

APPLICATION FOR CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH

1. General Information

1.1 Cruise name and/or number:	F2026-002 - NG-LEX ED142616
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1.2 Sponsoring institution(s):		
Name	Address	Name Of Director
Lindblad Expedition	Science@expeditions.com 2505 2nd Avenue Suite 300 Seattle, WA 98121-2051 USA	Natalya Leahy
National Geographic Society	1145 17th Street NW, Washington DC tleonardo@ngs.gov	Jill Tiefenthaler

1.3 Scientist in charge of the project:	
Name:	GABRIELLE CORRADINO
Country:	United States
Affiliation:	Barnard College of Columbia University
Address:	41 Grist Mill Lane Southport, CT 06890 United States
Telephone:	2039882742
Email:	gcorradi@barnard.edu

1.4 Entity(ies) /Participant(s) from coastal State involved in the planning of the project:	
Name:	See Section 6.2
Country:	
Affiliation:	
Address:	
Telephone:	
Fax:	
Email:	
Website (for CV and photo):	

1.5 Submitting officer:	
Name:	Ashley Knight
Affiliation:	Lindblad Expeditions
Address:	United States
Telephone:	858-349-8231
Fax:	
Email:	ashleyk@expeditions.com

2. Description of Project

2.1 Nature and objectives of the project:

This project investigates microbial plankton communities in sub-Arctic surface waters to better understand how changing oceanographic conditions influence plankton diversity, primary productivity, and microbial nutrient cycling. During the cruise, I will collect small-volume seawater and plankton samples (0–3 m depth) at several coastal stations around Iceland, as well as during the vessel's transit through the Denmark Strait near Greenland, for microscopy (including photography), environmental DNA analysis, and characterization of microbial community structure.

Sampling will be conducted from the M/V National Geographic Endurance using handheld bottles, sterile collection containers, and a small plankton net deployed from a Zodiac when permitted. All sampling is low-impact, non-destructive, and limited to small-volume surface water collections. No culturing or manipulation of live organisms will occur on board.

The objectives are to: (1) document microbial plankton composition across sub-Arctic waters, (2) assess environmental drivers of plankton community variability, and (3) contribute data to ongoing research into microbial processes in a warming North Atlantic. All data and results will be used exclusively for academic research and may be shared with Icelandic partners and authorities as required.

2.2 Relevant previous or future research projects:

I am a marine ecologist specializing in plankton community dynamics, microbial food webs, and coastal ecosystem change. I hold a Ph.D. in Marine, Earth, and Atmospheric Sciences from North Carolina State University. My prior research applications have primarily involved U.S. coastal waters, the Gulf of America on the NOAA GOMECC cruise and university-based plankton ecology studies, including NSF-funded work on microbial food webs and diatom–flagellate interactions. I have also participated in collaborative North Atlantic fieldwork, but this is my first MSR application submitted as U.S. Chief Scientist in foreign waters.

Future research activities may include follow-up sampling cruises in the North Atlantic, Arctic gateways, and sub-polar regions, contingent upon funding and required coastal-state approvals. I currently serve as faculty in the Department of Biology at Barnard College of Columbia University, where I teach marine ecology, microbiology, and field-based environmental research methods. I routinely organize and lead research projects involving undergraduate researchers, and I am experienced with low-impact seawater sampling, sample handling, and compliance with all U.S. and foreign regulatory requirements for marine scientific research.

My work is strictly academic and non-commercial, and I am committed to conducting all field activities responsibly, transparently, and in accordance with international MSR regulations.

2.3 Previous publications relating to the project:

In Review:

1. Corradino, G., Ekland, S., Laufer, H., Ostrander, T., Ireland, M., and Rivera, M. Evaluating Plankton Assemblages in the Hudson River: Microscopy and Molecular Methods. *Estuaries and Coasts*.
2. Corradino, G. and Schnetzer, A. Getting Attached: A Heterotrophic Nanoflagellate Mingling with Centric Diatoms. *Phycology*.

