My father and the Conrad Holmboe expedition to Greenland in summer 1923.

On a bright spring Sunday in 1953 when I was home from boarding school my father and I were walking along the harbor front in Stockholm. To our right was the Royal Palace, to our left the Grand Hotel, and straight ahead on Skeppsholmen, an island in the harbor, the full-rigged steel ship *af Chapman*, a vessel I later learned he had sailed on twice. But then he said something curious, that he had been on an expedition to Greenland in summer 1923 – 30 years earlier. Curious, because it came as a complete surprise. I had always seen my father dressed in a dark business suit with matching coat, vest, and pants, ironed white shirt, and the crooked tie my mother liked to straighten out, not as someone who had experienced the rough and tumble of life at sea. To me he was a complete loss around the house, he might be able to replace a light bulb, but prepare a meal or use a screwdriver, forget it. Mother did all the driving the few years we had a car.

The objective of the expedition was to relieve the men at a weather station Norway had established at 74°N on the east coast of Greenland the year before. It was the most recent of several stations that Norway had established to improve weather coverage around the Greenland and Norwegian Seas, the others being on Jan Mayen, Svalbard and Bear Island. It wouldn't surprise me if the Bergen school on frontal dynamics had some influence on the development of these plans. My father had spent a year in Bergen several years earlier so perhaps he wanted to be part of the action – he was a guest meteorologist onboard.

I don't recall his exact words that spring Sunday, but he mentioned that the expedition did not go well, they were not able to reach the men on Greenland due to the crushing ice that summer. As I read in the book Grønland (more about this later), they had a very difficult time battling the ice and for quite a while they had to store their gear on an ice floe for fear of the ship suddenly being crushed. You might think this would put an end to an impractical young man's sea going, but he evidently had an adventurous mind for the following summer he joined the *af Chapman* (the cadet ship of the Royal Swedish Navy) as a meteorologist on its cruise around the British Isles and in summer 1925 when they sailed to Portugal and Madeira. I'm sure I asked him some questions about the expedition, but my lasting impression seems to be that he didn't want to talk about it, and I don't recall learning anything more.

Fast forward to 2018 when I was visiting the Meteorological Institute at Stockholm University. One day my colleague Prof. Peter Lundberg gave me a photocopy of a chapter from a book titled 'Grønland' by the Norwegian polar Explorer Gunnar Isachsen, published in 1925. The chapter titled 'Conrad Holmboe's drift in the Greenland ice 1923. A first account' describes in considerable detail the July 19 to October 11 voyage from Tromsø, Norway to Isafjord, Iceland. It is possible I saw the book in father's library, but he never mentioned anything about it. He wouldn't have, looking back I am struck by how rarely if ever he would reminisce about the past. I know next to nothing about his childhood, upbringing or life in a city apartment with three brothers and a baby sister by the time he graduated from high school. My Swedish cousins know just as little about

their parents. Perhaps that was typical of earlier generations, and perhaps, as a teenager I wasn't very curious about his early life.

The chapter starts with an excellent 3-page summary that gives the reader a good idea of what they hoped to achieve and had to endure for the two months they were stuck in the ice. In the best sense of the word it is a chilling story. This is followed by Isachsen's diary, describing in considerable detail the reasons for the expedition, their stop at Jan Mayen Island and their two-month ordeal coping with the ice as they drifted south. More recently I found an excellent account of the scientific activities onboard the expedition written by Tor Kvinge (1963).
https://folk.uib.no/ngfso/Norskehavet/historical/KvingeT63.pdf It includes a tabulation of all weather and oceanographic data collected during the expedition.

I'd like to acknowledge Mr. Ivar Stokkeland, chief librarian at the Norwegian Polar Institute in Tromsø. He provided me with scanned copies of the diary photographs. The diary mentions that my father made film recordings of polar bears, and no doubt of other activities on board. Mr. Stokkeland found a note in the Norwegian daily *Aftenposten* that my father reported on the expedition only a month later in Tromsø. He also showed his movies. Mr. Stokkeland and I have searched in all libraries and national archives across Norway and Sweden for those films, but without luck. (I'm tempted to say this was typical of my father, he was not one to keep stuff lying around, perhaps reflecting his somewhat restless style.) Mr. Stokkeland also helped me with words and phrases I could not find in the dictionaries. Having said that I take full responsibility for any errors of translation. Photos courtesy the Norwegian Polar Institute, Tromsø, Norway. I encourage you to visit: https://bildearkiv.npolar.no/fotoweb and search for Conrad Holmboe.

Reference: Isachsen, Gunnar, 1925. Grønland og Grønlandsisen. J. W. Cappelens Forlag, Oslo, 248 pages.

Conrad Holmboe's drift in the Greenland Ice 1923
A first account
(Translated from the Norwegian by T. Rossby)

Seydisfjord, 17 October

The expedition with the motorboat "Conrad Holmboe" was sent out by the Geofysiske Institutt in Tromsø. The chief scientist of the expedition was the director of the weather forecasting office in Tromsø, Mr. Edlund.

After having dropped off oceanographer Mosby and three men to relieve the radio operators on Jan Mayen, and who later returned home on another vessel, we went at the end of July north and west along 74°N. Onboard besides the crew were four hunters and a radio operator to relieve captain Johan Olsen and his six men at our radio station at Myggbukta on the East Greenland coast at 73½ °N. In addition, the Swedish

meteorologist Rossby and I were invited to take part in the expedition. All in all we were 16 men onboard.

Last year the polar current transported little ice, this year much more due to easterly winds all summer which pushed toward land a band of ice around 80 km wide at 74°N with virtually no opening toward the coast.

On August 2 we became trapped at 74 ¼ °N and drifted hither and dither southward in the ice at various rates for more than two months. In the beginning the drift was fairly steady without ice pressure. But on the 28th of August the sun and the quiet disappeared. Gales broke up the new ice and big floes pressed together and huge ridges of ice towered around us. The floes fractured, the boat was thrusted up, at turns at the bow and the stern. At times the squeezing got quite violent. The deck load with supplies for housing on Greenland had to be jettisoned to lighten the vessel. Equipment, provisions and whaleboats were offloaded onto the ice.

On the 7th of September the weather service in Bergen telegraphed via Jan Mayen that there was danger for a sudden storm in the afternoon. It came the following day, the 8th. The intense ice pressure led to serious leakage both fore and aft of the hull. The fate of the ship seemed decided.

While we were busy throwing everything on the ice, a lead opened up between the floes. Even though the rudder handle was broken we hastened over to another floe some hundred meters away. The five men who didn't make it onboard from the floe where we had our things, worked to bring everything together as this floe broke into several pieces shortly after we left them. They were later brought onboard.

The storm increased during the pitch-dark night and the sleet didn't leave a dry thread on our frozen bodies. We had to secure ourselves to the new floe, but the storm and ice pressure kept ripping the lines. Broken and uneven ice, floes and high ridges made for a witch dance around us. The pumps were at it nonstop.

Even though the boat survived the rage during the night, it was with apprehension we faced the next day. Where was the floe with our gear, provisions and the three dories? For a brief moment Sunday morning we sighted land. We were in the middle of Davy Sound at 71°47'N and our supply floe had been kind enough to keep itself at an easy distance. Pumps were constantly at work and any free hands were busy straightening out the mess. A line caught in the propeller was also removed.

We continued drifting south along the Liverpool coast about 5 nautical miles (NM) from land. Even if we had wanted to it would have been hazardous to reach land in the boats through the new ice and the meter thick soup between the floes.

The thrusting and ridging continued at all hours of the day.

On September 30 we were only 1 NM from land, Cape Swainson on the north side of Scoresby Sound, but a northwest gale put us the next day in the middle of the fjord entrance. If the vessel had been wrecked on land during the night would have meant safe survival but stuck for the winter. Firmly hoping that we could handle the rest meant that I readily took the risk of continuing to drift.

We danced willy-nilly with our floe southward. The drift went faster, but troubles of all kinds continued to follow us. Toward the end we drifted 30 NM per day. Our floe, which to begin with was one of the smaller ones, had now become one of the biggest. This far south the floes were broken up and had their sharp edges worn away. Big ridges piled up along the edges.

October 3 became a day to remember. In short time we tore down the big tent, Villa Liverpool we had erected on the floe, and brought everything onboard. We moved 15 NM that day about 6 NM km from ice edge. We then continued in frozen slurry ice until October 10. When the ice broke up we called the rescue ship 'Polarulv' by radio. It was evident and obvious that breaking through the ice edge where the heaving was substantial had to be done today. The hull got what it could take and when dusk came we were out in open water at 67½ °N and 25°W.

