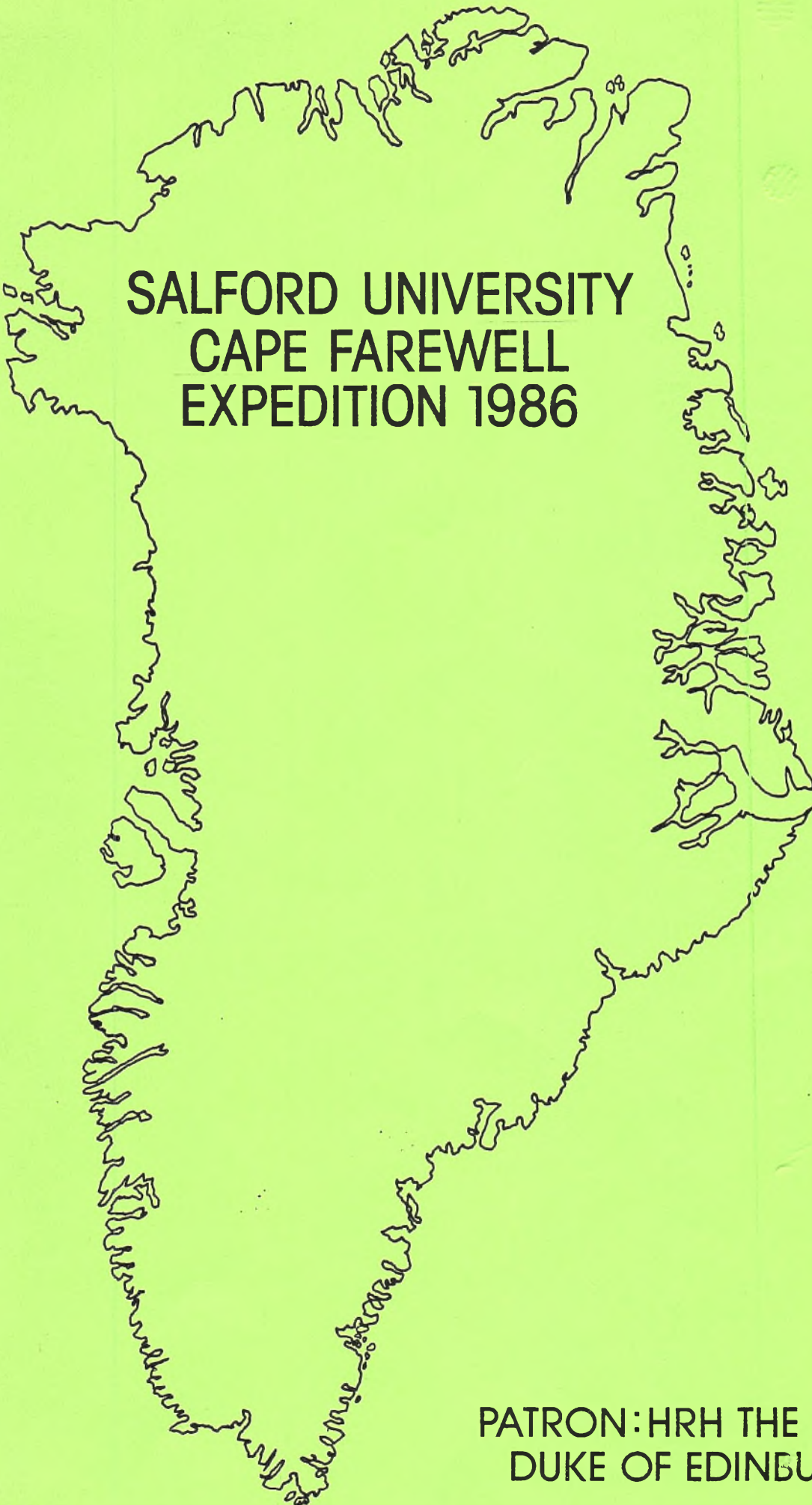




SALFORD UNIVERSITY CAPE FAREWELL EXPEDITION 1986



PATRON: HRH THE PRINCE PHILIP,
DUKE OF EDINBURGH, KG, KT

SALFORD UNIVERSITY
MOUNTAINEERING CLUB
CAPE FAREWELL
EXPEDITION 1986

Patron: HRH The Prince Philip, Duke of Edinburgh, KG, KT

Edited by L Turnbull
122 Hart Lane
Hartlepool
Cleveland
TS26 0JY

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Introduction

Between 28th June 1986 and 23rd August 1986, an 8 man expedition from Salford University Mountaineering Club spent 5 weeks on the eastern shore of Kangerssuneq Qingordleq, north of the Ilua in the Cape Farewell area of Southern Greenland. During that time they made 16 first ascents, 4 second ascents, made the first British ascent of Igdlorssuit Qaqat (2292m) and made several ski and sledging journeys in the land between Lindenows Fjord and Prins Christians Sund.

This report describes how the expedition was organised, selected equipment, organised the food rations, describes the climbs achieved and explains how it was financed.

Expedition Members

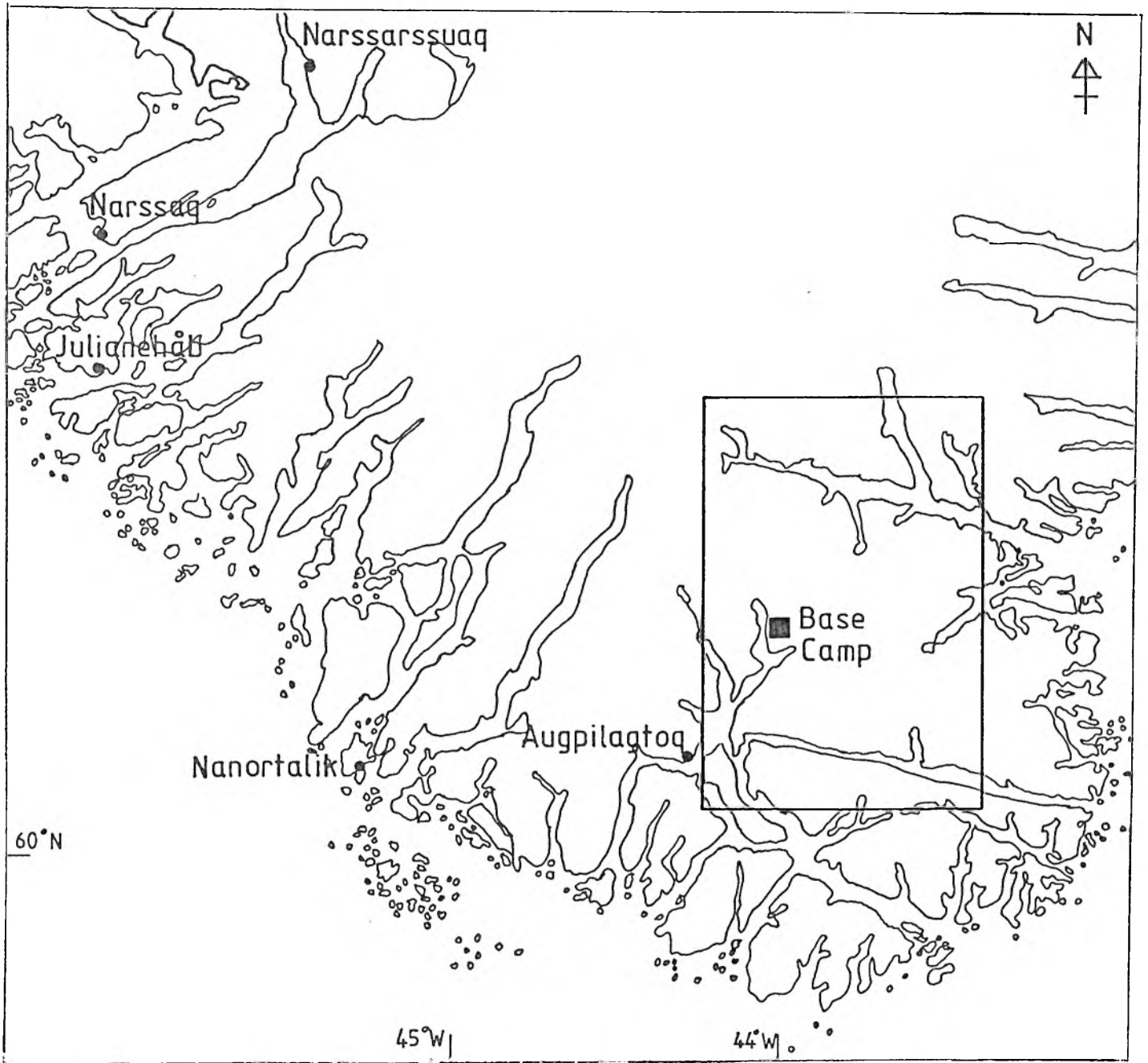
Les Turnbull - Computing Officer. Leader.
Andy Leslie - Teacher. Equipments Officer.
Rob Cooper - Mechanical Engineer. Treasurer.
Martin Sluce - Teacher. Food & Stores Officer.
Stas Chobrzynski - Employee Relations Officer. Medical Officer.
-Rawicz
Paul Hodgkins - Electronic Engineer. Radio Operator.
Brian Hull - Mechanical Engineer.
Andy Greenwood - Building Surveyor.



Standing: Paul, Brian, Rob, Andy G, Stas.
Kneeling: Andy L, Martin, Les.

Expedition Timetable

- Sat 28th June - Drive Salford to Glasgow.
- Sun 29th June - Flight Glasgow to Keflavik, via Copenhagen.
- Mon 30th June - Flight Keflavik to Narssarssuaq.
- Tues 1st July - Helicopter Narssarssuaq to Narssaq.
- Wed 2nd July - Ferry Narssaq to Julianehab.
- Fri 4th July - Ferry Julianehab to Nanortalik.
- Mon 7th July - Charter boat Nanortalik to base camp.
- Tues 8th July to - Operating from base camp.
Tues 12th August
- Wed 13th August - Charter boat base camp to Nanortalik.
- Sat 16th August - 5 members helicopter Nanortalik to Narssarssuaq.
- 3 members ferry Nanortalik to Julianehab.
- Mon 18th August - 3 members ferry Julianehab to Narssarssuaq.
- Flight Narssarssuaq to Keflavik.
- Sat 23rd August - Flight Keflavik to Glasgow.



Map of Southern Greenland, showing the settlements visited and the expedition area.

Expedition Aims and Objectives

The aim of the expedition was to explore and climb in the north and east area of Kangerssuneq Qingordleq fjord. The French expedition of 1956 climbed a total of 16 peaks, most of which being first ascents, the largest of which is called Igdlorssuit Qaqat (2292m). This peak is the highest in the Cape Farewell area and it became obvious that this should be one of the expeditions objectives and so make the first British ascent. Igdlorssuit Qaqat means "Big House Peak", so called for at its base lies the remains of a Norse settlement.