2025:

Corradino G., Schnetzer A. Impact of temperature and diet on feeding and growth of a marine heterotrophic nanoflagellate. *Journal of Plankton Research*

2022:

Corradino G., Schnetzer. Grazing of a Heterotrophic Nanoflagellate on Prokaryote and Eukaryote Prey: Ingestion Rates and Gross Growth Efficiency. *Marine Ecology Progress Series*.

2019:

Shields M., Bianchi T., Osburn C., Kinsey J., Ziervogel K., Schnetzer A. and Corradino G. Linking chromophoric organic matter transformation with biomarker indices in a marine phytoplankton growth and degradation experiment – *Marine Chemistry*: 214: p 103665

2018:

Kinsey JD., Corradino G., Ziervogel K., Schnetzer A. and Osburn C. Formation of Chromophoric Dissolved Organic Matter by Bacterial Degradation of Marine Particles. *Frontiers in Marine Science*

3. Geographical Areas

3.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude, including coordinates of cruise track/ way points):

Iceland:

- Reykjavik and adjacent coastal waters ($\approx 64.1^{\circ}\text{N}$, 21.9°W)
- Westfjords region ($\approx 65.7^{\circ}\text{N}$, 23.2°W)
- Siglufjörður and northern coast ($\approx 66.2^{\circ}\text{N}$, 18.9°W)
- Húsavík / Skjálfandi Bay ($\approx 66.0^{\circ}\text{N}$, 17.3°W)
- Grimsey region ($\approx 66.5^{\circ}\text{N}$, 18.0°W)
- Eastfjords including Borgarfjörður Eystri ($\approx 65.5^{\circ}\text{N}$, 13.8°W)
- Westman Islands ($\approx 63.4^{\circ}\text{N}$, 20.3°W)

Greenland (Denmark):

- Transit through the Denmark Strait along the southeast Greenland margin ($\approx 64^{\circ}\text{--}68^{\circ}\text{N}$, $24^{\circ}\text{--}30^{\circ}\text{W}$).

Sampling will occur only in surface waters within the territorial sea and Exclusive Economic Zones of Iceland and Greenland. Exact station coordinates will be recorded during the cruise and can be provided to coastal state authorities upon request

3.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) showing the geographical areas of the intended work and, as far as practicable, the location and depth of sampling stations, the tracks of survey lines, and the locations of installations and equipment.
Chart provided - see Section 10.1.

4. Methods and Means to be Used

4.1 Particulars of Vessel:		
Name:	National Geographic Endurance	
Type/Class:	Ship : C/S	
Nationality (Flag state):	Bahamas, The	
Identification Number/Lloyds #/MMSI #:	IMO 9842554; MMSI 311000929	
Owner:	Lindblad Expeditions Holdings	
Operator:	Lindblad Expeditions Holdings	
Overall length:	124.4m	
Maximum draught:	5.3m	
Displacement/Gross tonnage:	12,000.0	
Propulsion:	Diesel-Electric	
Cruising:	16.5 KTS	
Maximum speed:	17.3 KTS	
Call sign:		
INMARSAT number and method and capability of communication (including emergency frequencies):		
Name of master:	Aaron Wood	
Number of crew:	89	
Number of scientists on board:	21	

4.2 Other craft in the project, including its use:
N/A

4.3 Particulars of methods and scientific instruments:		
Types of samples and measurements	Methods to be used	Instruments to be used
Plankton Sampling	Using a plankton tow net in the surface waters (0-3m) to collect a plankton community sample for analysis.	plankton tow net (150um)

4.4 Indicate nature and quantity of substances to be released into the marine environment:
No

4.5 Indicate whether drilling will be carried out. If yes, please specify:
No

4.6 Indicate whether explosives will be used. If yes, please specify type and trade name, chemical content, depth of trade class and stowage, size, depth of detonation, frequency of detonation, and position in latitude and longitude:
No

4.7 Indicate whether protected species be studied. If yes, please specify:
No

4.8 Indicate whether scientific acoustic equipment will be used.:
No

4.9 Indicate whether fishing/trawling will be used.:
No

5. Installations and Equipment

5.1 Details of installations and equipment (including dates of laying, servicing, method and anticipated timeframe for recovery, locations and depth, and measurements):
No

