

Irish Scoresby Sound Expedition July-August 2022



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1. Introduction :

The planning for this expedition started 5 years ago. The essence was a low budget, independent sailing expedition to Scoresby sound in East Greenland from Ireland and back in one season. Arrival by sailing yacht ensures that the impact on the environment is minimal and the yacht would serve as a floating platform for adventures within Scoresby sound.

The expedition took place from 28th June to the 31st August 2022.

This report will give an insight into the expedition planning and logistics, the crew and boat preparation and how we organized ourselves during our time in Greenland.

2. Objectives:

The primary objectives were:

Sail from Ireland to Scoresby sound and around Milne land

Explore unclimbed coastal mountains and cliffs at Milne and Renland for climbing possibilities.

Do water assessment for microplastics at each location visited

Surveying of each anchorage visited

Adhere to a Minimal Environmental Impact and the policies specified in the Polar Yacht Guide (<https://rccpf.org.uk/pilots/187/Polar-Yacht-Guide>).

3. Team Members



Peter Owens: Expedition leader, skipper, climber.

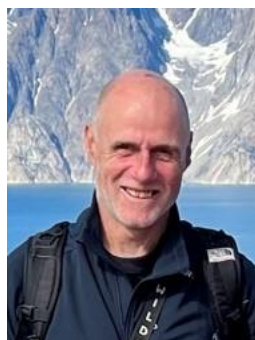
SCIENTIST AND LIGHT MICROSCOPY SPECIALIST AT UNIVERSITY OF GALWAY
SKILLS: SAILING, MOUNTAINEERING AND SKI MOUNTAINEERING, KAYAKING, YACHT MECHANICS. 30 YEARS PLUS SAILING AND MOUNTAINEERING. 4 TRANSATLANTIC PASSAGES, LEADER OF SAILING MOUNTAINEERING VOYAGE TO LOFOTEN IN ARCTIC NORWAY,



Richard Darley: Co-skipper, Sailor 60 YEARS OF SAILING INCLUDING PROFESSIONAL SKIPPERING, RACING, CRUISING AND WITH TRANS-OCEAN EXPERIENCE.



Paddy Griffin, Sailor. BOATING OFFICER WITH BRITISH ANTARCTIC SURVEY IN ROTHERA RESEARCH STATION, ADELAIDE ISLAND ON THE ANTARCTIC PENINSULA. SKILLS: HYDROGRAPHIC SURVEYING, SURVEY BOAT SKIPPEER, SAILING, KAYAK AND POWERBOAT INSTRUCTOR. SAILED TO ANTARCTICA FROM FALKLANDS IN 2018 AND IN PATAGONIA 2019. CREWED FOR THE ROUND IRELAND SAIL RACE IN 2018. DIVEMASTER.



Paul Murphy: Sailor, Kayaker PROFESSIONAL ECOLOGIST. SKILLS: KAYAKING, ROCK-CLIMBING, MOUNTAINEERING, ALPINE AND SKI MOUNTAINEERING, SCUBA DIVING, SAILING. RECENT SEA KAYAKING EXPEDITION TO SOUTH GEORGIA



Sean Marnane: Climber SEÁN IS A PASSIONATE ROCK CLIMBER WITH OVER 20 YEARS OF CLIMBING EXPERIENCE. HE'S SPORT CLIMBED UP TO 8A, BOULDERED 7C AND ONSIGHTED E5 IN TRADITIONAL STYLE. HE'S TRAVELED EXTENSIVELY THROUGHOUT EUROPE, CANADA, LOFOTEN, NORWAY (ARCTIC CIRCLE) AND THE GRAMPIANS, AUSTRALIA.



Richard Church: Sailor RICHARD IS A CLIMBER AND SAILOR WHO WAS KEEN TO GET MILES FOR HIS YACMASTER QUALIFICATION.

4. Planning and Logistics.

Peter Owens conceived and drew up the original planning documents and decided on the location. Scoresby sound was chosen as it provided an interesting sailing challenge and also provided many opportunities for unclimbed mountains and cliffs.

At this planning stage Owens consulted with many sailors and climbers who have travelled to the region. This yielded much information about the region and provided details on the area which are just not possible to obtain from searching the internet alone.