The expedition took 4 equipment carrying sledges (varepulks) which were obtained from a previous expedition to Greenland. Training in cross-country ski-ing and the pulling of these varepulks took place over the early New Year in the Cairngorms, making the most of the snow conditions. Once base camp was organised, food dumps were established at an advance base camp on the edge of the ice-cap. The use of skis and varepulks enabled us to maximise travelling distances on the ice-cap. We were the first expedition to use skis and varepulks in Southern Greenland.

Two of the expedition members, Rob and Paul, hold amateur radio licences and set up a base camp radio station capable of transmitting both worldwide and to expedition members on the ice-cap. As Greenland is a fairly uninhabited country, there are very few licenced radio amateurs, so a call sign originating from there is extremely rare. Thousands of people all over the world probably waited hours for the chance to contact a Greenland station, so we gave them this opportunity by being available at set times and on certain radio frequencies on given dates. HF radios require very large aerials and these were initially set up at base camp but were then moved to the west coast of the Kangerssuneq qingordleq fjord for the remainder of the period of occupation. Smaller, hand held VHF radios were used by expedition members to keep in touch with each other while out on the peaks and with base camp. To power the base camp radio we used a normal car battery. However, as the car battery has a limited life we took an Erskine petrol driven generator to recharge it and the nickel-cadmium batteries of the hand held sets.

Travel Report by L Turnbull

Travel to and from Greenland

The Manchester based members of the expedition set off from Salford on Saturday 28th and I drove like a bat out of hell to pick Brian up from Chorley, and Andy L and Stas from Andy's home in Scotby, Carlisle. We arrived in record time, as we were an hour behind schedule and Andy's mum was preparing lunch as our "last decent meal" before we got to Greenland. It was great eating cold chicken, quiche loraine, salads with chilled wine on the back lawn in the heat of a good summer. Rob then took over the driving for the final leg of the journey to Glasgow Airport, in his usual style. Fran, the Deputy President, Finance & Services of the Students Union volunteered to drive the Union van back to Salford for us. He had not sampled our driving before, especially Rob's, and so he regularly asked for a turn at the wheel.

We arrived at the Airport in good time for the flight, but learnt that there was a minor complication and we had not been booked on the flight to Keflavik. However, our baggage was allowed to go on the original flight, and we would have to fly to Heathrow, then to Keflavik to arrive a couple of hours later. OK, this seems fair enough we thought. At this time Brian thought that Rob's short haircut was most suitable for a 2 month expedition and he wanted one. So, in the middle of the departure lounge, Rob set to work on Brian's blonde locks. The time of the flight to Heathrow was at 6:00pm, but as it neared 5:30 pm we had still not heard on the tannoy to go to any departure gate. Getting a little anxious, we made enquiries at the Icelandair desk. "Oh", she said, "That flight is only during weekdays". "What", I said, "How on earth do we get our connecting flight to Greenland". At this time I think I was getting a little irate.

Anyway, 1 hour later saw the 8 of us having a meal at the Carvery in the Excelsior Hotel at Glasgow Airport. At this time we were still wearing T-shirts and shorts as our main luggage had long gone to Keflavik. We received some funny looks as we walked into the Carvery, what with Brian and Rob looking like 2 Buddhist monks and the rest of us the aftermath of a beach party. I distinctly heard one woman saying to her husband "And you asked if you should wear a tie!". So we had another "last decent meal" before we got to Greenland c/o Icelandair and waited for further news. We had a great meal with plenty of Roast Chicken, Pork, Beef and vegetables all washed down with a couple of bottles of the best wine.

Late evening arrived, we were getting very merry and the woman from the Icelandair desk arrived to give us the news. "Icelandair will put you up in this hotel for the night, then at 10:00am tomorrow you will have to get the flight to Copenhagen". Puzzled looks on all our faces. "Isn't that the wrong direction?", suggested someone. She continued, "Then two of you will have to

immediately get the next flight to Keflavik, while the other six get the flight at 10:00pm". "When you say immediately, how long do we have to change flights", I said. "About 20 minutes", she said. Even more puzzled looks on our faces. Martin and I then volunteered to be the unfortunate 2, and so we continued with our "last decent meal" before we got to Greenland, and had another slice of gateaux.

Next morning, we all woke up to a slight hangover but soon recovered enough to tuck into our "last decent meal" before Greenland". What started out to be a simple flight to Iceland, ended up being a mini world tour. Who knows where we would be this evening,... Canada, Alaska, Australia? Making the landing approach to Copenhagen we all thought that the plans were running too smoothly; surely something else must go wrong. I then told one of the Air Hostess's that 2 of our party need to get the next flight to Keflavik, so she had a word with the Captain. Martin and I were then summoned to the front of the plane so that we could get off first to avoid the queues and to waste no time. The plane landed, the doors opened, we walked off first and there waiting for us was an Immigration Control Officer. "You two!, follow me", she said. We looked at each other and did not argue as she was bigger than both of us. As we went into the van, she set off to the other side of the Airport, not bothering to check if the doors were shut or we were seated. As we were thrown around, it brought back fond memories of Rob's driving. We boarded the plane in one piece and as soon as we were seated, we were on our way to Keflavik, ..., we hoped.

Meanwhile, the rest of the lads were having a good time in Copenhagen, taking in the sights as Andy L had been there the previous year and knew his way around. Apparently, Icelandair looked after them well and gave them food vouchers, which they duly spent on Carlsberg beer and Danish pastries. They arrived at Keflavik in the early hours of Monday morning and then again Icelandair looked after them, by accommodating them in the Hotel Loftleider. They had no change of clothes and still wearing shorts and T-shirts, as they had not been able to collect the luggage from the Airport.

There were no complications as the 2 groups met up in Reykjavik and boarded the flight to Narssarssuaq. We were looking forward to getting good views of Lindenows Fjord and the intended expedition area. However, the sea mist increased and we only saw tantalising views of the bigger peaks. Regular passengers to Narssarssuaq know of the difficulties in landing and the sea-mist sometimes means flights have to be detoured to Sondre Stromfjord or even Frobisher Bay in Canada. Our mini world tour seemed to be coming into fruition.

For the return journey, it was a wise move getting the Monday flight (instead of the Friday flight) to Keflavik because we were told that it was the bicentennial of Reykjavik and there were a lot of celebrations planned over the next few days. Although we arrived in Reykjavik at about 11:00pm we pitched the tent at the

camp site on Sundlaugavegur next to the swimming pools, dumped the luggage and then headed into town for the festivities. We were told that we missed the best bit, a 200m long cream cake!, but the firework display was spectacular enough.

The return journey from Keflavik to Glasgow was not as eventful as the outward journey, apart from an overbooked flight and a drugs search and we were back to native soil only a couple of hours late. There we were met by parents and girlfriends and whisked us back to home comforts.

Travel within Greenland

It was Monday 30th June when we arrived at Narssarssuaq airport only to find that the connecting ferry to Julianehab was fully booked and that the next one was not until the following Friday. We were somewhat dismayed, but our immediate priority was to sort out our luggage and find somewhere to sleep for the night. We learnt that there was a Fjeldstationen (Field Station/Youth Hostel) virtually at the end of the runway, so we scrounged a lift off one of the Gronlandsfly workers in a pick-up truck, to take us all there. We were lucky, the Fjeldstationen had plenty of beds empty, so we booked in for an indefinite length of time. We later found out that it was owned by the Danish firm DVL, who organise trekking holidays to all parts of Greenland.

Once established, we received a lot of help from the Hut Warden who had the timetables and prices of the ferries and helicopters operating from Narssarssuaq. She informed us that to get to Julianehab without too much of a delay, we would have to get the helicopter to Narssaq and then the ferry to Julianehab. Better still, she offered to do the booking arrangement for us. This proved to be the best option, as it meant we would eventually arrive in Nanortalik on Friday 4th July.

Next morning the helicopter flight and ferry were booked at the Gronlandsfly desk at the airport and we were soon on our way. However, we learnt that the luggage allowance for the helicopter was only 20 kgs per person and we were going to be way in excess. Anyway, with a bit of arranging and "selecting" the heavier items, our excess baggage was only 20 kgs for the 8 of us, and we had to pay DKK230 duty. Meanwhile, I reported in to the Security Office at the airport with the letter of expedition approval from the Ministry of Greenland, just to say that the expedition had arrived and was on its way to Nanortalik. The Security Officer proved to be very helpful, especially with regards to the ice conditions around Nanortalik, as we wondered if we would be able to get to our intended expedition area. There are apparently 3 ice patrols per week and the pack-ice that flows down the east coast, around Cape Farewell and up the west coast is plotted on a large scale map. It looked promising and we should be able to get to the expedition area with no trouble if the good weather stayed.

Because we would be getting the ferry at about 9:00am the next day (Wednesday 2nd), we pitched our Vango Hurricane tent (c/o Andy G) just outside the helicopter station perimeter at Narssaq, filled it with all of our luggage and went for a walkabout. That evening, we decided to have our "last decent meal" at the Restaurant Ujuat, before bivvying for the night.

Next morning, fully laden, we walked through Narssaq to the quayside to board the ferry "Aleqa Ittuk". We had to negotiate a lot of ice that day and the captain showed his skill with the ship's manoeuvrability. At times it was so dense that we had to force our way through. Rather than ramming the ice head-on, we would give it a glancing blow, mount the ice and use the weight of the ship to push the ice aside. It was a most enjoyable journey, taking pictures of the superbly sculptured icebergs with delicate arches and majestic ice towers. A 4 hour journey took us to Julianehab, where we spent a couple of days sightseeing and discussing the possibility of getting to our intended expedition area.

On Friday 4th at 9:00 am, we again set sail on the Aleqa Ittuk for Nanortalik, where we hoped to rendezvous with the expedition freight; we arrived at just after 6:00pm.



Encountering icebergs on our way to Julianehab

We had not hired a boat in advance with KNI to take the expedition to our intended base camp, as our circumstances may have changed, so we tried to do our own arrangements at the quayside with some of the fishermen. With hindsight it will be easier to do the chartering of a boat entirely with KNI, as they know what size of boat would be suitable and which ones were available. Because we had a lot of freight, mainly due to the skis and varepulks, we had to hire a larger boat, so KNI put us in touch with Nico Hansen who owned the boat "COLO". The boat was most suitable for our needs and we agreed on a price of DKK 7000 for the return journey.