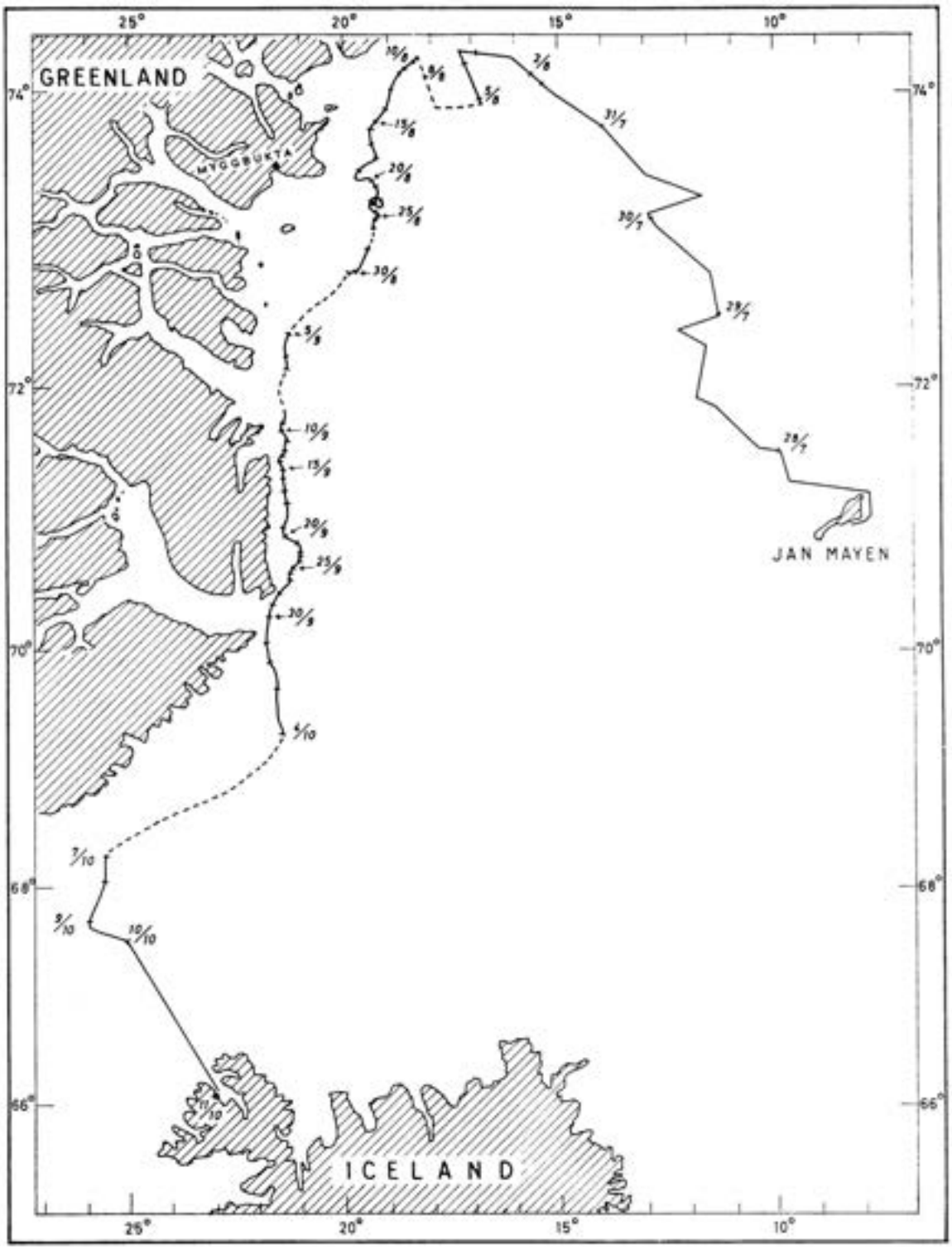
We were concerned about how well the ship would cope in the open sea and we found out. In the company of 'Polarulv' we set course for the nearest harbor, Isafjord, Iceland. Fast it went with a northerly wind and high seas. At 2 AM in the night the pump started acting up, but now and then it continued to assist. It was a heavy sea. The sails helped a bit, but the reefed mainsail had to be taken down as the gaffe broke off. On October 11 around midnight we anchored in Isafjord.

Since the end of August until now we haven't had a quiet moment. It has been a rare test of both nerves and muscles. In that sense we shall not complain for lack of boring times or lack of things to do.

The ship suffered serious damage. The outer hull (an extra protective layer of wood) is gone, and main keel is broken in two places. There are also serious leaks. The hull planks have been pushed in and out and several frames are probably broken. The hull sounded like a squeaky organ in the seas. That the 'Conrad Holmboe' now beached in Isafjord says something about what a ship can take and what people can accomplish when they fight for their lives.

The 7 men in Myggbukta left with their boat 'Anni' on their way home before we drifted by their place. They were on our minds all the time, constantly looking for them as well as the Danish boat 'Teddy', which still hasn't turned back from the Greenland ice. If we don't hear from the missing soon, we must hope that they got ashore and camp until next year. 'Polarulv' is now scanning ice edge from 64°N northward to Jan Mayen.

Gunnar Isachsen



Track of the Conrad Holmboe from Jan Mayen to Isafjord, Iceland (Kvinge, 1963). https://folk.uib.no/ngfso/Norskehavet/historical/KvingeT63.pdf

Diary Notes

The weather in the Norwegian Sea imposes itself on the lives and activities of our people. Not only on the west coast and in the north but also for us on this side of the mountains.

Forecasting is the practical side of the meteorologist's work. In earlier times it was limited by the lack of stations in the north and west of the Norwegian Sea, the 'blind corner' where the powerful storms broke out over our coast and so often took lives and properties.

To establish better forecasting it was therefore necessary that we in 1918 got a weather station on Bjørnøya, in 1920 a station at Quadehuk on Spitsbergen, in 1921 a station on Jan Mayen and in 1922 a station on the east coast of Greenland.

The Norwegian meteorological Institute in Oslo was established in 1866 and was for years the only meteorological institute in the country. In time several other more or less independent institutions spun up, and in 1920 these all went together to form a bureau with the Meteorological Institute in Oslo as its center.

Norway has 3 geophysical institutions:

I. The Norwegian Meteorological Institute in Oslo whose activities include inter alia climatology for the entire country and the weather service for the eastern sector (Swedish coast to Lindesnes). Serving as part of the institute there is the Meteorological observatory at Ås which besides meteorological studies also makes air-electrical measurements.

II. The Geophysical Institute in Bergen, established in 1917 with 2 departments:
A: Oceanography
B: Dynamical meteorology and forecasting for the west (Lindesnes to Leka). Bergen has operated a meteorological observatory since 1903.

III. The Geophysical Institute, Tromsø, established in 1918. Earth-magnetic studies and northern light (aurora borealis) studies as well as weather forecasting for northern Norway (Leka – Russian border).

1. This institute also includes the observatory at Haldde on Alta, established in 1912. It conducts earth- and air-magnetic, and meteorological studies, and of northern lights.
2. The geophysical station on Spitsbergen, Quadehuk, Kingsbay. Meteorological, aerological, earth-magnetic and air-electric and northern light studies. Station active during 1920-1924.
3. Station on Jan Mayen. Meteorological, earth-magnetic and ground temperature studies.
4. Station on Bjørnøya. Meteorological observations

5. Station at Myggbukta, east coast of Greenland. Meteorological measurements, 1922-1923.

The Greenland station was established in 1922 thanks to an arrangement between the geophysical institute in Tromsø and Captain Johan Olsen's hunting expedition which included a radio operator. The transmitter, a modern 0.5 kW vacuum tube transmitter used earlier by Tromsø to communicate with Jan Mayen, the receiver and antenna equipment were supplied by the Norwegian Navy. The mast was built from 4" and 3" water pipes. In addition to the regular equipment a Telefunken sparker with oscillator as reserve for the transmitter in case of failure of the vacuum tubes. Power was supplied by a 2-cylinder portable Marconi motor and as reserve a 5 hp Bolinder motor.

A shipment of vacuum tubes from Germany arrived too late that the limited reserves meant that they must use the least amount of power to reach Jan Mayen, around 300 W power.

At the end of July the hunting expedition with their vessel, the skutan 'Anni I' left Tromsø. The 'Anni-men' were 7:

Leader A. Olsen, Skulafjird in Tromsøysund
Radiooperator Helge listerud, Toten, from the navy
Engineer and hunter Alvin H. J. Olsen, Skulsfjord, brother to the leader
Cook and hunter Oskar Johansson, Halland, Sweden
Hunter Olaf Olsen, Målselv
Hunter Jakob B. Andreassen, Lenvik
Hunter Edvard K. Løkvik, Tromsøysund

The expedition vessel 'Anni I' was 33 gross and 12 reg tons, length 50.5, width 17.8 and draft 4.6 ft built at Skaervøy in 1913 and equipped with a 4-stoke Houmøllers gasoline engine.

Johan Olsen had bought the boat, and all the participants added their share. The expedition earnings from telegrams and observations were for the year 3500 NOK (Norwegian kronor). The radio operator had his part as the others with a minimum net income of 7000 NOK, guaranteed by the Geophysical Institute.

The expedition brought materials for two houses. One, the main station, they set up at Myggbukta, on the maps known as Mackenziebukta at 73°40'5"N and 21.5°W. The other house was erected about 30 km west by Cape Franklin. The expedition kept the vessel in order to return in summer 1923.

The expedition began to transmit weather reports Oct. 14, 1922 from Myggbukta via Jan Mayen and the connection was quite reliable. Because they had to lower the mast to 15 meters they couldn't hear the station in Tromsø, whereas the Greenland station could hear the station of the same type in Tromsø. The government's expenses for this station for the budget year 1922-1923 was about 24000 NOK.

The particular interest attached to this station was that with it gave much better information on weather conditions west of Jan Mayen. One could therefore anticipate cold outbreaks from Greenland and the development of new storm centers in the Greenland Sea. The weather reports were therefore of great use for weather and storm advisories both along the Norwegian coast and other countries because the reports from Myggbukta were included in the international weather reports from Kristiania radio.

Since everything spoke for keeping the Greenland station the (Norwegian) parliament granted 10000 NOK for the continued operation of the station for the period 1923-1924, now as before combined with a hunting expedition. To cover transportation expenses 15 000 NOK were granted.

Travel could now take place with the motorboat which the Geophysical Institute had just acquired for shipping between Tromsø and the various stations and scientific studies.

The parliament did not consider the March 1 proposal I had given the Geophysical commission. The proposal wanted to establish a cooperation between the Geophysical Institute and an expedition planned and led by me to conduct a topographic and geological investigation of a defined east Greenland area and also to conduct oceanographic and physical studies in those areas visited by the expedition. The plan also included the establishment of a radio station on east Greenland for I anticipated that it would have to be moved from Myggbukta to a spot better suited for meteorological observations and to be more accessible. If such a cooperation could be established between the Geophysical Institute, the proposed expedition could have managed with less government support while achieving better results.