Richard Darley was first to be directly involved, coming in as the role of co-skipper. The inaugural expedition meeting was held 1 year prior to the expedition and over the course of 3 months the final crew were chosen and financial commitment was given by each member. There was plenty of scope for the expedition members to refine the objectives and bring their own suggestions. Group meetings were a mix of in person for the local team and zoom for those calling in remotely.

A date for the expedition departure was chosen and various jobs were identified and assigned.

We planned to sail direct from the west of Ireland to Iceland and then on to Scoresby sound from either Isafjordur or Husavik on the north coast. The boat was fully stocked, victualled and prepared in Ireland prior to departure. Many changes were implemented on the boat for this expedition, new solar panels, new oversized anchor, new deck fittings and upgrade of hatches. All food supplies were purchased in Kilrush, with enough supplies for 5 people for 3 months giving us extra contingency.

A rifle and ammunition was arranged to be picked up in Ittoqortoormiit, from Nanu travel for the duration of the expedition. Firearms are highly restricted in Ireland and hence it was deemed to be much easier to arrange in Greenland. However, in retrospect the expedition should have arranged to sail with a licensed firearm from Ireland as it was a considerable detour to Ittoqortoormiit which was costly in time and fuel.

Climbing gear was sourced directly from Sean Marnane and Peter Owens equipment with the exception of 2 x 60m ropes.

Due to the space restrictions on the yacht, Two folding kayaks were procured from a Ukranian supplier via a UK distributor.

It was invaluable to have a UK based expedition member to facilitate many items for the boat that came via the UK.

5. Communications:

On board were 5 vhf handheld radios, 1 fixed ship vhf with dsc calling, a chart plotter and a satellite phone , with dedicated ship antenna. We carried a second satellite phone for redundancy.

The expedition purchased a subscription for email with Seatech systems and a 2 month subscription to Predict wind. It was possible to use email and download weather onboard. It was imperative that we had ice charts available when we were in Greenland and through Richard Darley we were lucky to find David Lovejoy was happy to send us daily cropped small images and a weather synopsis by email. This was very useful as it is not possible to get ice charts through Predict wind. Unexpectedly, there was mobile phone coverage in Ittoqortoormiit, available on one of the team members phone.

6. Maps and Charts:

The expedition purchased new charts for Iceland waters, the portion of east Greenland and cmap digital chart coverage for Iceland and Greenland. Charts were from the Icelandic and Danish hydrographic office. We also carried sailing directions, the Arctic and Northern waters guide and Greenland waters by Mike Henderson and Helen Gould.

7. Permissions:

The expedition planned to stay out of the national park and thus no permit was necessary. Icelandic customs and immigration was cleared on entry and exit and the expedition joined the Greenpos system for the passage from Iceland to Scoresby sound. For this system we had to report 6 hourly position reports and ice conditions. This ceased when we arrived in Greenland coastal waters and for the entire time were in Greenland.

8. Insurance:

The yacht was insured by Pantaenius Germany. We also had Pantaenius personal accident cover for each crew member and search and rescue cover for each person, bought through GEOS <https://www.iercc.com/en-US/>. Many insurance companies would not insure for Greenland or else be prohibitively expensive. The GEOS costs were very reasonable but we were fully aware that this cover did not extend to rescue for climbing and that we had to be fully self reliant.

9. The yacht



Danú of Galway , Husavik , North Iceland prior to departure

The yacht is a Bruce Roberts 43ft ketch rig steel construction. The boat has a comfortable dog house and can accommodate 5 reasonably.

Fuel and water

We carried 300L of diesel in the main tank and 100 L of extra fuel on deck. We carried 300L water in the main tank and a 40L of cans on deck.

Food and Cooking

All food was purchased from a range of supermarkets (aldi, lidl etc) in Kilrush prior to departure. We carried three large orange propane cylinders, we used 2 over the two months expedition duration.

Other yacht prep

Danu was fitted with two new solar panels , 230W to add to the existing charging setup. An external sat phone antenna was installed and one of the main deck hatches replaced.

Anchoring and mooring

A second hand oversized Mantus anchor was purchased specifically for the expedition. We carried 100 m chain, often used as the anchorages were deep.