On the morning of Monday 7th July we had a lot of final arrangements to make. Last minute shopping, paraffin and petrol from the garage, payment of the outward freight costs and booking of the return journey to Narssarssuaq. Three of us decided that we would prefer to return by ferry, while the other 5 wanted to take the helicopter and so spend more time for walking and seeing the old Norse settlements near Narssarssuaq. At mid-day, we set sail for the expedition area and we arrived approximately 8 hours later.

The COLO arrived early on Wednesday 17th August to pick us up, because a storm was brewing and Karl, the captain, wanted to get back to Nanortalik before the worst of it arrived. We had not started the packing but by 1:00pm we had furiously packed the crates and the remaining tea-chests. Upon entering the Ilua area we felt the force of the oncoming storm and the journey became quite rough. As we sailed down Torssukatak on the east of Pamiagdruk and then headed into open sea, the sea became increasingly rougher and we were all turning a funny colour. We could not stay below as it seemed claustrophobic and most of us crammed into the cabin as the boat pitched and rolled to an alarming degree. Only Paul stayed down below in his usual horizontal position inspecting the insides of his eye lids. The boat hugged the coastline as much as it could and at times sailed through narrow passages between small islands to gain shelter and calm water. We arrived back at Nanortalik by 7:00pm and there waiting for us was Steen Madsen who owns the "MALUK" store and he offered to take us to the Hotel Kap Farvel.

Over the next few days we finished off the packing in the KNI warehouse, paid for the return journey, then sorted out the excess luggage into a spare rucksack because 5 of the lads were booked on the helicopter and did not want the trouble we had on the outward journey. Rob, Paul and myself were booked onto the ferry (again the Aleqa Ittuk) and apart from having our own luggage (1 large rucksack, 1 small rucksack plus 1 holdall) we had to share carrying the extra rucksack, which must have weighed at least 35kqs. The journey back to Narssarssuaq, via Julianehab, was easier than the outward journey as there was not as much ice in the fjords. We arrived at the quayside in Narssarssuaq on Monday at mid-day and then hitched a lift to take us to the Fjeldstationen where the others were supposedly staying. Just as we passed the Arctic Hotel we saw Stas, Andy L and Martin heading

towards the hotel with all their luggage, so we indicated to the driver that we wanted to get off and headed to the hotel for a coffee. The 5 who had been in Narssarssuaq since Saturday had seen everything that was to be seen and decided to get that days flight to Keflavik. It came as bit of a surprise, but we decided to do the same and before we knew it we were saying goodbye to the glaciers of Greenland.

Transport of Freight

In organising the shipping of expedition equipment to Aalborg in Denmark, we dealt with The Escombe Group of North Shields who collected the 3 crates and 13 tea-chests from the packing room at the University.

All crates and tea-chests were marked in the following way:

SALFORD UNIVERSITY
CAPE FAREWELL
EXPEDITION 1986
NORTH SHIELDS
AALBORG
NANORTALIK

together with the number on the Fragtbrev (Freight Letter).

After reading previous expedition reports, we learnt that some expeditions had to wait several days in Nanortalik, while the boat that was carrying the freight could not get in because of the ice conditions. Other expeditions had been advised to get the freight to Aalborg by the end of April, whereas we had been advised the end of May. This meant that KNI had 4 weeks to get the freight to Nanortalik, and to me seemed rather too close for comfort. However, KNI insisted that the expedition freight would arrive in good time before the expedition members.

Upon arriving at Julianehab we checked in at the KNI office to confirm our seats on the ferry to Nanortalik and to learn if the freight had arrived. Much to our surprise and delight, it had arrived on time and was in the warehouse in Nanortalik. KNI knew that the expedition was on its way and although we arrived in Nanortalik on Friday evening, the office opened up on Saturday morning so that we could collect a tea-chest full of food, so that we did not need to buy any and to last us through the weekend.

Upon our return to Nanortalik, we managed to get the freight down to the 3 crates and only 3 tea-chests. We decided to include some of our personal belongings, eg ski boots, Koflach boots, climbing hardware and excess clothing that we did not need for our time in Iceland.

Points worth noting

The Sommerfartplan (Summer Timetable) of Gronlandsfly can be obtained from KNI and shows the days on which "Special Fare" or "Green Route" operates.

On special "Green Route" days, the cost of helicopter flights are substantially reduced to become only slightly more expensive than the ferry.

There are about 5 tea-chests to 1 cubic metre.

The Sejlplan passagererskibe Vestgronland (Ferry Sailing Timetable of West Greenland) is obtainable from KNI.

In 1986 the cost of sending freight from Denmark to Greenland was DKK 1152.50 per cubic metre and DKK 587 for the return.

The outward expedition freight consisted of a total of 4.52 cubic metres and weighed 1000kgs.

The return expedition freight consisted of a total of 1.69 cubic metres and weighed 700kg.

KNI have a virtual monopoly on the hire of fishing boats.

In 1986 the cost of paraffin in Nanortalik was DKK 4 per litre.

When freighting outboard engines, make sure there is absolutely no petrol in the tank. We had some food polluted because of this.

We would like to thank the following individuals and companies who helped with the shipping of the expedition freight.

Mr D Nichols Whitehead Bros Ltd Manchester	Supplied tea-chests.
--------------------------------------------------	----------------------

Mr K Bradley The Escombe Group North Shields	Delivery of freight to Aalborg.
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Settlements visited in Southern Greenland by P Hodgkins

There were 5 stopping off points on our journey through Southern Greenland and each settlement had a different character to the others. The settlements were part of the expedition in their own right and because of this, deserve a mention in the report.

The first settlement you encounter upon arrival in Southern Greenland is Narssarssuaq, which is where you will land. If the sky is clear and you can see out of the windows of the plane, you may be forgiven for thinking "where is the town"?. Narssarssuaq IS the airport. The terminal building is basic and houses the control tower together with customs and passport control, which may not necessarily be used. You may find yourself, as we were, just given our bags and let loose on the country. There is also a gift shop and post office in the same building. Outside is a road. To the left it takes you about a mile to a dead end, or two thirds that distance to the Fjeldstationen which stands alone just past the end of the runway. To the right you will be able to travel the same distance before arriving at the dock where you catch the ferry to connect you with the rest of Southern Greenland. On the journey to the dockside you pass a few disused army barracks, the occasional house and the Arctic Hotel. This is the other place where you can stay in Narssarssuaq but it is a lot more expensive than the Youth Hostel. There is a small souvenir shop inside that smells of commercialism and a life size model polar bear. You can spend all your holiday here if you have the money and may go on guided walks to see a real glacier and real mountains, or just take the sight-seeing helicopter ride. The cafe inside does serve good coffee and cakes and is worth considering after a few weeks in the wild. Near the hotel, a cluster of houses and a shop complete the settlement.

The next settlement we were to stop at was Narssaq, which like most settlements can be reached by ferry or by helicopter. It has a population of over a 1000 and after Narssarssuaq it looks like a city. The wooden houses are randomly placed along the roads and are painted various colours to give a very picturesque effect. The town is quite well supplied with shops which are mainly centred around the town square. It may take you a while to realise what are, and are not shops, as they often just look like large houses from the outside, but from the inside there is no mistaking. They could be any supermarket in a western european town and seem to sell a wide variety of products from food to clothes to hi-fi. There is also a couple of clothes shops, a bank, a post office and an electrical shop where you can stock up with compact discs and video tapes. There are even places to eat out including a burger bar complete with juke box and video games to attract the teenagers. The pace of life seemed leisurely while we were there and everyone was enjoying the summer sun.

Julianehab was the largest settlement we stopped at, with a population of over 2000. There is a big communications centre on the hill overlooking the town, which handles telephone, radio, television and ship to shore traffic. It is run by Danes who are

trying to train the Greenlanders to do the job, but seem to be having difficulty as most of them move elsewhere when they reach a high level of education. The rest of the town is fairly westernised, perhaps due to the large Danish influence. Notable places include the fountain which we were told was the only one in Greenland, and the museum which includes a traditional house built from stone and turf. The bakery, which is near the fountain, does a good line in pastries which can be eaten whilst on park benches facing the fountain and watching the world go by, provided you can survive the mosquitoes. The town has quite a large hospital and also a number of tower blocks which show signs of graffiti, etc to prove that the country is not immune to urban decay.

You will probably find almost anything you are looking for in Julianehab and will be made very welcome. We stayed a couple of nights in the Youth Hostel and met quite a few friendly locals, including Herluf and Anny Rasmussen (who have been given a mention in the radio section), and made our stay very enjoyable and educational. If you feel lazy or are in a hurry to get somewhere, you can take any one of the 30 taxis in the town, but considering that you can walk from one end of town to the other in 10 minutes, it may seem a bit extravagant. The way in and out is by air or sea.

The regular ferry service took us from Julianehab (Qaqartoq in the local tongue) to Nanortalik, which was our last taste of civilisation before our departure for base camp. The settlement is somewhat smaller than the places previously seen and has a population of about 1000. The locals are friendly and much less used to seeing visitors except for the occasional expedition or cargo ship passing through. In spite of this, there are a couple of hotels and we were able to negotiate a fair price at the Hotel Kap Farvel by sharing rooms and some of us sleeping on the floor. The Danish manager/chef is a large imposing gentleman and we were a bit unsure of the low price quoted for our 3 night stay, but after questioning him twice, we decided to risk it, although still unsure. The price was correct DKK 1200 and the breakfasts were excellent. The place is definitely worth considering if staying in Nanortalik.

The rest of the attractions include a small fish market, the shops, the tourist centre, the museum and again the typically colourful Greenland settlement itself. There are 2 large stores selling food and clothes, etc (Brugsens and the KNI store), and a smaller one (Maluk) which seems to be open longer hours. The owner of the smaller store, Steen Madsen, is a helpful and friendly Dane, who is also the local tourist officer. He was very keen to show us around and helped us buy some of the local soapstone carvings, and he was also pleased to take the generator off our hands, which saved us some shipping costs. The museum is worth a visit and at the fish market you can stock up with several varieties of fish and numerous parts of seals; the remains of which you will see and smell around the town.

The tourist centre contains a bunk house which can be used as a cheaper form of accommodation than the hotels and with the money you save you may like to visit the local bars or discotheque. The alcohol is very expensive but this does not seem to bother the Greenlanders who consume it at a fair rate. Pay day is supposed to be a day to keep out of the bars, as a great many people end up none too well for the drink. Violence is common but generally is not malicious and if you are careful, it can be avoided. The advances of the local women may not be so easy to escape!

Nanortalik was supposed to be our last contact with the outside world for 5 weeks, but due to the generator and boat engine trouble, an unexpected journey to the settlement of Augpilagtoq was called for after 2 weeks at base camp. This was a very enlightening visit which gave us an insight as to what life in the more remote places is like.