6. Dates

6.1 Estimated overall project start and end dates:
Project Start Date: 6/30/2026
Project End Date: 7/10/2026

6.2 Coastal State-specific details:	
Coastal Area	Iceland
Estimated Entry Date:	6/30/2026
Estimated Departure Date:	7/9/2026
Estimated Research Start Date:	6/30/2026
Estimated Research End Date:	7/9/2026
Explanation of multiple entries:	The cruise starts in Iceland, then goes to the Denmark Strait to the shores of Eastern Greenland for 1 day and then back to Iceland to Húsavík and continues in Iceland for the duration.
Research will be performed:	Within 12 M, Between 12-200 M
Extent to which Iceland will be enabled to participate or to be represented in the research project:	The coastal state is welcome to observe or participate in sampling activities whenever feasible and may request access to environmental data or preserved samples. I will provide updates, station information, and a preliminary report, and will accommodate any additional representation the coastal state requests within logistical limits.
Name, affiliation and contact information for all participants from Iceland:	N/A
Coastal Area	Greenland
Estimated Entry Date:	7/4/2026
Estimated Departure Date:	7/5/2026
Estimated Research Start Date:	7/4/2026
Estimated Research End Date:	7/5/2026
Explanation of multiple entries:	N/A
Research will be performed:	Within 12 M, Between 12-200 M
Extent to which Greenland will be enabled to participate or to be represented in the research project:	Denmark Strait to the wild shores of Eastern Greenland: the coastal state is welcome to observe or participate in sampling activities whenever feasible and may request access to environmental data or preserved samples. I will provide updates, station information, and a preliminary report, and will accommodate any additional representation the coastal state requests within logistical limits.
Name, affiliation and contact information for all participants from Greenland:	N/A

7. Port Calls

7.1 List of Port Calls				
Port	Arrival Date	End Date	Special Logistical Requirements	Shipping Agent
Reykjavik	6/30/2026	7/9/2026	None	Lindblad Expeditions / National Geographic port agent (Reykjavík)

8. Participation of the representative of the coastal State

8.1 Modalities of the participation of the representative of the coastal State in the research project:
See Section 6.2
8.2 Proposed dates and ports for embarkation/disembarkation:
See Section 6.2

9. Access to Data, Samples and Research Results

9.1 Expected dates of submission to coastal State of preliminary report, which should include the expected dates of submission of the data and research results:
No more than 3 months from the end date of the research as provided in Section 6.1.
9.2 Anticipated dates of submission to the coastal State of the final report:
No more than 2 years from the end date of the research as provided in Section 6.1.
9.3 Proposed means for access by coastal State to data (including format) and samples:
Data will be provided through official channels at no cost to the coastal State(s). Samples will be provided upon request.
9.4 Proposed means to provide coastal State with assessment of data, samples and research results:
Assessment of data, samples and research results will be provided at no cost to the coastal State(s).
9.5 Proposed means to provide assistance in assessment or interpretation of data, samples and research results:
Assistance in further assessment or interpretation will be provided upon request.
9.6 Proposed means of making results internationally available:
I will make all results derived from this work internationally available through peer-reviewed scientific publications, presentations at international conferences, and data sharing upon request. A preliminary report will be submitted within 30 days of cruise completion in accordance with MSR requirements. Processed environmental data (e.g., metadata, environmental parameters, and non-sensitive plankton community summaries) will be provided to the coastal state authorities upon request at no cost. Any preserved samples or derived materials from Icelandic waters will be made available for examination by the coastal state, consistent with applicable regulations. In addition, I will maintain open communication with participating institutions and provide written summaries or datasets to collaborating partners as needed to ensure broad access to the scientific results.

10. List of Supporting Documentation

10.1 List of attachments, such as additional forms required by the coastal State, etc.:			
Attachment Type	Description	Attachment	Submission Date
Supplemental Material	Letter of Support	Letter of Support - Corradino.pdf	12/30/2025 4:27 PM
Proposed Cruise Track	Proposed cruise track	Proposed Cruise Track.docx	12/30/2025 4:28 PM

Executed: 1/5/2026 5:13:41 PM (Coordinated Universal Time)