Ice navigation

We carried two ice poles , made from an old aluminium head sail foil with sharpened barbs cut for purchase in the ice.

The ships radar was invaluable for approaching and leaving east greenland coastal fog .

Shoreside operations

We carried 2 blue expedition barrels which were to be used for on shore backup but in the end they were used to carry gear on way up to Greenland and store general refuse throughout the expedition. For this they proved very useful.

For bear protection , we hired a rifle and ammunition in Ittoqortoormiit, through Nanu travel.

We carried two dinghy's , one as a backup stowed on deck.

We would carry a rifle onshore at all times but we never saw any polar bears. Having one firearm meant that the climbers would be shepherded part of the way and then they were on their own . The shore party returning to the dinghy would keep the rifle as this posed the greatest risk.

We utilised two folding kayaks, enabling us to get to areas not possible by the yacht.

10. Microplastics sampling

Each day throughout the voyage we took 2L water samples on board and passed this through a filter paper under vacuum. The particulate matter remained on the filter paper, each one folded carefully and stored in a small ziplock bag.

Each bag was labelled and this corresponded to an entry in the survey lab book. This entry would contain the gps position and conditions at the time of taking the sample.

At the end of the expedition we returned the samples and the lab book back to our collaborators , Dr Quentin Crowley and team of the Trinity Centre for the Environment.

(<https://www.tcd.ie/environment/>)

11. Anchorage Surveying equipment

We used a very effective device for recording position versus depth data that could be either placed on a kayak or on a dinghy. The device used was

https://deepersonar.com/us/en_us/products/deeper-smart-sonar-pro

Richard Darley was responsible for the surveying of each anchorage that we sailed to . This information will be used to provide accurate chartlet information for upcoming versions of arctic sailing directions.

12. Daily Diary

30/6 depart Kilrush, Paddy Griffin, Richard Darley, Peter Owens on board. Round Loop head motor sailing. First sample for microplastics testing.

1st July nice sailing full sail

2nd July wind becomes NW, clawing our way northwards

3rd July getting close to Rockall bank, dreary weather, wind increasing and sea state rougher, 3 reefs in main

4th July wind increases F6-7. Running under mizen and headsail, main stowed.

5th July wind backs to SW, making good speed to east Iceland . Getting colder cabin temp 10degreesC

6th July momentarily and strong wind shift catches us off guard, a flailing sheet punches a hole in the port side doghouse window. Made repair with duct tape, patches of old sail cloth and mastic.

7th July heavy conditions approaching Iceland SW gale running behind us. A big wave crashes over aft deck soaking paddy and ripping off a solar panel. Panel was still attached to one cable so shipped on board and made fast. Wind doesn't let up (42kts+) until our approach to Djupivodur.

8th-9th July got a gift of a sheet of Perspex so we could repair the window and transmission needed work, needed 3 dives to see what was going on with prop.

10th July depart Djupivodur , sailed northwards along east coast to Bakkegeroi.

11th July depart Bakkegeroi, foggy conditions off north coast. Worrying sounds from engine. We have a good sail off Laganes headline in complete fog.

12th July wind increasing from NE to 35kts. Arrive Husavik midday in low cloud, heavy rain. Paul Murphy arrives.

13-14th July lots of repairs on Danú. Solar panel repaired, rat lines fixed, general prep for Greenland . Met other sailors there planning to go to Scoresby. Husavik turns out to be a great place to depart for east Greenland.

15th July depart for Isafjordur but have engine problems a few miles out in the bay. Cuts out repeatedly. We return to Husavik and spend a few days sorting this out. New alternator and fuel filter element added., all fuel lines rebuilt. Sean Marnane arrives on board so we have the full crew.

16th to 20th July weather and ice conditions are not right for departing for Greenland so we keep on with boat prep and also take a day off to see the famous Icelandic waterfalls and geysers.

21st July depart Husavik , humpback whales spotted in glassy seas. Tie up at Sigulfjordur.

22nd July depart for Greenland . Extra fuel and water shipped on board along with fresh provisions obtained at Sigulfjordur. Cross the Arctic circle at 3pm.