The land of towers

We set off initially in the afternoon of a seemingly calm day, for the 28km journey down Kangerssuneq Qingordleq and into the Ilua fjord. We carried food, sleeping bags, stoves, the car battery, the generator and the 4 of us (Stas, Andy G, Rob and myself) clad in full Goretex and life-jackets as we limped slowly forward until we rounded the corner of our sheltered fjord. Here

we met waves of up to a metre, which was too much for our dinghy and put us in severe danger of sinking. We were forced to give up and retreat as falling into the icy water was almost certain death.

On the second attempt we went as far as the abandoned settlement at Nuk and stopped for a rest. The place was littered with graves, many of which were open to reveal whole skeletons. We decided not to stay long and were soon underway, heading somewhat reluctantly out into the waves of the open fjord. Luckily our first sign of civilisation came soon after in the form of a Greenlander in a small fishing boat who realised we had problems and picked us up. He spoke no English and was obviously quite amused at the situation. We were deposited in the harbour and thanked him as best we could in a language he did not understand.

After a number of enquiries to the gathering curious crowd, we found that the only people to speak English were the schoolteacher and her husband who had just returned from a holiday with relatives in their native country of Denmark. They were very helpful and soon managed to translate the problems we had into Greenlandic and find someone who could repair the boat engine from the 200 strong population. He was already having a look at it and was very amused at its age. No chance of spare parts here!

As it was the school holidays, we were allowed to stay in the school house with all its comforts of home. The idea of having a shower in the middle of our expedition was very appealing. After leaving our gear we went to see how the engine was progressing and discovered that it was beyond repair. The gears were ruined and there was water in the oil. All we could do was to replace the oil and hope nothing else goes wrong.

As for the generator, we were able to use the school workshop and some electronics teaching kits to effect repairs and we also charged our car battery. The rest of the evening was spent in the company of Elisabeth and her husband Hello, who is a hunter and had some very interesting stories to tell.

On Sunday morning we went to church as a matter of courtesy and tried our best to sing along to some of the hymns, without much success. Most of the lines had only one or two very long words filled with K's and Q's and were impossible to pronounce.

We were lucky to arrive when we did as it was their film day and they had borrowed a film and projector from another settlement. The film was subtitled in Danish and had a summary every now and again in Greenlandic, but the soundtrack was still in English, so we were treated to a free viewing of "Gremlins" in the evening. Between church and the film we had a good chance to look round the settlement.

This was the smallest of the settlements and was less westernised because of this. As mentioned already, English is not spoken at

all but nevertheless everyone was friendly. The typical haphazard arrangement of brightly coloured wooden houses is soon noticed and there are no cars or roads to be seen. One of the most noticeable things is the water supply which is just a large pipe running from a nearby stream to the middle of the settlement. Locals just fill up their containers from it and the children can be seen dragging heavy 5 gallon containers up the hill. The rest of the settlement contains the necessary shops and a church and that is about it for Augpilagtoq.

It may initially seem that the settlements are quaint places but too quiet to live in, but after spending a few days in them, like us, you will be tempted to return.

Useful Addresses

Ministeriet for Gronland Hausergade 3 1128 Copenhagen K Denmark	Expedition permit.
Geodaetisk Institut Rigsdagsgarden 7 1218 Copenhagen K Denmark	Maps and oblique aerial photographs.
Greenland Telecom Struenseegade 7-9 2200 Copenhagen N Denmark	Radio systems in Greenland.
Dansk Bjergklub Expedition Committee Sremandsvej 1a 2730 Herlev Denmark	Expedition information.
The Danish Tourist Board UK Office Sceptre House 169/173 Regent Street London W1R 8PY	Tourist information.
Gronlandsfly Head Office PO Box 1012 3900 Godthab Greenland	Fares, dates and times of helicopter flights within Greenland.
Icelandair 73 Grosvenor Street London W1X 9DD	Fares, dates and times of flights to Greenland.
Fred Olsen Travel 11 Conduit Street London W1R 0LS	Fares, dates and times of flights to Greenland.
DVL Rejser Kultorvet 7 1175 Copenhagen K Denmark	Trekking holidays to Greenland.
Kallaalit Niuerfiat 3922 Nanortalik Greenland	Fares, dates and times of ferry services in Southern Greenland. Costs of hiring fishing boats.

Kallaalit Niuerfiat
Gronlands Handel
Umiartortitsivik
Trafikvirksomheden
Gronlandshavnen
PO Box 8100
9220 Aalborg Ost
Denmark

Freight costs to and from Greenland.

The Escombe Group Ltd
Albert Edward Dock
North Shields
Tyne & Wear
NE29 6DU

Delivery of freight to Denmark.

Leman Ltd
Northside Road
Bradford
Yorkshire
BD7 2BA

Delivery of freight to Denmark.

A personal account of the expedition by L Turnbull

After paying the freight costs at the KNI office in Nanortalik, we hired a fishing boat to take the expedition to our intended base camp, some 100kms away close to the ice-cap. Although the fishing boat was about 10 metres long, with the 2 crew, 8 expedition members, 3 large crates, 13 tea-chests and 3 drums of fuel we were fully laden and the proposed journey looked worrying.



Nearing Kangerssuneq Qingordleq fjord

It was exciting as we neared the expedition area, identifying prominent peaks from our maps and the aerial photographs. The largest peak in the Cape Farewell area is Igdlorssuit Qaqat (Big House Peak, 2292m), was the expeditions main objective to climb and as we sailed through the inner fjords, the peak was seen capped with cloud and it looked daunting. The peak was on the east coast of the Kangerssuneq Qingordleq fjord, bordered by a huge glacier and by a delta formed by the meltwater stream of another glacier to the east. We established base camp on the southern shore of this delta from where we had superb views of peaks and glaciers to the east (our gateway to the ice-cap) and peaks and valleys to the west.

It was hard work moving the crates and tea-chests from the boat to the flatter area on the hillside, and we nearly lost some over the side. The whole of the next day was spent establishing the big mess tent and sorting the food into more manageable packs. The food was split into 2 categories, base camp food and mountain food. Mountain food consisted of light and dried food and base camp food was tinned and more substantial.

The following day was very windy and we were woken up by cries of help from Brian. He and Andy G pitched their Super Nova next to the mess tent and in the early hours they heard a lot of crashing. He stuck his head out and saw that the mess tent was about to take off, so he grabbed at it and nearly ended up hang-gliding into the fjord. The only way we could make it stable was to weight the valance with a lot of rock and to lash it to some boulders. Martin placed a piton in the slab at the back of the tent and Stas kept saying more rock, more rock! We must have moved at least a ton of rock that morning. Whenever the weather did get a bit too windy, we all took turns to sleep inside the mess tent so that the others could be called for help.



Base camp and looking towards the eastern col

We had been warned about the mosquitoes, as they exist in vast numbers all over Greenland. How true this was. We were hit by a

constant barrage of attacks, so we had to wear nets over our heads and thick pile jackets that they could not penetrate. Andy G took along an electronic device, which gave off a high frequency hum. It was supposed to be the same frequency signal a mated female mosquito gives off to ward off the advances of males. Although very few mossies landed on him, it seemed to attract a lot more. This device was soon discarded and he had to rely on more conventional means of netting, mosquito repellent and thick clothing.

The first week was spent ferrying mountain packs, skis and varepulk to the top of the ice-fall. This was no easy task as we had to negotiate crevasses and ice towers at the tricky part of the glacier. To facilitate ease of access, a 100m fixed rope was established to aid crossing the precarious path over boulders wedged in the crevasses and on loose rock. Once on the top of the ice-fall we could put on our cross-country skis, go over the eastern col and then we were off.

There had been 2 previous expeditions to this particular fjord, a French party in 1956 and Cambridge University in 1975. Most of the peaks surrounding base camp had been climbed so we had to climb further afield. This was why skis and varepulk were used to allow us to travel the greater distances to seek unclimbed peaks. There was no strict division of members for climbing certain peaks, rather a free for all and you could team up with who you liked, and for as long as you liked. This worked very well and most of us climbed with everyone else. Brian and Andy G were the first to boldly go where no man has gone before and took marker flags to mark out safe routes on glaciers. Rob and Paul had a little difficulty establishing the base camp radio station as they could not get the signals to Britain.

I do not know whether it was all the exercise and the clear air, but all of us seemed to suffer from a sleeping sickness. No matter how hard we tried to get up for an early start, we just could not and slept in till 9:00am. Perhaps it was because of the long day and only a few hours of twilight that we seemed to be getting to our sacks very late.

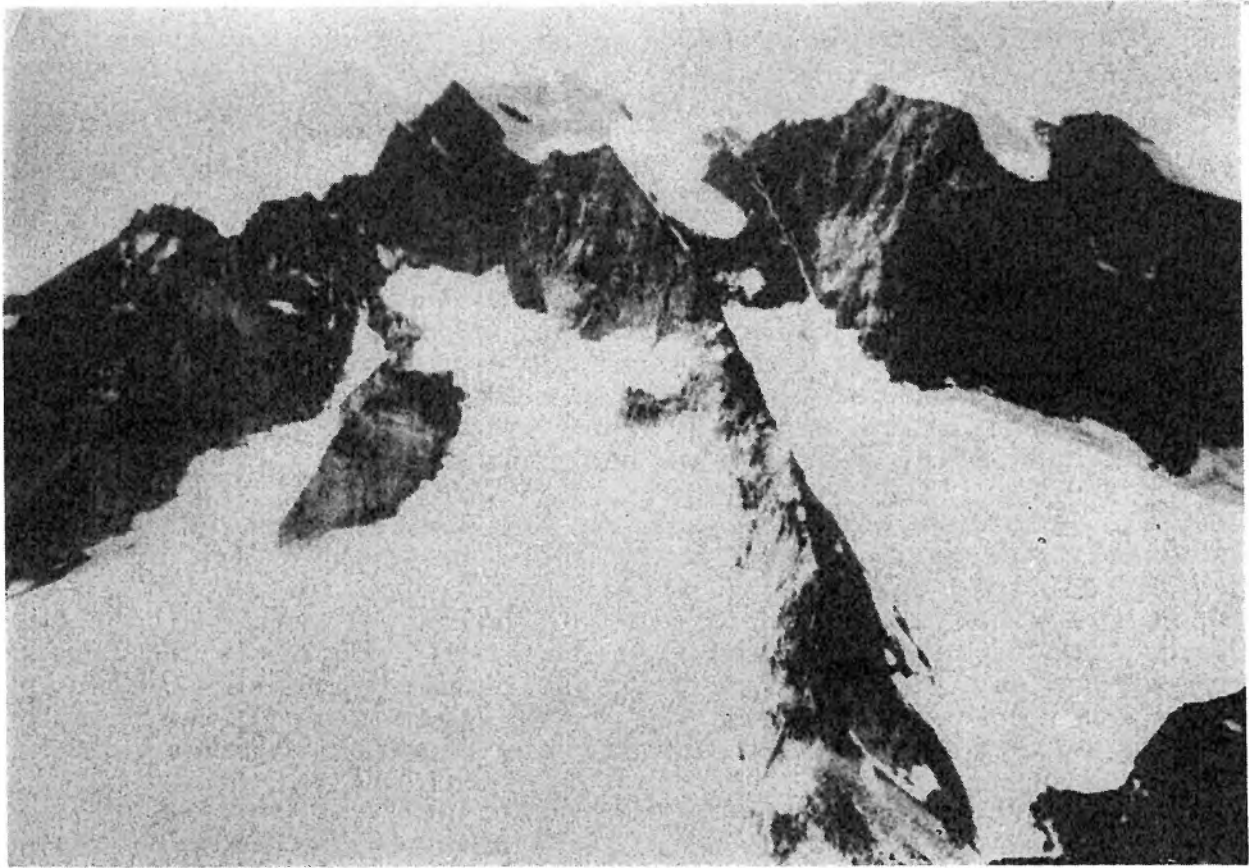
The glacier up to the eastern col seemed to be changing daily and exposing more rocks and as a result the ice-fall became increasingly difficult to get to the top food dump. By the end of the expedition, we had estimated that about 3m of snow had melted from the lower part of the glacier. What was once a scramble up the ice-fall, now became a delicate and unnerving experience and we hoped that none of the overhanging ice platforms would give way. The second ice step was like climbing an ice fin and you emerged on a narrow top some 2m from the rock buttress with a yawning gap below. Nearing the end of the expedition, Martin found an easier route to the top dump to avoid the ice-fall completely by going over the top of the rock buttress. The snow plod up to the rock was a lot steeper, but much safer. But again the banked snow melted rapidly and some care was needed to get on and off the rock.