The Geophysical Commission felt that given the challenging economic conditions that so many important scientific needs must endure the only way a government grant might be possible would be if other considerations besides scientific were included in the enterprise.

As a result my proposal was not accepted, but the government did allow me to join the 'Conrad Holmboe' the name given the Geophysical Institute's boat at the time of departure.

'Conrad Holmboe' (formerly 'Fredrikke') was of several of this type bought from the U.S.A. during the war years. It was known as 'Governor Russell' and was built in Essex, Massachusetts as a 'room-ribbed' (i.e., not ice-reinforced) flat top fishing vessel in 1892. At 132 gross and 56 reg tons it was 96.6 ft long, 35 ft wide and 10.4 ft deep. With its long sharp bow, greatest width far back and fine lines she had no doubt been an excellent sailor. In Norwegian ownership in 1917 the masts were

moved and given other dimensions. As well she was equipped with a small 2-cycle heavy oil 124 hp Bolinder motor that could be reversed.

The vessel was ice-reinforced protective iron in the bow and 1.5 inch 'ice skin' aft of mid-ship to just below the water line.

Departure from Tromsø was originally set to July 14 but the vessel was delayed by the return of two victims at the Quadehuk station, which had just been found, and because there still were a number of things to improve on the ship which the Geophysical Institute had just put into service. The ice at Myggbukta hadn't yet broken up, but were we to wait until it had it might have been a long wait. Shielded by Hudson Land the ice at Myggbukta is protected from breaking up and earlier expeditions had learned that it takes a long time for the summer heat to melt the ice in that bay.

Conrad Holmboe departs from Tromsø

The wait in Tromsø is long for the one keen to get to work. Nonetheless there was plenty to do. It is a hub for the coast all the way to Svalbard for hunters (esp. seals), for scientists and tourists traveling to arctic regions, and for Laplanders (Samis) from the interior. The many and varied impressions make it easy to be distracted in Tromsø, there is so much to see and hear, and the north men are easily distracted. All this means that things often take more time than anticipated.

Instead of the Russian merchantmen one used to see we mostly see refugees. Many of them stay on Russian vessels which now remained tied up for years at moloen. The vessels have been possessed for payment, but lack of documentation prevents

them from being sold. They have been there so long that the migratory birds view them as home. All summer they hang out in the masts and riggings.

Around now the English geologist Wordie and 6 young scientists left Tromsø. After a swing to Jan Mayen they were headed to Frans Josefs fjord in east Greenland. They had rented the motorboat 'Heimen' with Captin Jakobsen, the same person who had in 1921 had wintered on the Siberian coast looking for the missing Tessem and Knudsen.

After visiting Jan Mayen 'Heimen' took off for Frans Josefs fjord, but they never got there. They got stuck, but after several frantic situations they broke out and went to Iceland where Wordie pitched his work that summer.

Some day after us the motorboat 'Ornes' from Balsfjord took off for Greenland for a winter stay. The vessel didn't dare penetrate the dense ice and went to the north side of Svalbard for a winter stay.

The days went by and the sun reminded us we needed to get going. Sunday was the last day we could see the entire solar surface from the late Prestvannet above Tromsø.

All departures from Tromsø in summer seem like pleasure trips. People salute and wave for so long that a handkerchief can be seen. Finally we too could depart on July 19. In the evening we assembled at Botnhamna on Senja to get ready for departure.

The Greenland group to replace the Anni-men at Myggbukta were 5 men with Mikal Olsen from Ofoten in charge. Andreas Qvarnström from Dalarna joined him loyally this time too. He had done this since they were known as mineworkers at Store Norske (mine) on Spitsbergen several years ago. There was also Viljam and Johan Borg and the telegraph operator Naerup who also ran the radio onboard. The group's supplies and provisions cost about 14000 NOK. They were equipped by a Tromsø supplier who accounted for about a half, the other half was shared by Mikael Olsen and Qvarnström.

The group headed for Jan Mayen included the radio-operator Haugan as leader, radio-operator Johan Larson and Kvive Andersen as cook and handy man. They had provisions for 1 year. Andersen had last winter been at the Quadehuk station and earlier overwintered 8 times in Spitsbergen. I met him at Isfjorden in 1921. At that point he had rowed in a miserable little boat all the way from Sörkapp. In all he got only 12 polarbear skins. Permanent ice had not set in until February at Sørkapp. Andersen had injured his hand in a shooting accident. As the sore wouldn't heal he had in effect to remove his entire little finger with his knife.

The crew consisted of 7 men: Captain Johan Naess, mates Leif Jansen, Johannes Jensen, Søren Andreassen, cook Kristofer Kristofersen and the engineers Jakob

Kristiansen and Emil Ellefsen. The ice pilot was Jens Øien for whom this was his 15th Greenland trip.

In command was the Swedish licentiate J. O. Edlund, director of the weather service in Tromsø, and the oceanographer Olav Mosby who joined to assist with the oceanographic studies.

The guests onboard were the fil. kand. C. G. Rossby from Stockholm, earlier employed at the weather service in Bergen, and myself.

Meteorologist Carl-Gustaf Rossby, oceanographer Olav Mosby, and mate Johannes Jensen

In all onboard we were 19 men. Of four-legged creatures there were two retrievers, a black cat, the ox Apis and a baby pig to Jan Mayen.

In the morning of the 20th we took a station at 300 depth and early in the afternoon we crossed the edge of the shelf.

Between Malungen and Jan Mayen a hydrographic section with 8 casts was planned.

The fourth cast on the 22 July was halfway to Jan Mayen. In the heavy seas it took all of 9 hours.

Not all oceans have such defined borders as the Norwegian Sea: Norway, Shetland, the Faroes, Iceland, Greenland, Svalbard, Norway – all parts of the ancient Norway that Håkan Håkanson proclaimed as his sovereignty in 1261 – and all the way to the north pole. Of all these only Svalbard remains Norwegian, but we are so closely tied to the Norwegian Sea that all these lands will continue to be of Norwegian interest.

The bathymetry also gives the Norwegian Sea good definition. Were the water level 600-800 m lower a good portion of the Norwegian Sea be Norwegian soil.

The physics of the Norwegian Sea, its bathymetry and currents, its structure and temperature we now know well, perhaps better than any other sea. But given that the currents constantly vary, perhaps not as much in direction as in strength, we need to study these and the water properties and clarify their causes and effects. As our methods and instruments improve so will the results be better and the studies more comprehensive.

Not only the cold deep water but also the overlying surface waters of the Norwegian Sea have a uniform 34.9 ppt salinity. Due to the strong cooling of the water in this open part of the sea the cold water at depth is a rather uniform -1.3°C. Since the cold deep water in the Arctic has the same salinity as in the Norwegian Sea it seems probable that it is formed in the Norwegian Sea. However, given that the cold deep water in the Arctic at no depth is less than -0.9°C Nansen argues after extensive study that there must be a ridge between Svalbard and Greenland that prevents water colder than -0.9°C from entering the Arctic. The 'Nansen ridge' should lie at around 1500 m depth.

As our expedition was equipped by the Geophysical Institute in Tromsø with the director of their weather service in charge, it was obvious that the most important studies during the cruise should be meteorological and oceanographic.

The meteorological activity includes the regularly scheduled weather observations and other things of interest. The oceanographic studies included temperature readings from the sample bottles from various depths. These samples also served to determine the salinity, oxygen and alkalinity concentrations. From the surface to about 100 m samples were taken to determine plankton levels, the little organisms drifting in the water.

Isolated in the western Norwegian Sea lies Jan Mayen or just Jan as the hunters call it about 1000 km from Tromsø and Svalbard, and about 500 km from Iceland and 450 km from Greenland.

Jan was discovered or perhaps rediscovered in 1614 by the Dutch whaler Jan May. His mate Joris Carolus drew the first chart where Jan is clearly indicated.

After that until about 1650 Dutch whalers came every summer to set up the boilers on the northwest side of the island. To attend to the equipment 7 dutchmen overwintered in Hollenderbukta 1633-1634. They all died of scurvy and in the diary they left behind they wrote in simple and gripping terms about this first overwintering on Jan. After 1650 the Dutch no longer came every year and rarely after 1700.

Zorgdrager was ashore here in 1699, Scoresby the younger in 1817 and 1818, Lord Dufferin in 1856, Berna and Vogt in 1861 and the Norwegian Polar Expedition in 1877. The first detailed investigation of Jan was done by the Austrian expedition in 1882-1883 under the command of lieutenant von Wohlgemuth. The expedition was financed by Count Hans Wilczek, and Jan was one of that year's polar stations.

This because at a natural sciences meeting in Gratz a lieutenant Weyprecht suggested systematic studies in the polar regions. After many congresses and committees in various countries it was finally decided to conduct this work in 1882-1883 at 13 stations:

1. Point Barrow (71°N 159°W) under lieutenant Ray (USA)
2. Fort Rae (63°N 119°W) under captain Dawson (UK).
3. Cumberland Sound at Kingvafjord (67°N 68°W) under Dr Giese (Germany)
4. Fort Conger at Lady Franklin Bay (81°N 65°W). under lt. Greely (USA)
5. Godthaab in Greenland (64°N 51°41'W) under Adam Poulsen (Denmark)
6. Jan Mayen (71°N 8½°W) under lt. Wohlgemuth (Austria)
7. Spitsbergen at Kapp Thordsen (79°W 16°E) under N. Edholm (Sweden)
8. Bosekop in Finnmark (70°N 23°E) a Norwegian government exp. led by A. S. Steen
9. Kautokeino in Finnmark (59°N 23°E) under Sophus Tromholt.
10. Sodankylä in Finland (67°N 27°E) led by Lemström and Biese.
11. West coast of Novaja Zemlja (73°N 53°E) under lt. Andrejeff.
12. Also a Dutch expedition with ship 'Varna' would try to reach Dicksonhavn (73.5°N 81°E) but it got stick in the Kara Sea and was recovered by lt. Hovgaards Danish Dijmphnaekspedition.
13. Lastly, a Russian station was to be established at the Lena river mouth (73°N 124°E) under lt. Jürgens.