23rd July sailing in moderate SW breeze, flat seas. Visibility getting worse, temperature decreasing rapidly.

24th July we see our first icebergs through dense fog, radar on. We help French boat Northabout to navigate in the fog as their radar is not working. They fall in close behind us as we motor west wards.

We make a wpt for Turner Sund on the Blossville coast as we believe it is ice free. Current thinking is Scoresby is not. We see land at mid-day and sail direct to Turner Sund where we anchor off a hot spring. Windlass fails and chain has to be hauled out manually.

25th July motor north to Turner sund , very nice anchorage. A promising ice chart shows Scoresby now partially open so we make a jump for Cap Brewster departing Turner Sund at 9.30pm.

26th July sail through a multitude of bergs floes and growlers to Ittoqortoormiit. We pick up the rifle, refill with diesel and depart there are 6.30pm.

27th July wall of ice encountered in Scoresby sound at 3am – no way through this so we turn north and sail along its edge. We anchor in remote spot off the south coast of Jameson land.

28th July we spend the whole day motoring to the south side of the sound and back but no way through the ice. We return to anchorage of Jameson land. Wind increases and anchorage becoming untenable.

29th July we depart early and give the north passage another go and to our surprise we have clear seas. We are now in open water in the middle of Hall Bredning. We sail to anchorage of Jyttes Havn navigating between Milne land and the Bear islands.

30th -1st July we recce the east side of Milne land for climbing routes and find a promising line. The next day we return and give it a go. A scary loose traverse leads to a belay on teetering blocks, very dangerous so we retreat. Takes 40 min to dinghy out from Jttes havn to the landing spot on Milne land.

2nd August rainy morning. We depart for Pinnacle pool, another anchorage in the Bear islands.

3rd August depart bear island and sail to Skillebugt on south coast of Renland. Surveyed the depths before committing to the anchorage.

4th August exploration of the area around the anchorage for climbing possibilities. We eventually settle on the wall up and right of the anchorage. Fill water tanks from stream close by.

5th August : Peter Owens and Sean Marnane Spend the day on 'Skillebugt Wall', E2 5c, 9 pitches. Long day, route finished on a flat ledge on a narrow rib. We made us of the midnight sun to keep going to 2 am. Descent was via the rib and abseil. Richard and Paddy survey the anchorage and Paul explores the upper reaches of the bay by kayak.

6th August weather breaks and we depart for Jyttes Havn

7th August early start and sail down Ofjord and then up into Rypefjord to see the Eilson glacier. We almost run aground in a shoal patch. We sail back into the main fjord and up into anchorage at Ternevigerne, a very sheltered spot in 6m.

8th August rain all day so we stay put – cold and snow level low down.

9th August a sunny morning we sail down Rode fjord and anchor in bay off southwest Milne land, close to the summit of Hermelintop.

10th August Peter and Sean bring climbing gear for an exploratory visit to the south face of Hermelintop. The approach is longer than they think. They start up a loose gully on the left side. A massive chockstone at mid height was turned on the left. This continues almost to the top, the final

summit being an easy scramble. There is a substantial summit cairn, wonderful 360degree views from there.

11th August Poor visibility in light rain, we depart and sail along the south coast of Milne land. New weather forecast gives a few days window to get back to Iceland so we decide to make a direct route back to Ittoqortoormiit.

12th August Arrive Ittoqortoormiit at 9.30 am. More diesel taken on, some fresh food supplies and the crew have showers which are available at the community centre – much appreciated. We give back the rifle and have a chat with Mette, the owner of Nanu travel. We leave at 2000 hrs bound for Isafjordur.

13th August Fog banks roll in and out. Lasts glimpses of Rasmussen land as we leave east Greenland coast.

14th August steady progress towards Iceland. When close to the coast, mobile coverage is obtained and phones are hopping! Arrive Isafjordur 9pm.

15th –20th August . Peter and Paul Spend a day walking the ridge on west side of Isafjordur. Turns out to be some interesting via ferrata type sections, a fine day out. Weather glorious. Sean and Paddy leave for return flights to Ireland. Paul departs a day later. Major engine transmission problem with worn coupling and broken keyway. A hoist is sourced on loan along with a bearing puller. Engine is lifted and the coupling is removed and brought to a machine shop for rebuilding . A solution for getting us home is found. Richard Church arrives.