The prominent glacier at the top of the fjord proved to be a deceptively long distance away as Andy L and myself later found out. It was about 4kms away and quoting Brian, "about as big as Malham Cove". One day we had a leisurely journey towards the glacier taking pictures of the bird colony and the waterfalls. We were wanting to get as close to the ice cliff as possible to confirm Brian's estimations. But we soon changed our mind when a large chunk of ice broke off when we were 200m away. Just as we were turning back, a crunch was heard from the engine and we stopped moving. With vain attempts at trying to find the fault without any tools, our only course of action was to row back. It took us 2 hours to get back to base camp. When we looked at the engine on the beach we found that it was the shear pin that snapped and not the gears as we had thought.

We generally had good weather on the expedition and we were reasonably accurate in predicting what the weather was going to do over a 2 to 3 day period. Often there was a low cloud level, but it invariably broke up by mid-day showing glorious blue skies above. Some days however the cloud cover did not break and stayed most of the day. The hours of darkness became increasingly longer after our 5 week stay and the night-time temperatures soon dropped to below freezing. One morning we woke to find pancake ice covering the fjord.

The days came and went and so did the members. Being some 28kms from Augpilagtoq down the fjord, we felt very much isolated and had our own little community. Base camp felt positively crowded when all 8 of us were there. I recall on one occasion when Martin and myself were on our own at base camp for 2 days and then by the end of the third evening, the "rabble" returned, destroying the harmony and adding more mess to the mess tent. Well, that is how it gets its name. The days rapidly passed and then we realised that there was just over a week left at base camp and we had not fulfilled the main expedition objective, climbing Big House Peak. There was now 6 of us at base camp and we decided to go for it.

However, having 6 people on the same route on a mountain, to me sounded risky, and so we decided to split up into a group of 4 and a group of 2. Brian and Martin decided to attempt the north east ridge and the other 4, Andy L, Paul, Andy G and myself by the south west ridge, opposite base camp. Brian and Martin set off that afternoon for the long journey up to advance base camp, so that they could get an early start the next day. The rest of us set off at lunchtime the next day. We took the inflatable dinghy to the other side of the fjord to save us a couple of hours walk around the delta. The first 500m of climbing consisted of dense shrubs and we had to do a lot of gardening. The rock was of a very poor quality and more often than not it would come off in your hands.



Big House Peak showing the south-west and north-east ridges

It was infuriating climbing on such poor rock and it tried our patience on many occasions. We climbed to about 1420m up the ridge (we knew this because we were horizontal with the top of the peak behind base camp), where we kicked a platform out of the rock and then set about cooking the evening meal. The view from the ledge gave us a panoramic sight of the Cape Farewell area and we could see the peaks and fjords we had passed 4 weeks earlier. On looking down on base camp we could make out the orange mess tent; a small pinprick of colour amongst the green hillside. We could just make out 2 figures walking along the delta to base camp; it was Rob and Stas returning after their 5 day ski-ing journey. We left them a message in the mess tent to make a radio schedule that evening and we duly contacted them on the VHF radio and explained why we had set off without them. They were a little peaved that we had decided to go for it, as they wanted to have a try at the mountain, but nevertheless wished us luck and arranged 2 radio schedules for the next day. As a storm was brewing up in the west and heading this way, we lay in our bivvy bags and wondered if we had to call off the attempt for the moment. However, it came and went and the next day was ideal.

The rest of the climb up the ridge proved just as traumatic as the previous day and our tempers were becoming frayed. We gained

the highest point of the ridge and found a cairn built by the French party of 1956. The only way left open to us was to abseil onto the glacier and then to climb the steep snow basin to gain the summit ridge. The 4 of us then discussed what to do. It became obvious that Andy G and myself had lost heart and did not fancy the summit push. Andy L and Paul wanted to go for it, but they knew it would take a long time because of the steepness of snow to gain the summit. They decided to travel as light as possible and dump their excess clothing on a suitable bivvy ledge. We all realised that if they did get to the summit, they would not get back to the south-west ridge until late that evening or early the next morning. The plan was for Andy G and myself to go back to the first bivvy ledge, collect the sleeping bags and food, etc and bring them up to the high point of the ridge. On commenting later, Paul and Andy L said that they felt totally cut-off when they abseiled 150ft to the glacier and then hauled in the rope. They were now committed. On the other side of the mountain Brian and Martin were having their own problems, but at least the rock was more stable.

That evening was clear and we witnessed a spectacular display of the Northern Lights. Emerald greens, yellows and blues danced in eerie shapes over the whole horizon. In the late hours we regularly shouted to see if they were on their way down, but nothing could be heard, so we settled in for the night. That night I slept restlessly, as I must admit I was worried and I kept getting up to see if I could see their headtorches. Nothing could be seen. Early next morning we gave another shout and we heard a call from the top of the ridge. We were expecting them down below on the glacier waiting for a rope to prussik up. A few minutes later we saw Andy L,... and Martin! How on earth did he get there?; he was supposed to be on the north-east ridge.

Apparently, the 2 climbing pairs met up on the summit within 10 minutes of one another, but Brian and Martin had arrived first. Andy L and Paul must have sensed a tinge of failure to be pipped at the post, but this was put aside and they rejoiced in their achievements and discussed how the 2 routes had been. Brian and Martin had all their gear with them and Brian wanted to stay the night on the summit. Martin was not keen so Paul jumped at the chance. They had a most comfortable night on the summit, whereas Andy L and Martin had a miserable time benighted on a tiny ledge below the abseil point in the cold without food. At first light they decided to climb the steep side of the ridge to get warm. After having breakfast and a brew with us, Andy G and Martin decided to go on down rather than wait for Paul and Brian. As it was a fine day, Andy L and myself decided to wait as there was no great rush. They arrived at the bottom of the abseil point about lunchtime, so we secured the ropes as best we could, as there was nowhere decent for a belay point. We had experienced on previous climbs substantial rope drag, mainly due to the sharp, black lichen. This rock on the ridge proved no exception, so we had to protect the rope with jackets over the edge.



Andy G on the south-west ridge of Big House Peak

Within no time at all, they had jumarded up to us, still bouyant and exuberant from their experiences. The 6 of us met up again at the first bivvy ledge and descended the ridge in roped pairs. I was with Andy L and we had a little route finding difficulty to find the easiest way down. We down climbed some dubious and loose rock and when it was definitely unsafe, I insisted on an abseil to a steep snow patch. On getting down to the snow, I promptly slipped, but as I tried to ice-axe brake it hardly made any impression on my speed of descent. I was fortunately still roped up and I eventually came to a stop after 10m. I was then very angry, so I cursed the mountain and made feeble attempts to try to kill it with my axe. Andy L definitely thought that I had finally flipped my lid; he was always suspicious of ageing men who are going thinner on top. It was a relief to get off the rock and onto the more welcomming shrubs and plants, or so I thought. No sooner had I arrived when the mossies came out to greet me and started to drill for blood. Heaven knows how they survive as there are no animals in substantial numbers for them to feed off. Andy L and myself were some 2 hours behind the others so they set off in the boat back to base camp. We eventually arrived at the beach and shouted "Taxi!"; within 10 minutes Andy G was there to ferry us back.

After a couple of days rest, all of us wanted to go for a final ski journey and try and tick off some of the peaks close to Lindenows fjord and as far east as possible. Five of the lads decided to go together leaving Andy L, Stas and myself for a sledging journey for the next 5 days. There was no pressure at all now, as we knew our time was limited and we had fulfilled the expedition aims. We decided to have a leisurely journey to the peaks north of Prins Christians Sund and only take one varepulk between us. That day was very windy, coming from the south west and helping us up the eastern col. Just over the col the ice became quite hard and so we had to be careful, especially with the wind behind us. Unfortunately, the wind caught Stas and blew him onto a higher traverse line with a steep descent coming rapidly closer. Stas did a classic wipe-out and he was lucky not to have broken anything. He did however twist his knee badly and throughout the rest of the day, the pain increased and his knee became inflamed. He could not ski comfortably with his knee as it was, so he had to make the decision of going back. By now, we were well on our way to Sonderarm, but we decided to turn back. We took all of the heavier items out of his rucksack and put them in the varepulk, then Andy L and Stas would press on ahead while I pulled the varepulk. It proved a long job to help Stas down the ice-fall as we rigged up belay points with the snow anchors, so that he could walk down the rope. It was a long and painful day for Stas and it was a relief to unload our heavy loads.