Besides these stations similar observations were made at several sites in Bering St and Labrador.

The Austrian station at Mary Muss Bay is still there although in quite bad shape. Other visits to Jan include Charles Rabot 1892, the Danish Ingolf expedition 1896, Nathorst 1899, the Danish east Greenland expedition led by Amdrup in 1900, 'Michael Sars' in 1902, Charcot 1902, 1912, 1913, the Count of Orleans 1909, Stackhouse expedition 1911 and the Danish survey ship 'Islands Falk" in 1919.

We sighted land on the morning of July 25. You'd think it would be easy to spot a 55 km long island like Jan with its high Beerenberg mountain which on a clear day can be spotted at 200 km. But the fog in the Norwegian Sea makes for challenging astronomical navigation and positions get uncertain due to the variable currents.

We anchored at Jameson Bay in 4 fathom water below the radio station. Since the Jan group was going ashore today the young folks had used the night well. It might well lead to a year before they could party again. Violence is not far away when Norwegian youth let loose. One is reminded that when a Dane hits the table, the Norwegian will split it apart. Let's be kind and take this as an indication of the enormous untapped forces of the Norwegian peoples.

Jan has no safe harbor so one must seek lee. Regardless, going ashore through the waves constantly crashing against rocky ledges, especially on the south side of the island. When landing it is essential to keep the boat headed straight and with good speed drive it onshore as far as possible. Then everyone out to haul it up. If you turn too late or if the boat leans over at the shore it will be flooded right away.

Tough guys stand ready to receive us on the shore, the telegraph operators Paulsen and Foldvik. Happy they were to see strangers for they had been here for over a year.

From the little shore to which we brought the supplies, all was hoisted up the ledge. Then by wheelbarrow and ported to the houses.

The station lies 21 m above sea level and consists of the station house, engine room for the two generators and a shed to track the pilot balloons. One problem here is the lack of water especially in snow-free frost times when the big but shallow ponds freeze to the bottom.

The station was built by engineer Ekerold in 1921, ready 17 September. The masts, over 40 m high, blew over in the storm 24 September, but from 19 October on the station has without interruption sent weather reports.

Ekerold's two boats, "Isfuglen" and "Polarfront" included an English expedition with 5 members including the botanist Chadworth-Musters, the geologist Wordie and prof, Mercanton from Lausanne, who August 9-11 was the first to climb Beerenberg, the highest mountain inside the Arctic circle excepting the peaks on Greenland.

From the observations made thus far the year's temperatures range between +10°C and -30°C.

The precipitation for 1922 was 367 mm rain and snow, The corresponding numbers for Kristiania (Oslo) and Bergen were 596 mm and 2181 mm. Precipitation was fairly uniform throughout the year 224 out of 365 days.

For the year 1922 the cloud coverage was 8.3 and not a single cloud-free day was observed.

According to the scheduled observations 4x/day the average wind speed was a bit over 7 m/s for the year. The observers mentioned that for 65 days the average windspeed was over 18 m/s. In February 1923 there were 5 days with an average windspeed of over 35 m/s with gusts up to 85 m/s. The peak of Beerenberg is often clear but it matters little as the island and its surroundings are often shrouded in fog which comes when warm and moist air from the Atlantic meets the colder waters around Jan.

The weather on Jan varies rapidly and is not inviting with its harsh snow and sandstorms. Nonetheless time flies fast for the station folks given the scheduled tasks all day and night. There is so much to attend to that the staff hardly has time for a few hours rest.

Isolated, and without important resources of any kind, Jan has for long times remained forlorn up there shrouded in fog. An occasional seal hunter has no doubt stopped by to clean up, but most are careful to keep a distance from the island. 'In stormy weather he is a nasty fellow to have a-lee.'

My father (left) and oceanographer Olav Mosby on a Jan Mayen beach

Jan Mayen is like Iceland of volcanic origin and has never been connected to any surrounding land. Its area is 413 km^2 and is thus more than twice as large as Bear Island.

The northeastern sector is taken up by the 2545 m high Beerensberg, an extinct volcano with a 1000 m wide crater and many others on its slopes. The cone is snow-covered and many glaciers spread out from its rim. Many of them reach the sea on the northern and eastern sides. Only on Beerenberg are there glaciers, nowhere else on Jan.

Beerenberg, which is twice as high as Vesuvius and reaches Galhøpiggens (Norway's highest mountain) height right out of the ocean is an impressive and unforgettable sight when the sun plays on its white and blue snow and ice cover with gray and black specks where the lava breaks through. It must have been an overwhelming sight when spewing fire!

The southern part of Jan has many minor craters with heights not exceeding 800 m. Edges and rests of craters are evident around the coast, such as Fyrtårnet, Losbåten and Finnkjerringa.

The middle part of the island with its small craters, lava and ash heaps is the lowest part. Eggøya, 183 m high, which perhaps earlier was an island, sends steam out through its cracks. It is the only volcanic activity on the island.

Southwest of Eggøya lies a 16 km long and 1 km wide sandy beach with the Sydlagun inside.

The Nordlagun on the northern side is 5 m above sea level is up to 36 m deep whereas the Sydlagun can some years dry out.

The sand beaches outside the lagoons are littered with driftwood, most of Siberian woods. Other objects that mess up fishing nets and blasting mats from the mines can be found.

The vegetation is sparse in the harsh soil.

Ever since the whalers stopped coming it has been quiet on Jan.

In the 1900s Norwegian hunters have overwintered to catch fox, the only animal. Polar bears show up only when the ice lies in close. Reindeer have been observed earlier on Jan. Often fox and occasionally reindeer will wander on the ice between the polar landmasses. In the 1890s the skipper Hans Johannesen from Tromsø shot reindeer from his boat in the ice between Spitsbergen and Jan.

Even if foxhunting on Jan isn't all that substantial it can still be profitable as the most common fox here is the valuable blue fox. The white fox which is more common elsewhere around the Arctic is found only rarely on Jan.

The foxes mate in February and get about 5-8 pups just before the common eider birds lay their eggs. It has been observed that blue and white foxes can mate and blue and white pups can be seen in the same batch.

Our hunters usually capture the foxes in traps, a loaded board with trip sticks underneath. The Russians on the other hand use a loaded gate which falls on some sharp sticks standing in a horseshoe arrangement. The fox is speared on these sticks.

Numerous seabirds hatch on Jan and it is easy to collect eggs in summer and fresh bird meat throughout much of the year. The men at the station do not shoot the birds but snare them with a snare on a rod.

The hunter lodges lie on the northwest side of the island where the hunters also use the Austrian station.

It took 2½ days until the evening of the 27 July to haul everything up to the station house while Qvarnström kept the singing going at the winch. Johan Olsen reported from Myggbukta that he would soon leave for home as the ice had drifted out of the bay.

Mosby, who had to be in Bergen by August 20 went ashore here. He and last year's station crew would head home with "Anni' or perhaps with 'Conrad Holmboe' when finished in Greenland

In a northerly gale we went northward on the east side of Jan which soon disappeard in the fog. The streak of ice we passed must have been visible from Jan.

In the 2 years the station has been in service ice has never been observed from the island which indeed for the last 10 years has been free of ice all year round. The Dutchmen who were here 1633-1634 had ice at the island all winter from 19 October to 27 April.

The Austrians in 1882 had to return to Tromsø because of the ice but were finally able to come ashore July 13 after waiting for an approach since 27 June.

Drift ice is made in the Arctic. During fall as the sun sinks the sea freezes more and more. The ice masses move with the winds and currents, break up and twist together. Openings and leads freeze up quickly. Again, the ice breaks up here and there and is thrusted together. The ice doesn't get more than 3-4 m thick, but the ice ridges can be many times higher.

Since the Arctic receives water from the continents and given little evaporation the water and ice will be pressed out through the openings to the Arctic.

The nearly 4000 m deep Arctic, which was discovered during the 1893-1896 Fram expedition has a roughly 200 m thick cold layer at the surface with lower salinity than underneath. It is from this light surface water that the polar ice is formed and by which it is advected southward.

It is the East Greenland Current that transports the greatest ice masses out of the Arctic to the south and diminish in width as they come into contact with warmer air and water. Due to the earth's rotation the ice is pushed to the right. Hence the ice will cling to the east coast of Greenland, but the currents and prevailing northerly winds along the high coast will move the ice south.

The persistent yet variable forces the Arctic ice is exposed to, from when it is made in the Arctic until it – perhaps many years later works its way south along Greenland means that this Arctic ice is more twisted and chopped up than any other drifting ice.

Outside the Arctic current on the Greenland shelf in the sea between Svalbard and Iceland much ice develops in winter. This ice, known as bayice, fractures and and piles like the Arctic ice but since it never becomes more than 1 year old, the floes are both smaller and thinner than Arctic ice or old ice floes. Icelanders call this 'bay ice' Spitsbergen ice and the Arctic ice they call 'helluis' (hellu means plate or slab).

The Arctic currents along Greenland also transport many icebergs split off from the many and big glaciers on the east coast of Greenland. Icebergs from Svalbard, Frans Josefs Land and Novaya Zemlya are less frequent in these coastal waters. Icelanders call icebergs 'borgaris' (best understood as mountain in otherwise flat area).

It is in these regions our seal hunters are active when the Greenland seal in Spring throw their young up on the ice. The challenge is to find the young breed, the 'young capture' for it is these white pups, only a few days old, that have the most valuable furs. At Jan the seals throw their pups between the middle of March and early April and in Newfoundland 5-10 March and in the White Sea from the middle of February to the end of March.