21st August Depart Isafjordur bound for Ireland. On board Peter Owens Richard Darley and Richard Church. Light airs, motor sailing

22nd August rain and freshening wind, nice sailing.

23rd August sailing in light winds

24th August Gloomy morning, gusts to 30kts.

25th August motoring then sailing again with full sail, visited by a big pod of pilot whales who swim with us for hours.

26th August Light airs, engine on and off.

27th August motor sailing, autohem fails so we switch to the backup.

28th August making for Slyne head wpt , close reaching . Wind then on nose so we cant sail.

29th August Motor sailing with full main, slow progress into wind.

30th August glorious weather with light winds coming from exactly where we want to go. We divert to Inishboffin as its a closer landfall, arriving there at 1500. We celebrate ashore.

31st August Depart for Killronan , Inishmore Aran islands.

1st September depart Aran islands and sail to Parkmore Kinvara, our home port. Arrive home to great welcome from family and friends.

13. Finances :

Awarded £5000 from Gino Watkins fund and Arctic club.

Awarded £3000 from the Ocean cruising club.

Awarded €700 from Mountaineering Ireland.

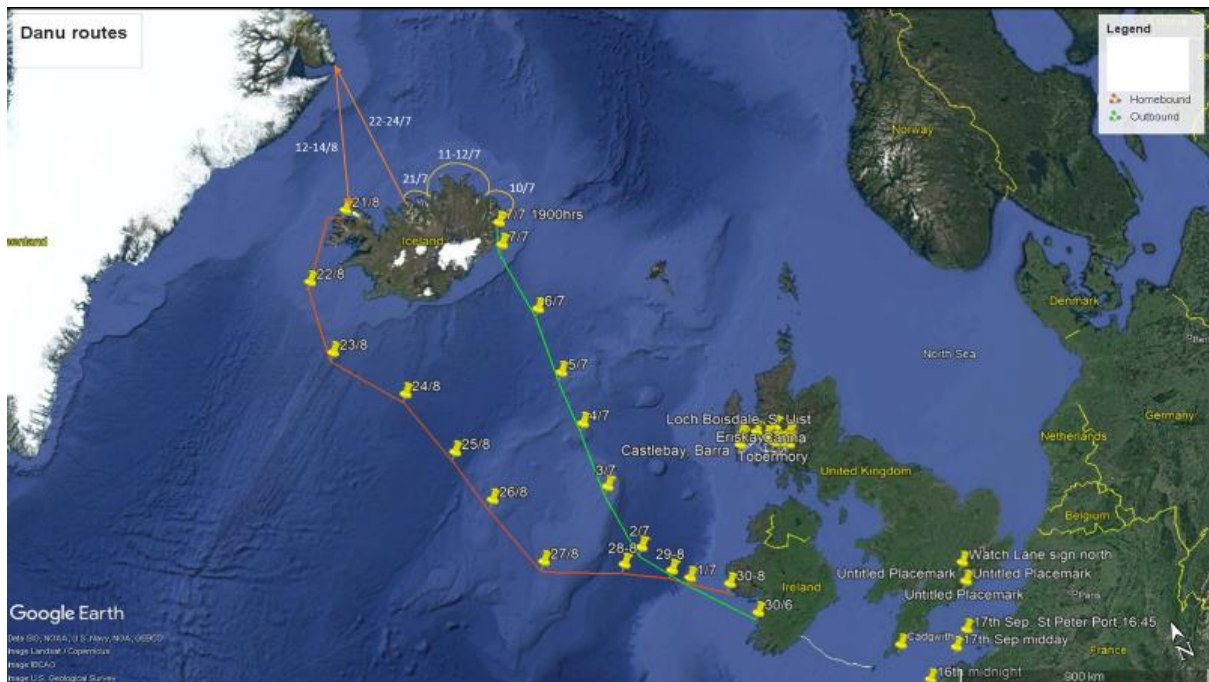
Each expedition member contributed €3000.

An expedition Revolut account was created to take care of all expedition transactions – this made it very easy to transfer monies in or out.