Ski-ing from Peak 1013m

While we were waiting for the rest of the lads to arrive back, Andy L and myself had another close encounter with an iceberg. A particularly large berg had been in the fjord for several days, waltzing around and finally grounding itself close to base camp. We decided to investigate and possibly take some pictures with Andy L standing on it. We came up close and I placed an ice-axe so that I could steady the boat while Andy L put his crampons on. While we were chatting the berg silently tilted and the axe was now higher than its original position. We thought nothing of it and carried on regardless. The berg tilted again and the axe was now 1m higher with me at full stretch. Quizzical looks on our faces soon turned to that of fright. "Wasn't the axe down here originally", I said. "I think it's going over", said Andy. We had previously a lot of practise with rowing, but on this occasion we excelled ourselves and we would have matched any rower of Olympic standard. Screams of laughter were heard from Stas at base camp. The berg tilted to an alarming degree and the point where Andy was going to step onto it, was now 6m above the water line. Andy had thoughts of what would happen if he was on and it did turn turtle; him running over it till the berg wanted to stop.

The rest of the lads came back over the next few days, telling us how they were blown up one peak and seeing fantastic views of Lindenows fjord and Norrearm. Our running total had now reached 16 first ascents and we thought this an impressive number considering the distances involved.

August 11th was a special day for Paul, as it was his birthday. All of us, except Stas, had gone up to the col for a day of skiing and cleaning up our debris (ie fixed ropes, litter, tents and varepulks). We held the very first Cape Farewell Winter Olympics, by setting up a slalom course with bamboo poles and had a Cresta Run with 4 in a pulk from the col to the tent at advance base. The real celebrations started when we arrived back at the mess tent; Stas had cooked the party meal and brought out 2 bottles of wine we had bought in Nanortalik.

The boat came early on the Wednesday, but we had not finished the packing. We were surprised to find an Englishman on the COLO as crew. It turned out to be Geoff Shaw and he seemed to know that we were in the area and knew a lot about past expeditions. The name sounded familiar but we could not place it. On the journey back to Nanortalik we learned that he was on the Lanchester (Coventry) Polytechnic expedition in 1982 and knew Andy L's friend Neil Dowie.

Equipment Report by J A Leslie

Personal Equipment

Sprayway cagoule
Sprayway salopettes
Polisox, loop-stitch socks
Damart gloves, fingerless gloves & hood
Victorinox Swiss Army knife
Boots (Koflach)
Lightweight boots
Rock-climbing boots
Cross-country ski boots
Cross-country skis & poles
Gaiters
Glacier goggles
Snow goggles
Salopettes
Mountain Equipment goretex bivi-bag
Sleeping bag
Karrimat
Thermal underwear
T-shirts
Mosquito net
Ice axe
Ice hammer
Duvet
Crampons
Head-torch
Large rucksack
Small Rucksack
Shorts
Waterproof mitts
Fibre-pile jacket
General clothing
Underwear
Camera & film
Writing equipment
Hat

Climbing equipment:

Harness
Helmet
Ice screws (2)
Prussik loops
Slings (4)
Karabiners (10)
Nuts (8)
Descendeur

Base Camp Equipment

<u>Item</u>	<u>Qty</u>	<u>Comments</u>
Boat:		
11 ft Avon inflatable	1	
Mariner outboard 15hp	1	
Collapsible paddles	1pr	
Boat inflator	1	
Life jackets	4	
Engine spares:		
Spark plugs, tool kit, WD 40, shear pins and split pins		
Tents:		
Mess tent	1	Constantly used and essential.
Super nova	4	1 tent permanently at advance base.
Fjallraven Q4	2	
Hurricane Vango	1	
Tent spares:		
Spare poles, tent repair kit, snow stakes		
Araldite	2pkts	Could have done with a little more.
Nylon cord	50m	Could have done with more.
Stoves:		
Primus Hiker	4	Constantly used at base camp.
Primus Silent roarer	1	Mainly used for the oven.
Epigas burners	4	Used on mountains and sledging trips.
Tilley lamp, plus spare mantles, pressuriser, etc	1	Used nightly and essential. Spare mantles essential.
Oven	1	Made from an old biscuit tin and insulated with wood.
Climbing Equipment:		
Ropes, 9mm x 45m	10	Correct amount.
Ropes, 12mm x 45m	2	
Tape, 1"	50m	Used for abseils.
King pins	30	Assorted sizes and shapes.
Deadmen	4	Occasionally used.
Deadboy	4	" "
Jumars	1pr	Rarely used.

Equipment spares:

Boot laces, Nikwax,
Koflach rivets,
1pr crampons

Fuel:

Petrol	100lt	Exact amount.
Paraffin	150lt	Some left over.
Methylated spirit	12lt	3lt left.
Epigas, Butane/Propane	48	10 cartridges left.

Fuel containers:

Sigg fuel bottles (0.5ltr)	4	Used for priming Optimus stoves.
Jerricans (10ltr)	2	
Paraffin bottles (1ltr)	4	
Funnel	1	
Siphon tube	2m	For siphoning petrol and paraffin into jerricans. We tied it to an old ski stick we found in Nanortalik.

Water containers:

Roll-up water carriers	4	One punctured by Andy L.
Water bottles (1ltr)	10	For personal use.
Jerricans (10ltr)	2	
Black plastic bags	6	Used for melting snow at advance base and on ice-cap.

Cutlery/Crockery:

Mugs (1pt)	12
Plates	12
Soup plates	12
Knife, fork, spoon sets	12

Pots/Pans:

Frying pans	2	
Tea pot, large	1	
Pan sets	4	Could have done with 2 more.
Large Pan	1	Constant use at base camp.

Accessories:

Baking foil	30m	
Plasticbowls	2	Andy L broke both. It must be
Pan scourers	12	the cold!
Brillo pads	1 box	
Baby can-openers	25	No baby cans to open.
Fairy liquid	2lt	Only used 1lt.
Wooden spoons	2	

Spatula	1	
Whisk	1	
Waterproof matches	1box	Never used.
Lighters	16	More convenient than matches.
Household matches	4	Exact amount.
Mosquito coils	12box	Constantly used; only used 6 pkts.
Jungle formula	16	Only used 8 bottles.
Toilet rolls	40	Stas wanted Tesco's special, but we bought the white, shiny, scrapy paper instead.

Radio equipment:

YAESU FT101	1	Old but reliable.
Erskine petrol generator	1	Developed fault.
Car battery	1	Acid carried separately.
Bamboo poles		
Copper wire		

Emergency Signalling:

Mini-flare kit	2	Never used.
Smoke signal canister	1	Never used.
First-aid kit	1	

Fishing Equipment:

Fishing rods	2	
Reels	2	Both broken by Andy L.
Spinners and feathers		

Boat

An 11ft Avon inflatable and motor was shipped out to Greenland with 2 main objectives in mind. Firstly to act as a means of evacuation of any casualties from base camp to the nearest settlement at Augpilagtoq, 28km away and secondly to increase the area in which the expedition could operate.

In the sheltered waters of the fjord around base camp, the boat performed adequately and provided the ferry service across the fjord to the radio station. However, once in the more open waters of Ilua fjord the boat journey became increasingly hazardous. Waves of 1m were experienced due only to moderate wind conditions caused by the funnelling nature of the fjords. It soon became apparent that the boat could not be used as a means of evacuation in all but perfectly calm conditions. Some difficulty was experienced with the motor due to its ageing state which necessitated myself and Les having a 4km row back to base camp on one trip.

In conclusion, boats are the only means of efficient transport in the Ilua area, however, a substantial rigid dinghy would be much safer than an inflatable.

Base Camp Equipment

Most equipment lasted remarkably well during its heavy and constant use on the expedition. Our 8 tents gave us a wide degree of flexibility allowing relative comfort at base camp (2 people per tent) while allowing the establishment of a permanent tent on the ice at advance base camp. This allowed members to stay up on the ice for longer periods removing the dangerous descent of the ice-fall too frequently and the boring walk back to base camp.



From Peak 1130m looking towards Apostelens Tommelfinger

Both the Vango Hurricane and Super Nova tents performed excellently, however the Fjallraven tents gave some worries due to the strong winds occasionally experienced at base camp. The mess tent which was initially viewed as a luxury by members, was in fact essential in giving us storage area and cooking area. Originally the 2 Super Novas were expected to be taken on sledging journeys, but they were not actually taken past advance base camp as goretex bivvy bags proved to be more preferable.

Base camp cooking was carried out on Optimus paraffin stoves which proved ideal, if a little temperamental at times. While on a sledging journey or on a mountain, Epigas burners were used. These provide a lightweight stove and performed well even at low temperatures, due to the Propane mix.

One luxury item taken was a small amplifier for a personal stereo and two speakers which proved very popular in the mess tent, until Les connected them up the wrong way to the car battery and blew it up (no one spoke to him for the rest of the day).

Climbing Equipment

Most climbing parties used 2x9mm ropes for flexibility on the technical climbs, but due to the nature of the rock, they soon wore out and had to be cut up or discarded. Two ropes were placed on the ice-fall as fixed ropes and were left in place for the 5 weeks, these were remarkably intact when recovered at the end of the expedition.

The most important piece of climbing hardware taken were camming devices called Friends. These proved eminently suitable to the rock and were used frequently. Pegs were occasionally used but not as much as was expected.

Ice hardware proved pretty useless, except for the occasional dead man placement. Ice screws were never used but were always carried for some reason!

Some debate as to what footwear to take on routes was common. The ideal solution was found to be ski boots and rock boots. This combination was used on peaks 1560m and 1290m where a ski approach to the rock was in order. Plastic boots or leather boots were surprisingly not as important as had been first thought (exception for Big House). The ski boots/rock boots combination being adequate. The weight of big boots often necessitated them to remain at advance base camp on longer sledging journeys.

Firearms

We did not have a firearm on the expedition mainly due to the freighting and documentation problems. To obtain a gun licence, to buy a gun and then to pay for a licence to export it did seem too costly for our limited resources. Fortunately, we did not have any Polar bears visiting us at base camp, mainly because we were too far from the coast. However, after our visit to Augpilagtoq we learnt that in a bad year they kill 6 bears and at least 12 in a good year, as they swim through Prins Christians Sund. Also it is not uncommon for bears to travel from Lindenows to Tasermiut fjord. I think future expeditions should consider taking a gun if they are based on the coast.

We are very grateful to the following companies, organisations and individuals who donated the following equipment.

Mr J Hunt Sprayway Ltd Manchester	Goretex cagoules and salopettes.
Mr C S Polito Polisox Ltd Leicester	Loop stitch socks.
Mr J Robson Damart Thermawear Ltd Bingley	Thermal gloves, hoods and sockettes.
Mr E M Beecham Swiss Cutlery Ltd London	Victorinox Swiss Army knives.
Mr M J Turner A B Optimus Ltd Rushden	Hiker triple fuel stoves.
Mr T F Popper Tilley International Plc Belfast	Tilley lamp and spares.
Mr M R C Dawson Burton McCall Ltd Leicester	Loop stitch socks and clothes at trade prices.
Mr S Preston Fjallraven Ltd London	Tents and clothing at trade prices.
Mr D R Henderson North Cape Ltd Stirling	Thermal wear at trade prices.
Mr James Weldbank Plastic Co Ltd Chorley	Plastic bags.
Mr T Howard Troll Safety Equipment Ltd Oldham	Reduced prices.
Mr R Hetherington Mountain Equipment Ltd Stalybridge	Goretex bivvy bags at reduced prices.

