

An aerial photograph of a glacier, showing a complex network of blue and white ice with numerous cracks and ridges. The text is centered over the image.

EXPEDITION **GLACIALIS**

A SCIENTIFIC VENTURE INTO THE ARCTIC



[*Eubalaena glacialis*]

Human impact in the Arctic regions is likely to increase

The Arctic ocean faces climate changes in the most abrupt way. Melting sea ice dramatically accelerates the opening of a new shipping route in the North West Passage. This leads to many anthropogenic impacts, such as noise pollution, air and water pollution or the growing exploitation of natural resources by fisheries and hydrocarbon exploration.

Inter-seasonal change and shorter winters

Modifications of wildlife habitat
Change in prey availability

New shipping routes

Noise pollution due to traffic
Higher risk of ship strikes

Industrial development

Oil spills
Noise pollution due to exploitation
Entanglement in fishing gear

A pluridisciplinary team in an adventurous expedition

We are a team of biologists, research technicians and an experienced captain & photographer who are committed to document the fragile and remote environment of the Arctic. *Monitoring the marine fauna and its biological and acoustic environment is crucial to permit protection measures to be taken in time.*

Virginie Wyss

Master in Biology & Campaign Officer

Mathieu Marzelière

Natural Environment Field technique
and certified Marine Mammal Observer

Laurence Tremblay

Biologist & Research assistant

Arnaud Conne

Captain & Pro photographer

Glacialis 2021, opening the way to monitor the North West passage.

Expedition Glacialis will step onboard the sailing vessel « Atlas » in the Azores archipelago early May 2021. We will sail to the Baffin Sea, covering a distance of over 8000 nautical miles in 5 months before the winter season in Saint-Pierre et Miquelon. *Providing a precious source of data and experience, this first expedition will open the way for further monitoring on the Northwest Passage in 2022.*

May - June

Azores archipelago to Greenland

June - July

Labrador Sea to Baffin Bay

July - September

Baffin Bay to Newfoundland

September - December

Data analysis & communication

First visual, thermal and acoustic catalog of cetaceans

We are developping innovative and replicable protocols to create the first combined catalog of Arctic marine mammals. Acoustic devices will allow noise pollution monitoring and species recognition. The use of drones and of thermal cameras are new in cetology and will open new ways in the field. A thermal camera will be used to detect whale blows and tested as a navigational aid by automatic detection to help avoid ship-strikes. Drones will be used to take aerial footage of whales, documenting their health status and detect entanglement and ship strikes marks. Physicochemical parameters, microplastics & plankton sampling will complement our research.

Photo ID, drone footage, thermal imaging & acoustic monitoring.

Worldwide accessible data to connect the scientific community

Our intention is to improve knowledge on the Arctic ocean and its fauna, test innovative and replicable protocols and enhance Arctic's policies in order to allow humans and wildlife to coexist harmoniously. We will share and publish our data online and collaborate with several institutes, communities, universities, NGOs, governments, media and industries to encourage open science.

OGSL - St. Lawrence Global Observatory
<https://ogsl.ca/en>

OBIS SEAMAP
<http://seamap.env.duke.edu>

Flukebook
<https://www.flukebook.org>

eBird
<https://ebird.org>

Communication and awareness rising

Communications mean a lot to all of us nowadays. On this ambitious adventure, they will not only be our essential safety line connecting us to daily weather and ice reports. They will allow us to share the venture and the problematics we encounter through several types of media, both on the go and back on land !

The exceptional gathering of data and footage over the expedition will be an amazing source of knowledge and beauty to be shared the world. Our expertise in communication will spread awareness through different media like radio, blogs, and a documentary. We are already working with our partners on the scenarios for a radiophonic piece and a documentary film. Professionnal quality photographs will be produced along the whole experience by Arnaud Conne.

Help Expedition Glacialis reach its full potential !

The crew, ship, budget, scientific methods, route and itinerary have been determined. We have documented partnerships and platforms to perform and make public our data and analysis.

We will be very happy to share our datas with you, collect datas for you, test materials or adapt our protocols with your expertise.

Please join our partners!

Our scientific partners will provide a significant part of the gear needed for the survey. Thanks to Atlas Expeditions, we have the adequate platform for the project. The latest generation research equipment (thermal camera, lidar drone, hydrophone, multiparameter, software) will be used so that the methods developed will be useful for future researchers.

We will upgrade the communication equipment on board, purchase survival gear and engineer solutions to deploy scientific equipment.

The communication equipment will not only increase safety but it will also enable us to keep followers updated in real-time.

We need your support to help Expedition Glacialis reach its full potential !

Please join our sponsors!



JOIN
EXPEDITION
GLACIALIS

www.glacialis.ch
info@glacialis.ch