The flow of warm Atlantic water coming from the south along Norway and Svalbard also sends water westward where upon it encounters streaks of water from the polar current. The most conspicuous of those eddy motions that develop is the one northeast of of Jan Mayen where the Polar Current drives the ice eastward in the 'ice point' while the Atlantic water north of the 'point' drives the ice westward in toward a bay what the hunters call Northbay in this opening in the ice. It is preferably at the 'ice point' with its broken and refrozen bay ice that the hunters seek their young prey.

With the wind and currents the point and the bay also change shape, extent and location. It is least developed those years in early Spring with much ice when the ice edge lies far off to the east, maybe even toward Bear Island. For the last 8-10 years the ice edge has been far west such that the ice and weather conditions in recent years have been challenging for seal hunting in the western ice. In the severe storm out of the east April 17, 1917 7 seal hunting vessels were lost, and 2 vessels disappeared in the storm in April 1920. It was a loss of men we hadn't seen since in the western ice since Svend Foyn's brig "Håpet', Captain Nils Knutsen with a crew of 50 men disappeared north of Jan Mayen. This happened in 1871, the same year that Tønsberg (considered to be the oldest town in Norway) celebrated its 1000-year anniversary.

The sealer 'Geysir' lost 7 men in the same storm yet made it into Bergen with broken masts. The shipbuilder Dekke fixed it up in 17 days. 'Geysir' went back to the western ice and returned with a full load.

The ice masses don't just vary from year to year they appear to exhibit a measure of regularity. Several good ice years with little ice follow each other as will bad years. But given how little we know about these periodic variations in ice extent, one must always be prepared that any given year can be a bad ice year. If you want to make it through the ice in such a year you must be equipped as for a polar expedition.

We went along the lead from yesterday until 5 PM on the 29th when we set aside an hour for stations 10 and 11. After which we set on a northwesterly course. The sun burst through the fog at times until it got so thick that we had to stop at noontime on the 30th. We followed the ice in a northeasterly direction until 6 PM, turned north and northwesterly where we saw blue indicating water here.

Greenland seal, adult female

31 July – 1 August. Northeast and fog. Stayed still from 5 AM till 10 PM, went WNW till 6:30 AM when we tied up to an old-ice floe in the fog, fetched water and took station 14 where water depth was 212 m. The Greenland men are putting the Grei engine in a big hunting boat which they have brought along for Myggbukta. We went for a few hours in the evening and thanks to an opening in the fog could see Greenland. It was Salfjellet (Mt. Sal) south of Sabineøya (Sabine island).

2 August. We moved only a little today, from one floe to another in the opening where we are. A couple of polar bears kept a good distance. Few seals, seen once in a while in the water, never on a floe. 'Anni' reports that she has arrived at Cape Bennett and that she still can't reach the station at Cape Franklin.

3 August. We went for 3-4 hours this morning and stopped at unbroken Arctic ice, large floes. We see Pendulum,- Sabine- and Walrus islands, but no sign of water west of us. We are about 38 NM from land.

4 August. Since it is crucial to keep the boat clear so we don't get stuck we tried to head eastward but the two hours needed to take station 16 prevented us from doing so. We had to stay where we were.

5 August. Myggbukta reported today that 'Anni' had reached Cape Giesecke on the western side of the bay and was waiting for the ice to open up along the shore to Cape Franklin.

6 August. With some dynamite we blasted a little dock in the floe which is always useful work. While all was quiet after dinner Viljam came running shouting that there was “a hole in the boat”. It wasn’t a hole, but a floe had bent the bow so water trickled in between the seams into Viljam’s bunk. We rightened the boat in the dock, relieved the bow and the leak ceased.

Today we finally got some polar bears, which Rossby filmed. Johannes collects bear bile which is supposed to be incredibly good for ;various kinds of digestive disorder’. Only 50 m north of us lies a rather large lead. If we could get to it we could move 10 NM toward land. But for now this seems unwise as the ice is under pressure. The steward started to bake today, 65 loaves at a time.

7 August. This evening we got over to a large opening in the ice and went toward land for 2½ hours. Lacking things to do most of us apply their energies to card games which can get quite lively. Rossby, who during the day reads Weyl’s ‘Space, time and matter’ expressed this morning his irritation that the only time it is impossible to sleep is at night.

The opening stays clear but we often have to change course to avoid nearby floes. Now and then we see a ringed seal and common eider, they define the fauna here.

8 August. Today 100 years ago Sabine and Clavering on ‘Griper’ reached land at Sabine Island. The weather stays nice and quiet, we see the mountain tops over the fog.

9 August. Today ‘Anni’ went back to Myggbukta for more provisions before it again tries to reach the station at Cape Franklin.

The bear skins are stripped of their lard. To ‘delard’ the valuable polar bear skins was in the old days a task the skippers reserved for themselves. Before the advent of steam and motor engines on hunting vessels people had more time in the Arctic than now. Often the skipper and the cook remain alone on the boat, tied up in some harbor, while the crew were sent hunting on boats, often for 8 days or more at a time. In calm waters several vessels might tie together which would an occasion for a feast. The “Battle at Kandinos” in the 1860s, which is still talked about in Tromsø, was such an assembly where the skippers came to heads. It ended only when all the combatants wound up in the water. The cold bath imposed a temporary calm on the mood, which, incidentally, wasn’t so difficult to revive once the combatants had clawed their way up again.

Everyone has telegraphed home, the ice pilot was the last one. He just wanted to see if he might get a reply. And he got it today and it wasn’t hard to see how he experienced the wonder that the wireless is.

Now and then the engine is in operation, we move around in the lead and at the same time take the opportunity to charge the batteries. These leads drift in general

toward the south with the ice preferably in a southeasterly direction away from land. The ice stays closer to land.

It was as captain on the "Laura" in 1911 that our ice pilot, Øien, got caught in the ice around here. Count Kostersitz, who had rented the vessel, was rather impatient and wanted to get home as soon as possible. Had he waited till the next day they could probably have escaped the ice through a lead that followed them in their drift. But there is no reason to think that leads can remain open. If the ice hits resistance from land or ice the leads will constantly change or disappear, which can happen on a moment's notice.

10 August. This evening we got the vessel into a floe where we for the moment can lie in peace. Around us old ice floes with an occasional bay ice floe. Last year was nearly ice-free and good ice conditions, perhaps grounds to expect something similar this year too. But here there's been a lot of easterly wind which has pushed the Arctic ice toward Greenland.

11 August. Today the same beautiful weather we've had since we entered the ice. It is new moon and perhaps that is why we see more movement in the ice than usual. Small leads have opened in a northwesterly direction.

We caught a polar bear sow with 2 cubs. Rossby filmed the hunt. Seagulls soon showed up at the carcasses.

12 August. Sunday, weak southerly wind. The telegraph operator Listerud reports northwesterly gale at Muggbukta today. The ice is thus somewhat displaced from the bay. 'Anni' has turned around from Cape Franklin in the lead along land. They will try to go out on Wednesday which we advised against by telegraph.

As dense as the ice is here the ice must not only ease up, it must do so everywhere if we are to get out again. We have provisions for about 3 months. We now know enough about the Greenland ice that we need to be careful not to get caught. Drifting in the ice is no joke. You don't accomplish anything in that drift. We won't get to Myggbukta, but risk instead losing both ship and crew. The ice eased somewhat today.

13 August. Fog, a little rain and quiet. Listerud telegraphs that a fair amount of poor bay ice has come into the bay yesterday and last night but navigable to 'Hold with hope'. 'Anni' will try to get out on Wednesday.

A narwal has hung around yesterday and today in an opening next to the boat. We see several artic skua as well.

14 August. Northeasterly winds, a little rain. We have now drifted past the Clavering fjord, which the ice pilot considers to be the best place to get in and out of Greenland.

Olsen reports from Myggbukta that he will shut down the radio this afternoon to depart at night. We hope to be at Jan by Sunday, we heard Olsen report to Jan Mayen.

This evening we got Olsen's final telegram: Gratefully we have received your telegram. I have been following the ice movements this summer from the mountains. Since 23 July when the ice hit land at Cape Hold with hope it has not eased. The north side of Frans Josefs fjord in toward Cape Franklin is also tightly packed until the last few days. For Bontekoe – Cape Franklin and farther in the ice has drifted out and southward the last two weeks. Ice conditions today: Cape Hold with hope and beyond heavy pack ice 17 NM, can't see farther. Ice at Cape Hope with hold in to Bennetts Point hard to pass. Bennetts Point - Bontekoe and farther in occasional floes. Northeast point of Bontekoe a few smaller leads in northeasterly direction to 5 NM. May be possible to pass off Bontekoe. Maybe the ice will return. Will leave some provisions here since ice conditions became impossible early. If you get here so the station is manned feel free to take them with you. Greetings, Olsen.

This evening we are 16 NM straight east of Jackson Island, i.e. 20 NM north of Myggbukta. We tried again to discourage the 'Anni' men to head out in the ice, but our telegram did not reach them.

15 August. Jan reported a ENE gale but here it is weak.

In the afternoon we took station 20 at which the depth was 132 m. At station 13 the depth was over 600 m but since then it has been around 200 m or less. Stations 14 and on have been over the coastal bank along Greenland.

So far we have not seen a single iceberg. We have swung 90° with the floe.

16 August. 2 PM fog. Water temperature 0.6°C, air temperature 2.4°C. Today 4 weeks since we left Tromsø and 2 weeks since we got caught. Jan reported that the oxe Apis which we brought to Jan, was slaughtered yesterday,

This evening we see Bontekoe Island to the south.

17 August. The weather stays calm, it is almost always clear in over land. Should this point to westerly winds which sweeps over the cold air over the ice? For we have yet to see any wind from that direction.

