge of the Arctic Ocean and its wildlife. In this perspective, we will focus on marine mammals, an excellent indicator of ecosystem health.

### A micro-platform for research

We are working in collaboration with a variety of researchers, institutes, communities, universities, NGOs and governments to select and develop innovative research protocols that are easy to use, adapted to small research platforms and easily replicable:

- Acoustic devices will be used to monitor noise pollution and identify whale species.
- A thermal camera will be used to detect marine mammals and assess their stress levels. This technology also provides an aid to navigation. Our marine mammal identification data will enable our partners to refine these systems to avoid ship-whale collisions.
- UAVs will be used to take aerial images of the whales, document their state of health by photogrammetry and detect signs of entanglement and collision with ships.
- The physico-chemical parameters of the water, sampling of plankton, microplastics and environmental DNA will complete our data collection.

### Open access data

In an effort to encourage open science, we will share our data on online open platforms and collaborate directly with a variety of researchers, institutes, communities, universities, NGOs and governments.

## Arts & Science

All passionate about nature and the sea, we are committed to documenting the fragile and isolated environment of the Arctic. We are eager to share the adventure and the issues we will encounter through several types of media, in real time during our adventures and back on land !

- Real-time monitoring on social networks
- Interactive observation map
- Travel diaries & blog articles
- Creation of a documentary film
- Creation of a radio play
- Professional photographs
- Conferences & school presentations

### Glacialis Team

We are a mixed, young and pluridisciplinary team, composed of biology specialists, but also of audiovisual and human science professionals.

### Atlas Expeditions

This Swiss non-profit organization is dedicated to the preservation of heritage. It supports the organization of scientific, educational and cultural projects and provides the necessary platform for the Glacialis Expedition: the ATLAS sailboat!

### Swiss Cetacean Society

We are supported by the SCS, an NGO active for 24 years and with extensive logistical experience in scientific research, participatory science and the protection of marine mammals.





## HELP GLACIALIS REACH ITS FULL POTENTIAL !

In order to ensure a good start, we need your help to finance the missing research, communication and safety equipment, to equip the boat in an even more environmentally friendly way, to contribute to the costs of sample analyses and to feed an entire crew for five months of expedition!

Thank you for your support!

## EXPEDITION GLACIALIS

[www.glacialis.ch](http://www.glacialis.ch)  
[info@glacialis.ch](mailto:info@glacialis.ch)

AND JOIN US IN THE ADVENTURE!