Mr J White
Vango (Scotland) Ltd
Greenock

Trade prices.

Mr P Simkiss
Clogwyn Climbing &
Safety Equipment Ltd
Deiniolen

Karabiners and Pitons at seconds
prices.

Mr Harrison
Dale International Ltd
Leyland

Camping accessories at trade prices.

Mr S J Gareth Jones
G T Hawkins Ltd
Northampton

Boots at reduced prices.

Mr J K Toft
Northern Feather Leisure
(UK) Ltd

Reduced prices.

Ormskirk Camping
Ormskirk

Mess tent at reduced prices.

Salford University
Diving Society

Loan of their inflatable boat and
outboard motor.

Erskinies Ltd
Scarborough

Reduced price generator.

Food Report by M P Sluce

None of the expedition members had any great experience of planning food for such an undertaking. The task only fell to me because I had no other jobs to do at the time. My experience of food-planning was limited to my own kitchen. A lot of advice was sought over a long period, mainly from other expedition reports. No-one I knew directly could help.

Firstly, I began to categorise foods into nutritional value, this forming a vast list which adorned my wall. Over the following 10 months, this list grew and changed dramatically. Letters to potential sponsors began to prove extremely successful. Most sponsors were willing to delay delivery of their food until nearer the packing date, thus easing our storage problems.

About December 1985, we started to devise some menus, using as much donated food as possible. The aims of the menus were to:

- provide 4500 calories per person per day,
- maintain a balanced diet,
- keep the meals attractive and appetising,
- make optimum use of food donated from sponsors, thus reducing costs,
- allow for ease of transportation to Greenland,
- maintain a minimum liquid intake of 4 pints per person per day.

Various people and reports had suggested that variety in the diet was essential as it would be eaten for 6 or 7 weeks solidly. Also, the food must be filling, a different aspect to calorific value - "An army marches on its stomach".

At this point I decided to split the food into 2 sections, one for use at base camp and one for use in the hills. The thinking behind this was:

- a) Base camp food could be made to compensate for the hills diet. It could be bulky, filling, full of "little treats" and could take time and effort to prepare, as this was seen to be a recreational pursuit in itself. Lots of herbs, spices etc, would be available for experimentation.
- b) Food for the hills should be lightweight, compact, high in protein, easy to prepare and should use as little fuel as possible.

Weekly Treat boxes were organised as well. They contained a lot of extra, non essential bits designed to make life more enjoyable at base camp and to give people the chance to "stuff themselves silly".

In the early stages of planning, Quantities were taken directly from previous expedition reports. To test these out we had a dummy run, camping in Glencoe at New Year. Alterations were duly made and plans continued.

In February 1986, a first draft of the food requirements was drawn up and put to the expedition members for comments and approval. It was felt essential that all members should have some say in this, a vital field of the expedition planning. Thus consulted, members had the chance to voice opinions and preferences while there was time to make alterations. Hopefully, this would also prevent arguments at base camp.

The amended plans were tested on a weekends snowholing and skiing trip in the Cairngorms. As a result of this, the final menus were drawn up.

The food was originally going to be packed into 2 man-day sets and then sent out so that they could be used immediately on arrival at base camp. In this way the popular and less-popular parts of the food would be spread out, and each person should have eaten wholesome meals. Also, when anyone wanted to go into the hills for a few days or just move a supply of food to one of the various dumps, all they had to do was pick up the required number of bags without having to spend time planning and sorting food.

In the end, this aspect of the food planning was greatly appreciated by all members as it saved time, hassle and brain-power every time a trip was made. However, 2 problems did occur in this area:

- 1) The man-day packs system did not work satisfactorily at base camp, as the confines of the mess tent usually provided odd numbers at mealtimes. This, combined with the fact that people tended to pop in and out at peculiar times, caused many half-opened packs.
- 2) The food was a lot more bulky and difficult to pack into crates as 2 man-day packs.

The first problem just had to be endured, but the second was resolved by packing all food in bulk for transportation to Greenland, saving on vital space and therefore money. The first day of the expedition saw up to 6 people wandering around base camp making little piles of food whilst I called out the next items to be sorted.

Sugar and milk were kept separate, but the packs contained the relevant breakfast and supper, with the lunches mixed to obtain variety and best use of free food.

Menu

Hills

Base Camp

Breakfast 1	Serving	Breakfast 2	Serving
Alpen	2pkts	Porridge	1/8 tin
Milk (1/2 pint)	30g	Milk (1/2 pint)	30g
Tea bag	1	Tea bag	1
Vitamin tablet	1	Vitamin tablet	1
High fibre biscuit	2	French toasts, etc	3
Spread	40g	Spread	60g
Lunch 1	Serving	Lunch 2	Serving
Mackerel or Tuna	1/2 tin	Fruit drink	1ltr
Marzipan	125g	Crackers/crispbreads	4
Bars	5	Spread	50g
Peanuts/Raisins, or	100g	Bars	5
Mars, etc	1	Peanuts/Raisins	100g
Fruit drink	1lt	Tea bag	1
		High protein biscuit	2
		Milk	5g
Lunch 3	Serving	Lunch 4	Serving
Fruit drink	1lt	Fruit drink	1lt
High protein biscuit	3	Tea bag	1
Pate or cheese	40g	Milk	5g
Marzipan (1/2 bar)	125g	Soup	1/2lt
Bars	5	Pot Sweet	1
Chocolate bar, or	1	Corned beef/Smash, or	1/2 tin
Peanuts/Raisins, or	100g	Meatballs/Pasta, or	"
		Beans/Bread, or	"
		Beefburger/Beans	"
Supper 1	Serving	Supper 2	Serving
Raven meal, or	1	Beef Curry, or	1/2 tin
Batchelors meal	1/6 box	Chilli Con Carne, or	"
Dried Veg	25g	Irish Stew, or	"
Smash Potato, or	75g	Spam, or	"
Spaghetti, or	150g	Vegeburger, or	1/2 pkt
Rice	150g	Vegebanger	"
Pot Sweet	1	Dried Veg	25g
Custard Powder	1/2 sachet	Noodles, or	150g
Tea bag	1	Rice, or	150g
Milk	5g	Spaghetti	150g
High protein biscuit	2	Pot Sweet, or	1
Drinking Chocolate	10g	Tinned fruit, or	1/2 tin
Horlicks	1pkt	Rice pudding	"
		Custard	1/2 sachet
		Tea bag	1
		Drinking Chocolate	10g
		Horlicks	1pkt

Weekly Boxes

Double Cream	4 tins
Xmas pudding	311b
Fruit Cake	1
Dried Mixed fruit	500g
Gum	1 pack
Brownbread Mix	1.5kg
Scone Mix	"
Biscuits (digestive, etc)	4 pkts
Castor Sugar	1kg
Sugar Cubes	1.5kg
Golden Syrup	21b
Sweets	

Base Camp General Supplies

Herbs
Spices
Tomato Puree
Tomato Ketchup
Soya sauce
Cooking Oil
Vecon (vegetable stock)
Natex (savoury spread)
Salt
Coffee
Tin foil
Booze!!!!!!

We planned to be at base camp for 6 weeks, with 1 week of emergency food in case of an enforced stop due to excessive ice in the fjord, etc. The basic 6 weeks were divided in half for hills and half for base camp food, with the extra week as hills food as it could be used at base camp as well.

In short, we had 2 man-day packs of hills food for 4 weeks. The packs were extremely popular and would definitely be used in any future planned expeditions. On a good haul, 5 or 6 bags would be carried in a rucksack through the ice-fall to advance base, so stocks were easily made up. The extra week's food was carried to Reykjavik to reduce living expenses.

No one had any significant changes in body weight and we suffered no dietary illnesses, although a slight excess of fibre was experienced. In the beginning, worry about the food lasting caused me to nag members with a more hearty appetite - as it was, we sent a lot of food back at the end of the expedition.

The proof that the food was popular came when we were returning home through civilised countries with lashings of real food and yet we were still mainly existing off our rations. I must admit, though, that after 7 weeks of expedition food, I was glad of Mum's fresh home cooking!

Highlights of the food were fresh bread, although it never rose fully, and the various scones and sponges we made from scone mix, sugar, drinking chocolate, etc. Also, Christmas pud with custard and/or cream - Yum!

Portions were generally found to be adequate although breakfasts could have been larger. Hills lunches tended to be nibbled through the day and were planned with this in mind - 5 nut and oat bars or chocolate bars is more than anyone can take at once!

No one suffered dehydration, except when short of fuel to melt snow. On this note, we found it worth the effort of finding water rather than melting snow. In desperate moments, coffee and drinking chocolate is preferable to tea as the water does not need to be boiled - in cold temperatures, that last bit of heat seems to take an age!