18 August. We often do bottom soundings to determine drift speed and direction. At 1 PM -1.3°C.

The sun can no longer melt the shell ice. This evening we are straight east of Cape Hold with hope or 'Holdvik' as we call it here onboard. Between the two peninsulas

to the west we have Mackenzie Bay. Myggbukta or Mekansi Bay as some will say. I have heard Mexican Bay as well. Hudson Land looks good.

But how are the Anni crew doing wherever they are. Perhaps they are stuck and drifting as we are, some 50 km ahead of us.

Once in a while we get a bit of news when Naerup copies press reports from Karlsborg radio.

19 August. Drifting with the ice is a most boring state of affairs and those events which we know we have to clear and that can occur at any moment doesn't make it any better.

This afternoon we took another station. Rossby was down below to fetch a box of water bottles when he fell down to his crotch through the bung of a big empty blubber barrel. The blubber barrels are always stowed with the large opening on top. As Rossby hurt himself pretty good one can readily agree with him this was a stupid way to store a barrel.

Viljam shot a ringed seal this evening, the first so far.

20 August. There's not a drop of water to be seen under the sun and there is little of that. At 8 AM this morning the temperature was -2.5°C, the lowest we have had. The pilot balloon this afternoon went in a southwesterly direction for the first 3000 m, then northeast and disappeared at 5000 m elevation.

21 August. The fog reaches into all rigging which then becomes quite heavy. When the sun then comes it rains big and small chips of ice from the rigging. At 2 PM -1.6°C, water +0.1°C. Tough to sleep in this idle state.

22-24 August. Pigeons. Got a few ringed seals. We telegraph only in the morning to save oil.

25 August. Rossby began to measure the temperature from the crow's nest too. It is often a couple of degrees difference from the temperature on deck. 'Hold on tight' said the ice pilot, 'we don't want any blood splatter on deck'.

The new ice in the morning is now so thick it is hard to break it with an oar.

What a lot of coffee is drunk at night! Leif takes the record in that regard.

The ladder from the railing to the ice moves up and down a cm or so. There is movement in the water. The ice is looser than we've seen in a while, but that doesn't say much. Full moon.

26 August. Now and then we see a ringed seal. From the hydrocast, depth 349 m, the temperatures are positive at the deepest 100 m.

Mikal Olsen shot an ivory gull.

27 August. Got a whiff of air from west today. From the crow's nest see open water to the SE, for 15 NM. If we could only make 100 m or so we could go quite far south and southeast. It's been a long time since we saw open water. The ice has also opened a lead behind us too.

28 August. It looked so promising last night that I waited all night to get going. At daybreak the ice began to ridge. The new ice groans, snaps, and cracks. Whistles and complains. Now and then sounds like all the glass in the world is being shattered.

Got up around 6 this morning, it seemed like the ice absolutely would get into my bunk. The vessel groaned, skipped, and twisted. It seemed like it couldn't decide if it wanted to go up or down due to the enormous pressure on its side.

I was already up and about here in back when the ice pilot bellowed through the aft: 'Bail out boys'. Equipment, provisions, boats and supplies were quickly offloaded onto a big floe to our left. We had to lighten the boat.

Offloading the ship onto the ice

I can still hear the ice pilot's voice. A necessary command yet given with empathy. The same feeling I often had myself when in difficult moments thought of all the young lives onboard.

In the NE gale, in sleet and such we were busy all day. In the afternoon a huge ice wave came from the rear port side. The rudder was jammed into the planking, a part of the rudder linkage broke and took part of the cabin. The boat was pushed forward with its aft up on the ice such that some of the pressure was eased. Stop!

Wrapped in a fur coat and with cautious steps the ice pilot walked the length of the deck, not really wanting to see the damage. No matter, there was nothing we could do. We were completely dependent upon what 'he' wanted to do with us.

29-31 August. With dynamite and long hard work we removed the ice from the stern area. With a water window we could confirm that the rudder and propellor were ok.

The leakage eased somewhat during the night, the pressure on the vessel has slackened.

Someone (the ice pilot?) in the crow's nest is checking ice conditions.

We learn that the Geophysics Institute in Tromsø is preparing a rescue vessel. That they think a sled expedition with dogs can reach us from ice edge suggests they don't have much knowledge about the Greenland ice.

Not only is the whole mass of ice in motion, so also each floe in relation to the others. At ice edge even more so than farther in since ice drift is stronger and heaving in the swell. If we had to leave the ship it would be crazy to head south. It is just unclear whether we could reach land. The new ice, which is formed between floes and sheets of ice, is either shattered or so thin it can't support any weight.

Needless to say, he who is in distress is grateful for all good intentions of help. But I cannot deny I was astonished when mention was made of sending aircraft our way. I was also unaware whether we had supplies for this. I don't doubt that our valiant aviators were prepared to risk their lives to help us. But does it make sense to put them to this test? In the Greenland ice you can't expect to find usable landing spots, and leads can collapse at any time. And what could the aviators do for us? We had food and we couldn't leave the ship until inevitable.

Checking the rudder and propeller

1-3 September. It's getting colder and colder. We've been down to -8°C and then it snows. Autumn is approaching.

An uneasy situation. The steady ridging as the ice compresses makes us jump at the least sound. You want to get out before the vessel collapses and it can happen in the blink of the eye.

4 September. Tonight storm out of the north with snow-sleet. It blows so the boat shakes. Our 'harbor' is not the best. It consists of an old floe to the left and a younger thinner floe to the right. In front of us these floes were frozen together along a series

of ridges. Our 'harbor' should have been in the old floe, but with the gear we had we had to be content. We had neither an ice saw nor a bucket.

Last night Søren came down and reported that the floe is opening up. Everyone on deck. Everything we had on ice had to be moved to the old floe. That was the one we needed to rely on, where we had all our stuff. This morning the man on watch Johannes in wetgear came below and mentioned quietly that the floe is breaking up. It was the thin floe to the right that broke away. During the day with the help of dynamite we moved the boat forward a few lengths in the crack between the two floes. That way we got the better protection for the aft part of the boat.

5-6 September. Incessant wind from the north. The cold and heavy air over the inland ice slides down toward the coast where it turns and streaks along the high coast.

A gaggle of geese heading south. A narwhal tumbles in the little lead north of us. It is perhaps the only watering hole in a long while.

We heard from Jan that the boat 'Heidrun' left for Svolvaer with the old station crew and Mosby.

Our heading compass is located in the roof of the wheelhouse on the bridge, right over the radio room. That the wiring to the radio antenna goes through the roof next to the compass is probably not so smart. This arrangement could have cost the life of the ice pilot as he was getting compass headings while the transmitter was on. He escaped with a burn on his cheek.

Rossby has big laundry day today. Good thing this doesn't happen often as we've noticed that something then crazy often occurs. We shall see.

We filled up with water today. The tanks freeze up so we need to save water.

7 September. Northerly breeze at -1.5°C. Shifting at 4 AM. The weather service in Bergen telegraph danger for strong storm from the north this afternoon. This morning it was storm from the NW at Jan, in the middle of the day it was strong. The ice opens up between some floes and presses against others.

8 September. Gale with rain from the north during the night. Continued ridging. The floe on the right side split in several pieces. At around 8 enormous ridging, the boat up and down. While during the middle of the day we were busy moving our stuff farther in on the old floe to our left, the boat started to heave, jump and lurch. The external hull gets taken by the ice. A big ridge streaks long the right side and takes one of the boats with it.

Although I am not inclined to agree that 'now she got it', now she's done in', 'now it is over' I must confess that the boat could have gone down during those 7-9

September days hadn't 'he', in an act of kindness, allowed for a little opening between the floes and let us escape.

The hull yielded as if made of skin and from the engine room came sounds of breaking metal.

In no time we got the engine going and escaped to a large floe some 100 m away. But we had to leave 5 men behind on the old floe. We couldn't take them onboard. It was only as we were finished throwing everything on the ice that the floes left and right separated such that we could slip through. If we hadn't escaped then none of us doubted that the boat would have gone down. Even the charts, chronometer and the prepared dinner were moved to the ice.

No sooner had we left our old floe when it broke in several pieces such that the men left behind had their hands full bringing everything together.

That evening we got the men onboard again.

Sunday September 9. The ice pilot was undoubtedly right when he said last night 'we are in for an awful night'. I relive it again.

In storm and slush we fought all night to keep the boat secured to the floe. Ice drags and anchors were set up like spikes. We were absolutely soaking wet. Clothes and provisions were on the old floe.

In the pitch-dark night ridges and frozen heaps of ice came at us. Our only defense was the propellor water.

Heavy leaking up front and at the rudder area a stream rushes in through the side of the boat. 4 men keep the pumps going. The sound of the pumps may sound distressing but here they allow for dealing with the storm and ice. It was a hellish night.

With great anxiety we awaited dawn. What had happened during the night to the floe with all our stuff?

In the morning we saw land. It was Cape Wardlaw about 7 NM SW of us. During the last two days we had drifted 20 NM, the best drift so far. But we can't see our depot. We'll have to see when it clears.

The next question is the state of the rudder and propellor. We had used the propellor earlier in the morning but no longer as one of the tow lines got caught in it during the night. The rudder was serviceable.

Finally, we saw our gear at about the same distance and direction as before.

The big question - whether we can tighten the vessel so the pumps can keep up and whether we dare go in ice or water – can't be decided now, but we will find out later.

10 September. It is clearing, but at Jan it is still a gale from the north. Much to be done here if only the ice would give us some calm.

To tighten the hull we use what we have. Flour bags, shingles, mud, ash, zinc white and tar. To make sawdust we cut up the birch wood intended for Myggbukta. It looks like we will be able to keep the ship dry.

A block of ice got stuck midships at the bottom of the external hull which from here aft runs just below the water line. The pump acts up all the time, the fly wheel is twisted so ice and slop clog the filter in the sump. For that reason we cannot telegraph today. They are probably getting worried back home since it was agreed that we will have abandoned the ship and gone toward land in case they don't hear from us for two full days.