The award monies and team contributions were spent covering the boat fitout, expedition equipment, provisioning, fuel.

14. Summary:

We are pleased to report on our sailing–climbing expedition to Scoresby sound this summer, 2022. This was the culmination of many years of planning and organisation. For most of the expedition members, including the expedition leader and yacht skipper, it was their first time to Arctic waters. The boat was well prepared with an emphasis on backups in case of gear failure. Team morale was good at all times on board which is commendable for all involved. Scoresby sound was a marvellous location to visit. The sheer scale of the place was mind boggling with huge mountains rising up from sea level. It is a long way in from Cap Brewster, taking days to reach the interior, care must be taken in estimating fuel requirements. Once close to Renland and Milne land, you are in a pristine mountainous environment, a special part of the world. While the rock quality was poor on east Milne land we did find better routes from Skillebugt, so hopefully this report may inspire others to climb there. Also of scientific interest was our geolocated surveys of each anchorage visited and our analysis for microplastics at daily intervals along the sailing route taken and within Scoresby sound.

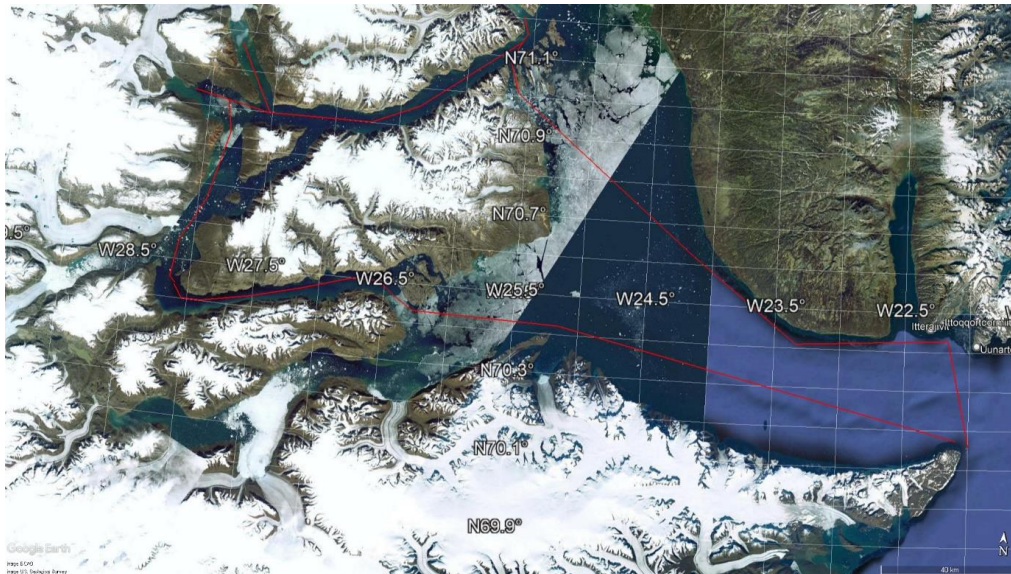


Green line : track and daily positions for outbound journey

Red line : track and daily positions for return journey



The Greenland team in Sigulfjordur , Iceland prior to departure for Scoresby



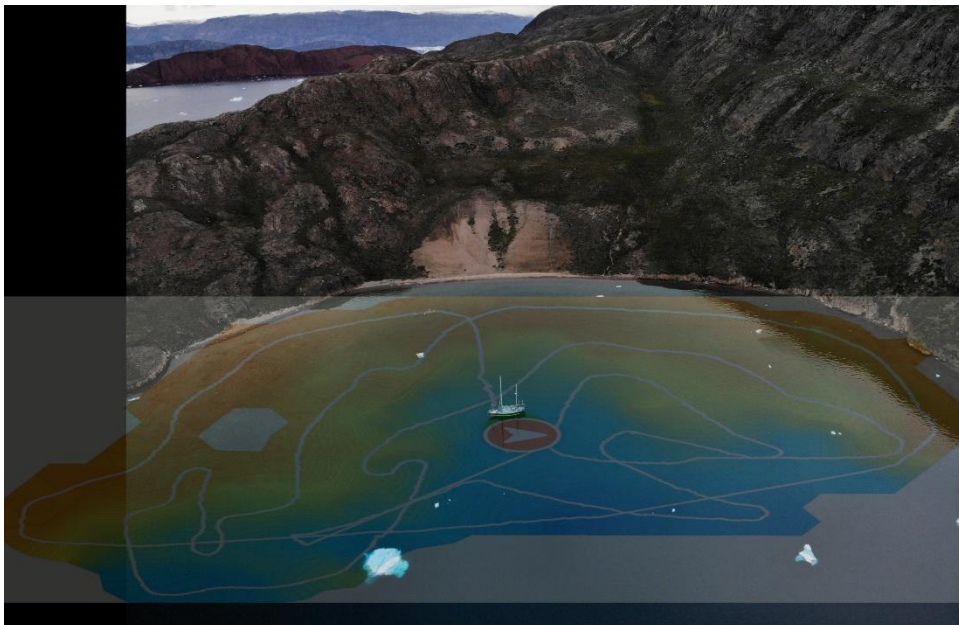
Our track marked in red while in Scoresby sound



Sampling for Microplastics at sea would take two people .



The first route tried on the east side of Milne land took the rib leading from the right to a hanging corner. This turned out to be loose and dangerous.



Example survey image overlaid with drone shot shows we were in the deepest section of the bay. We surveyed all the anchorages that we visited.



Flora in Scoresby



Fauna in Scoresby



Anchorage in Skillebugt



View to the glacier from high on Skillebugt wall



View up into south flowing glacier to the left of where we climbed – plenty of new route potential in this valley



Skillebugt wall



Closer view of Skillebugt wall , showing the complexity of the terrain



View from Pitch 5



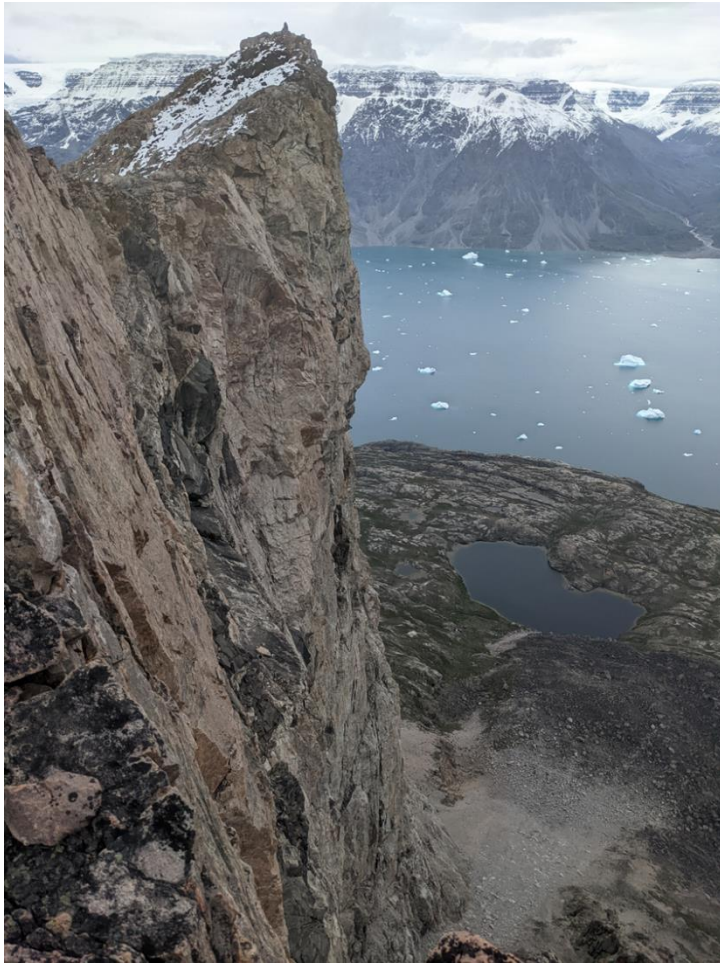
Rib we descended.



Sean Marnane high up on Skillebugt wall



On the descent , with the midnight sun .



The big north face of Hermelintop.