Since the rescue expedition for 'Anni' and us is ready for departure from home it is best to send it now in case we decide to risk going ahead with the boat. The Danish motor schooner 'Teddy', which hasn't been heard from, may also need help. We learn that it is the motorboat 'Polarulv' from Bodø that is being sent.

We freed the propellor today. The ice below the stern needs to be removed and with knives on long poles we were able to cut off the tow line wrapped around the propellor.

We have arranged a kind of dock at this floe so both the bow and stern are protected.

The work we have done to seal the hull has paid off. We keep her dry with 2000 pump strokes per hour instead of 3000 yesterday.

While we are eating lunch we hear the shout from the deck: 'Big floe along the side!' Slow and steady the ice approached us from aft on the right side. Had it wanted to it could have straight through the ship without slowing. But it was kind enough to just squeeze us slightly as it skirted along the side of the ship.

The water that streams along the floes and often from them help us.

As I mentioned there were many that didn't appreciate the big laundry Rossby did the other day. Now we knew for a helluva mess is the result. But it wasn't hard to bring Rossby to his senses. Raw and cold as it is he doesn't have anything to wash, he is wearing everything he brought along.

Early in the trip sharp eyes had noticed that the ice pushed closer when we got chocolate instead of coffee, and it was even worse when Qvarnström, who had

always slept in full dress since Tromsø one day decided to take off his pants. Just then the ship started to squirm. And it happened again the next time he got this bizarre idea, so that settled the matter. We tried, and with luck we succeeded in putting an end to these bad habits.

All men are organized into two watches. New moon.

11 September. This afternoon Naerup was at the telegraph. It is two days since last time. The ice has eased up so the motor can get cooling water.

We saw a long-tailed duck today.

'Heidrun' arrived at Svolvaer from Jan this evening.

We are drifting along the wild and notorious Liverpool coast with its high saw-tooth mountains, but unfortunately only 5 NM from land.

It looks like we are drifting along the edge of the unbroken inshore ice. The smaller floes pass by us faster offshore.

12 September. During the night and until noon NE gale with sleet.

Today we finally got our equipment back from the floe as the floes came together. We keep most of the supplies there.

Continued breakaways of floes that come at us. Today the ice pressed against us such that the planking in our berths cracked. The icy porridge surrounding the hull helps to keep the ice away.

The floes of ice are more or less abraded as we drift south. But the long ridges are shaped like the bottom of a loaf of bread.

13 September. Fine quiet weather, -9.8°C at 7 AM. Not much drift, slower than before. We lie still during the day, off and on toward the north as well.

Our drift is the topic of discussion. If someone comes down from the deck we need not ask, we can see on the face if we are moving ahead, or if it is 'meandering' as men of the north would say.

At the Liverpool coast

14 September. Last night and some earlier nights we've seen great northern lights.

Thinking of 'Anni' Edlund released a balloon with a sparkling flare.

It's getting colder and colder but indoors it seems to be going in the other direction. 30°C is not uncommon in lounge. Everyday a falcon visits us and is greeted with a missed shot.

Our floe is shaped like an ellipse 300x150 m.

15-16 September. Replenished the water supply.

Strange that we don't see any polar bears.

By moving chains and heavy stuff aft we lightened the bow and covered it with tar and zinc white.

The rescue ship 'Polarulv' left Tromsø yesterday heading straight to ice edge.

The MS 'Polarulv', 133 gross tons and just as big as 'Conrad Holmboe', was built in Bergen in 1919; fir on oak frames, 130 HP Bolinder motor.

The ice has to cope with a lot on its way south. Land islands, grounded icebergs, icebergs, and the floes in between. Grounded icebergs but also the icebergs are also unpleasant and dangerous neighbors as they drift slower than the ice we are in.

In the vicinity of these obstacles we must always be prepared for unpleasant surprises from the ice.

We secured the ship to a better spot on the same floe, which is constantly swinging one way or the other.

17 September. Ridging again last night. Grounded icebergs south and inshore of us that are holding us back. If we could only get 100 m to the east we could have done more than the 3 NM to the east today. The gray-blue shell ice surrounding us is formed from slop-ice. Not black like before when it is formed on still and very fresh water.

Saw a ringed seal today.

We pump and pump incessantly. The superstitious Qvarnström wants to get a pump when he gets home to Dalarna so he can run it at least once on Sundays.

18 September. Calm and fog. Jan reported a barometer drop of 3 mbar.

Moved the ship a boat length forward at the same floe. We sit in the triangle of three connected floes as long as it lasts. Saw a walrus and a hooded seal.

19 September. A lot of ice movement yesterday and between midnight and 4 AM we were thrust up high.

Northerly gale but clear and northern lights.

Today we built a tent on the ice, 6x10 feet. The ridge is the only secured part, the rest is held together with nails. The tent is intended to house our provisions, equipment, and ourselves if we were to lose the ship and had to continue our drift on ice.

20 September. Last night was a tough one. All of a sudden the ship was thrown on its side, just as I greeted the captain by taking him in the arm with a 'the ice is moving'.

The bow and the stern each in turn got pushed up and the ship got some hard bumps, especially in the bow.

As usual a battle with the lines.

The railings broke but no more frames nor the keel were broken last night.

The boat must be cushioned given that it can take such a beating. After the events last night it looks like a wreck.

The leak has increased but it is amazing that we have been able to get away with it.

We have several grounded icebergs inshore of us and a big one ahead.

The provisions and our equipment are stowed in the tent on the floe. All we have to jettison on the ice if it gets that bad are our bunk clothes. How many times have we

not made the trip from the boat to the ice. Many have let their clothes stay there a few days, but I have always brought them onboard when the ice calms.

The falcon made its daily visit today, this time for the last time.

The ice pilot, dressed in fur jacket, writes this evening in his diary, a somber note: 'Yes, now I have written in my diary that if we get caught inside the 3 mile line it will be a disaster. It was us and 'Laura' in 1907 and 1911 he was thinking of.

Øien commanded 'Laura' in those years. In 1907 the ship got stuck on 25 August 70 NM east of Cape Parry and drifted south. They were closest to land at 17 NM from the middle of the Liverpool coast on September 18. Between drifting and under power the boat continued to the SE leaving the ice on September 29 at 68¾°N and 16°W.

In 1911 'Laura' got stuck 12 NM east of Clavering Island. At Hold with hope she was 48 NM to the east. Frans Josef's fjord was packed with ice. At the Carlsberg fjord she was 6 NM from land but drifted out to 12 NM until opposite Rathbone Island when in a NW gale she could go SE out of the ice.

Scattered chunks of ice, mostly inshore of us, drift off and on to the north with the tide. A gasoline barrel which we jettisoned a few days ago passed us on the way north. It went by us several times.

We are constantly swinging with the floe, for some hours in one direction and then the other. Sunset today was beautiful. With the sun behind the mountain tops glowed in alpine colors.

21 September. A lovely night with northern lights and half-moon. At 7 AM -9.8°C.

The flow we are tied to was this morning in open water. The big floe outside us is also free. The ice has opened in the south, there must be open water down there.

For many days now we have been worried about drifting toward Rathbone Island, but now we have begun to veer outwards.

'Polarulv' has now arrived at ice edge. From the position given they are 60 NM SE of us. The blue haze suggests the biggest opening in the ice there.

The ice is constantly under pressure. It is crowded here with all the grounded icebergs and islands. It was here 'Hansa' was mowed down October 19, 1869.

22 September. It meanders a bit in lively waters. The floe is swinging lively today and we get many bumps.

Motors and belts, deck and machine pumps are constantly running, but then we are 'not talking small potatoes'.

The engineers are trying to mount the Grei engine in the engine room. We're going to try and get it to help with the bailing.

We relocated the ship forward 50 m on the same floe.

Viljam shot a hooded seal.

The evening watch was fine, quiet, moonlight and northern lights.

23 September. Øien shot a falcon today.

'Polarulv' is at about 21°W suggesting the ice band is narrow.

When we went NW the ice reached all the way to Jan.

The ice whams and scratches along the side of the boat such that it isn't possible to take a nap. It comes only when it is no longer possible to stay awake. And so it is that we all get our sleep.

24 September. So far as we can see we have only a few large floes outside us, the others are comparatively small. If we could only get beyond the closest big floes might we get far. But the ice pilot maintains that it is too risky to 'take off' given the state of the ship. Out there the ice is moving a lot faster to the south.

'We must have a magician onboard' said the ice pilot given all the troubles. But he quickly agreed with me that we must have many magicians onboard, but of the good kind. Given what we have endured so far, we still had the boat and all men in good shape.

The ceiling runs high for superstition for our polar sea people. But now we must also be careful not to lean on such notions and expectations.

One should not seem content with what where he is or lucky to have endured. Otherwise 'he', in this case our Lord might misunderstand and think of something worse to 'put us in our place'.

Some obviously didn't like that I now and then spoke as if I was confident we would get home. Johannes remarked: 'Have you checked with 'him' up there?' That our black cat had died was good. Had she gone (died) earlier we would have been out long ago.

25 September. Beautiful night with full moon.

A big icebreaker could have reached us in recent days. We need a big icebreaker. Given our interest in these extensive northerly waters no other country has a greater need for such a vessel than Norway. As things stand now, we are less fortunate than our neighbors.

The ladder down to the ice is squeaking a bit this afternoon due to the swell out at ice edge.

This afternoon a big growler with a slurry of ice ahead. The slurry relieved the pressure so we weren't heeled over. Afterwards we worked the boat 1 m farther into the floe.

26 September. Today it was again two days since we could telegraph. The reason is as before, lying in the slurry of ice we couldn't get cooling water to the engine.

The thermometer is down to -10°C today.

'Polarulv' telegraphs that they have tried to penetrate the ice, but after having worked their way in 4 NM they had to retreat. That was probably a good thing. For they must not get caught too.

27 September. Ice ridging as usual. A big floe attacked us but the slurry fended us. I saw the bird cliffs on Raffle Island, all we have seen.

We have now passed Rathbone Island and are closing in on Cape Hodgson where the landscape changes. The sawtooth mountains along the Liverpool coast turn into lower and more rounded forms south of here. Falcon and ravens continue their daily visits. A sweep around the boat and then back to land.

The engineers are cleaning the engine today, badly gummed up as it is. All kinds of things show up like peas and more from the pantry to hardware.

As we've seen from before, our drift was very slow, only 4 NM per day since September 10 at the start of the Liverpool coast. Overall the weather has been nice and quiet. These last few days we have angled down toward Cape Swainson so much so that Rathbone Island has disappeared behind Cape Hodgson.

28 September. This evening at 8 PM when it was dark it really looked like we might drift toward the cape, where there was much slack ice we were no more than 1 NM from shore. Behind the cape, which is quite low, there is a good harbor that folks from Hammerfest would use on their trips to Scoresby Sound back at the turn of the century.

From the latest position reports from 'Polarulv' it seems that they too in recent days are caught in the ice.

We are anxious to hear what the next day will bring. Will we drift toward land? Or will we be swept by the ice to the south. Fate will decide.

29 September. At daybreak it turned out we were a bit out in Scoresby Sound and drifting south.

The pessimists feared of course the worst, that we would drift in toward the southern side of Scoresby Sound, which indeed really would be the worst place we could be drifting toward.

30 September. Looked nasty last night when the tip of a big floe hit the starboard side of the boat.

At noontime 'Polarulv' was 37 NM away from us.

Naerup received 'S O S' signal which was repeated several times. '70° … from the ice …'. It was very unclear but must mean something from whoever it was. We telegraphed to 'Polarulv' and asked them to check. (Learned later that the SOS came from 'Teddy'.)

Conrad Holmboe goes out through ice edge

It thickened during the day and it began to blow hard from Scoresby Sound which is broken up as far as we can see. The weather service in Tromsø forecast a northerly gale along the east coast of Greenland.

1 October. The gale eased during the day and we were keen to see where we were. After a bit it cleared up. It turned out we were about a NM south of Cape Brewster.

All the icebergs that were ahead of us the last few days were now behind us, we passed them in the heavy weather and the gale without seeing them. Amazing how things can roll along.

Here is a nasty turbulent current which is constantly pushing the ice against us. We also notice the swell which the hunters say can reach 60 NM into broken ice whereas maybe only one quarter as much in hard ice.

Jan reports easterly wind, here it is northerly.

2 October. We have to cease bailing with the Grei engine as it shakes apart the radio equipment, which Is located right above.

'Polarulv' is 27 NM away at 69° 38'N 20° 45'W where there is an opening in the ice.

With the sun in the south it sparkles in the water this morning. It looks like we have entered the current proper. There's a different pace to the drift now.

You notice the change in mood right away: hair and beard, which will grow wild around here are pampered and cared for and some look like they are headed ashore this evening. The optimists have replaced the irreconcilable, the stern 'he' with the old kindly 'Old-Erik', who often gets the blame for everything.

3 October. After a nice quiet night we hope for much today. The sunshine was great and it was clear we needed to make an attempt to head south. At 7 AM this morning -9°C.

In two hours with all helpful hands we got all gear, boats and tents onboard and in 5 hours we made 15 NM toward the south. One man at the bow and one man below the aft deck to watch our soft spots during the run.

We managed the new ice well today, but got stuck in 2-inch-thick frozen slop or brash ice.

The ice pilot said we were 20 NM from land. I maintained more than 30 NM which was indicated by the blue haze over the land. This turned out to be correct.

I consider today to be decisive for our fate. If we hadn't made our way from land today it would have meant a westward drift in a steady battle with drifting ice and icebergs.

Today 'Polarulv' is at 69° 8'N 22°35'W so she has gone SW since yesterday. It is probably in the same opening which is drifting with the ice too.

It was a pleasant surprise to see that the leak didn't get worse during the run today.

4 October. The cold eases a bit today so the slurry ice is a bit easier to deal with. We ran from 9 AM to 2 PM but didn't get very far. Modest swell.

Iceland reports a 4 mbar drop so it looks like another round of weather again. A lot of hooded seals in the water. We caught only one, but it meant beef for dinner tonight.

5 October. During the night the wind turned northerly, full storm today with snow, 3°C cold.

We see fulmars and seagulls.

'Polarulv' shouldn't be very far away, you can hear it on the radio too.

This evening Øien shot a narwhal which came up and blew only a m from the boat. Stomach content fishbones and fisheyes, squid and numerous 5 cm long eels.

6 October. Storm. The other minimum went eastward from Iceland so hopefully we avoid gale # 2.

Naerup reports that he has only one tube left for the radio. So we may at any time risk losing contact with 'Polarulv'.

A bear that was too pushy this evening had to lose his life, but we didn't get it as the ice slurry pulled it down under a floe. It is always unfortunate to lose an animal whose life you have taken, but in this case it was just as well as the slurry couldn't take the weight of a man.

The drift is moving along and the slurry opens up leads. We are fortunately passing offshore of the many icebergs ahead of us.

Sunday 7 October. The wind eases in the morning. By 11 AM it begins to clear and from the crow's nest the captain sees 'Polarulv' roughly 6 NM away. It is rolling in the swell at ice edge. We hear clearly the rumble of the ice out there. We chop at the swell of the ice slurry to right and left.

8 October. Tonight the 'Polarulv' used its search lights and sent up a few rockets. We replied with a rocket and a flare.

The sails were lowered today.

We go easy on the water for it is not possible to get water from the ice.

The weather is nasty with sleet but we all feel upbeat. These days the boat has shown that it can take more than anyone thought possible.

9 October. New moon today. The ice begins to ease this morning, little floes and slop in rapid motion.

'Polarulv' has gone south along ice edge looking for 'Anni'.

We went for a couple of hours but made only 1 NM.

10 October. We saw the light from 'Polarulv's' search light at 10 and 12 last night. We replied with a flare.

'Polarulv' is 4 NM away. We see the men onboard.

A little sleet, around -4°C.

A few ravens circle around us and then head for land. I hope they will miss us tomorrow for today we must out through ice edge, whatever it may cost.

At 12 noon we get going and the thunder of the sharp hard sheets of ice against the side began. BY 4 PM we were beside 'Polarulv' which had entered the ice a bit to meet us.

Our ice pilot Øien is a first-class ice pilot with an experience few can match. 'Are you guys completely nuts' shouted the men on 'Polarulv' when they saw badly the ice had treated the 'Conrad Holmboe'. But Øien spit and rattled from the crow's nest 'the tub she is go' she'. No one knew her better than Øien who had owned it before she was sold to the Geophysical Institute.

Since it began to darken around 7, we left the ice edge and went to the leeside of the opening to get ready.

We greeted the last bump with the ice with a loud hurrah, and razorbills and guillemots, which we hadn't seen since we entered the ice, appeared startled by this life in the wilderness.

With 'Polarulv' at our side, we must now attempt to get the boat to Iceland. The nearest port was Isafjord, for which we set our course around 10 that evening.

11 October. We hadn't gotten very far before the northerly storm arrived with heavy seas. In the heavy swaying we could now and then see the lights of 'Polarulv' behind us but they also disappeared for long stretches of time.

Our pumps ran uninterruptedly as before, and that was just as well. The engine pump ran until 2 in the morning when it gave up due to all the debris in the well.

In the morning we attempted to steady the boat with a reefed main sheet, but we had to bring it down when the gaff rig broke.

Around noontime we saw land. It was Stålbergshuk, the westernmost tip of Iceland, it was straight ahead.

We were too far south. Our point of departure was farther south than our equipment indicated.

All day we worked our way north along the coast, but it was slow going.

At midnight we anchored off Isafjord and in the morning the 12th the harbor pilot brought us into port.

Yet another day and night we had to keep the pumps going, but finally on the 13th at high tide the boat was beached. At low tide when the boat was dry it was inspected by the naval engineer Thomasson. It turned out that several frames were broken, planks pressed in and out, the main keel broken in two places and twisted to the side. The boat was condemned.

Conrad Holmboe hauled on land.

My many Norway and Iceland friends sent us their greetings and the people of Isafjord were gracious and helpful, and especially the Norwegian Consul Edvald who is held in high regard by all who have met him.

Afterword

'Polarulv' is made ready to search along ice edge to the west for 'Anni'. Olsen and Qvarnström choose to go with 'Polarulv' to stay at Jan and hunt during the winter. 'Polarulv' was going to stop there with the gear that 'Conrad Holmboe' hadn't delivered. 10 days later the papers report that 'Polarulv' had gone down with four men lost. They had taken a hard beating, the crew on the 'Polarulv', those who were lost and the ten we got back. What happened was that the 'Polarulv' capsized on October 20 60 NM west of Stålberghuk. In a strong storm the sails were ripped to strips so they decided to head back to Iceland. They were repairing the rudder chain when a wave took Halvorsen. Later in the day the boat flipped all the way over with the masts in the water by a huge wave that took everything and everybody on deck with it. The boat righted itself and the men below came up. They closed all the openings, got the pump going for 30 hours but were otherwise helpless for 30 hours until they were saved by a British trawler and set ashore in Reykjavik.

The year passed without any word from 'Anni' or the Danish ship 'Teddy' headed for the Danish stations on the east coast. No further word from 'Anni', but the crew on 'Teddy' overwintered at Angmagsalik.

This website includes many fascinating Arctic and Antarctic expedition photos:
https://bildearkiv.npolar.no/fotoweb/archives/5000-Bilder/?q=isachsen