Food Quantities and Weights

<u>Item</u>	<u>Description</u>	<u>Qty</u>	<u>Comments</u>	
Meat	Tinned:			
		Irish Stew	36	Generally enjoyed.
		Beef Curry	12	Bits added to pad
		Chill Con Carne	12	out main meals.
		Spam	24	
		Meatballs	12	
		Corned Beef	12	Base camp lunches.
		Beefburgers	12	
		Pate	48	
		Dried:		
		Vegeburger	24	Mainly used to add bulk
		Vegebanger	24	to tinned food, although
				great as beefburgers.
		Savoury Mince	4pkts	
		Farmhouse Stew	"	Took a long time to cook
	Chicken Supreme	"	and needed added veg.	
	Chicken Curry	"		
	Sweet and Sour	"		
	Raven meals	70pkts	Not to be liked as much	
			as Batchelors and more	
			expensive.	
Carbohydrates	Smash potato	10lb		
	Spaghetti	13kg	Not enough.	
	Rice	"		
	Noodles	6kg	Popular. Too much.	
	Baked beans	12		

Soups	Dried:		
	Tomato	2kg	OK, but a bit weak. Not generally used.
	Mushroom	2kg	
Vegetable	2kg		
Cereals	Alpen (42g pkts)	392	Correct amount.
	Porridge Oats	11kg	Needed a little more.
Flour	Scone Mix	10kg	With added sugar and drinking chocolate, makes a great sponge cake. Rolls were better than loaves.
	Brownbread Mix	"	
Dried Milk	Marvel	32kg	Too much.
Puddings	Instant Custard	140	Too much despite heavy usage
	Pot Sweets	230	
	Rice Pudding	24	Popular.
	Strawberry Mousse	12	
	Xmas puddings	18lb	Popular. Easy to make.
	Semolina	1kg	
Jelly	12pkts	Very unpopular.	
Sugar	Sugar Cubes	11kg	Far too much.
	Castor Sugar	6kg	Too much.
	Golden Syrup	12lb	Just enough.
Vegetables	Dried vegetables	7kg	Took ages to cook.
Drinks	Drinking Chocolate	4kg	Very popular.
	Tea bags	1100	
	Coffee	4kg	Popular.
	Orange Powder	15kg	
	Horlicks (32g pkts)	216	
Jam	Strawberry	6lb	Put into tubes for easy spreading. Not quite enough.
	Raspberry	"	
	Blackcurrant	"	
	Marmalade	3lb	Very popular.
	Pear 'n' Apple	5kg	
	Peanut butter	"	
	Sesame spread	"	
Sunflower spread	2.5kg	Liked by only a few.	
Biscuits	High fibre	80pkts	Unpopular.
	High Protein	40pkts	
	Digestive	12pkts	
	Bourbon	"	Popular.
	Hobnobs	"	
	Muesli bars	1540	For use as bread at base camp.
	French toasts	12pkts	
	Bran crisp	"	
	Dutch crispbread	"	

Treats	Fruit cakes	7		
	Tinned cream	24		
	Mars bars	36		
	Marathon	48		
	Topic	48		
	White Marzipan	28kg	Popular.	
	Sweets:			
	Butterscotch	1box		
	Eucalyptus	"		
	Pineapple drops	"		
	Bubblicious	"		
Nuts	Peanuts (Yoghurt coated)	5.6kg	Popular.	
Fruit	Dried:			
		Raisins (Yoghurt coated)	5.6kg	Popular.
		Mixed fruit	3kg	
		Tinned:		
		Pineapple rings	12	All popular.
		Peaches	"	
		Pear	"	
		Two fruit	"	
		Mandarin	"	
	Sauces, etc	Margarine	4kg	Used sparingly, just enough.
Cooking Oil		2lt		
Pickle		1/2 gallon		
Tomato ketchup		1lt	Just enough.	
Tomato puree		24	Excellent for stews.	
Salt		1kg		
Soya sauce		1/2 lt	Hardly used.	
Vecon		2kg	Popular. Only 1kg used.	
Natex		2	Hardly used.	
Herbs		8pkts	Popular.	
		Spices	"	
	Sauce mixes	"		

Fishing

Although most of the members took some fishing line and spinners or feathers, we were unsuccessful in catching Arctic Char that we had read about from past expedition reports. The reason was because the water was not clear, as we had the meltwater from 4 glaciers flowing into the fjord. However, on a few occasions the water did clear, usually associated with a high tide, and we could see the Arctic Char in shallow water. But despite frantic efforts to attract them to our bait, they just swam past. The

fish that were easy to catch were a type of Weaver, which the locals called "stupid" or "ugly" fish. They do not look very appetising, but Les and myself had a meal from 3 of the medium sized ones and it tasted alright.

We are very grateful to the following companies, organisations and individuals who donated the following food.

Mrs P Delacote Sunwheel Foods Ltd Burton-on-Trent	Kalibu chocolate, carob bars, peanut raisins, noodles.
Mr M A M Tripp Kenco-Typhoo Catering Services Birmingham	Tea bags, drinking chocolate, marvel dried milk and smash potato.
Mr D J Hampson Itona Products Ltd Wigan	High fibre and high protein biscuits.
Mr M Butters Weetabix Mills Kettering	Alpen.
Mr C E Ritton Morning Foods Ltd Crewe	Mornflake oats.
Mr G Bird John F Renshaw & Co Ltd Mitcham	White Marzipan.
Mr R F M Cooper Tate & Lyle Refineries Bromley	Sugar cubes and golden syrup.
Mr G Sams The Realeat Co London	Vegeburger and vegebanger.
Mrs M Moorcroft James Robertson & Sons Preserve Manufacturers Ltd Manchester	Jam, marmalade and Christmas puddings.
Mr M W Cook Beecham Foods Brentford	Instant Horlicks.
Mrs J Eustace Golden Wonder Ltd Market Harborough	Pot sweets.

Mr Dwerrhouse John West Food Ltd Liverpool	Tuna and mackerel.
Miss L Quinn Modern Health Products Ltd Chessington	Vecon vegetable stock and Natex savoury spread.
Mr B P Linke Dietary Specialities Ltd Richmond	Frama bars, healthitone multivitamin and Heat paks.
Mrs J C Jobbins Shepherd Boy Ltd Leicester	Fruit and nut bars.
Miss C A Elliott W Jordan (Cereals) Ltd Biggleswade	Original Crunchy bars.
Mr T Hughes Fox's Biscuits Ltd Batley	Natural Crunch bars.
Mrs I L R Mustoe Lucy Foods Nantwich	Granola and Ra bars.
Mr T J Bough E T Sutherland & Son Plc Sheffield	Irish stew, Chilli Con Carne and Beef Curry.
Miss A Windus Newforge Foods Ltd Liverpool	Irish Stew and Spam.
Miss D Walker Simpson Ready Foods Ltd Manchester	Bazaar Parcel.
Mr J Parker Halls Brothers (Whitefield) Ltd Manchester	Butterscotch, Trads and mentholypus.
Mr C Thomas Dexter Brent & Paterson Ltd London	Muesli bar and Dextrose energy tablets.
Mr L Day Schwartz Spices Thame	Spice 'n' Easy sauce mixes and refill packs.

Ski-ing Report by A M Greenwood

<u>Item</u>	<u>Qty</u>	<u>Comment</u>
Sledges:		
Varepulks	4	Made in Sweden by Segeboden-Berg.
Chest harnesses	2	
Hip harnesses	2	
Rigid trace	2	Made by Brian from poles off a Vango Mk5.
Skis:		
Asnes MT54 Quickstep	6prs	Excellent skis.
Rossignol Chamois (waxless)	1pr	
Trak Telemark (no wax)	1pr	
Ski boots:		
Alpina Telemark	4	Excellent boots.
Meindl Arber	2	
Trak Tramp	2	Proved inadequate.
Ski poles:		
Swix polar (SM105)	12prs	One pair each plus one spare.
Ski bindings:		
Rottefella Telemark cable	4	
Rottefella Super Telemark	4	
Extras:		
Swix Glide wax	1pack	
Colltex skins	2prs	Used only by Stas and Brian.
Bamboo poles	20	Used to mark a safe route through glaciers and for sledging trips.
Red flags		

During the early planning stages, following discussions with members of past expeditions to Greenland, the relative merits of using cross-country skis in areas such as the inland ice-cap became apparent. As a result, we all agreed that the use of skis and varepulks as an integral part of the expedition would be of great logistical advantage. The expedition area was quite large and the objective peaks widely dispersed, it was therefore decided that having made an advance base camp on the ice-cap, the peaks would then be within reach.

Throughout the expedition two schools of thought developed:-

- 1) Whether to take a varepulk which meant the party were restricted to the pace of the pulk-puller, and then to have

the sobering thought that steep gradients on the glaciers became tricky downhill and shear bloody hard work uphill. The use of a varepulk did give the advantage of relatively lightweight rucksacks whilst ski-ing.

- 2) To rely solely on carrying all the gear in rucksacks, making ski-ing difficult downhill, because of the loss of balance and the subsequent aching shoulders it caused.

It is worth noting that both these approaches were tried and tested and each had its supporters.



Sledge hauling is hard work

It became obvious as the expedition progressed, why skis were so important to an expedition such as ours. The safety over crevasses was a major concern to us, however an air of confidence developed when we skied down a slope knowing that we could bridge 'all' the crevasses by adopting a Telemark position. The use of skis on the glaciers negated the usual roped up walking techniques. In general we skied to the base of the peaks and then on up until the gradient encouraged us to leave the skis and carry on using more conventional techniques. In practice the higher up the peak we left the skis the more satisfying the descent became.

By the end of the expedition a number of the members had mastered parallel and Telemark turns. These techniques were tested to the full on the last day before leaving base camp, during a slalom competition using bamboo marker flags as the gates. Other techniques developed during the expedition included the digging of snow bivvy ledges with the extended toe piece on the cross-country ski boots and the strategic placing of skis vertically in the snow at night to prevent unscheduled departure from the snow ledge.



Sledging from the eastern col to Sonderarm

The equipment used varied from person to person, notably due to financial restraints. Some members chose the Asnes MT54 ski with either the Rottefella Super Telemark or the Rottefella Telemark cable bindings, whilst others chose the Rossignol Chamois and Trak Telemark, cheaper but equally effective skis. All the ski-boots were leather and of 3 makes, a cheaper less rigid boot which fell apart on 2 members and an excellent more rigid hardwearing boot. The ski-poles used were Swix SM105 Polar, although spares were taken no one broke any despite some horrific wipe-outs at times. A point of interest is that the members who used the Rottefella Telemark cable bindings found, because it made the boot pivot further back, they developed blisters a lot more easily than those using the normal 3-pin binding. On removal

of the cable this problem was relieved. All the skis used were waxless and incorporated fish scales. It was found however the use of glide wax substantially increased the speeds obtainable on downhill sections.

We are very grateful to the following individuals and companies who helped with the selection of ski-ing equipment.

Mr C Hawson
Highland Guides
Aviemore

Ski equipment at reduced prices.

Mr T Metcalfe
Molog Travel
Chesterfield

Ski equipment at contract prices.

Radio Report by P Hodgkins (G0FDK)

From an early stage in the planning of the expedition, it was discussed and decided to be a worthwhile exercise taking various radios and associated equipment. The main purposes were to enable separate climbing parties to contact each other and base camp for safety reasons, and hopefully to allow communications between base camp and the UK. Two of the expedition members held amateur radio licences and we chose to use amateur frequencies for our Greenland to UK attempts, whereas VHF handheld sets were used within the expedition area.

The licences to operate have to be obtained from Denmark, prior to leaving Britain and some useful information can be weeded out of the pamphlet "Regulations Relating to the use of Radio Systems in Greenland", which can be obtained from Greenland Telecom.

The fact that we took a large 100 Watt short wave radio meant that a car battery and generator were required and these were obtained from a scrap yard and Erskines Ltd (Scarborough) respectively. The generator was a small mains/12 Volt unit which would supply up to 400 Watts of power but was a little noisy and badly suppressed. The idea was that our car battery could be charged using the generator and then used for running radios and charging smaller batteries which were then used in the VHF sets and Walkmans (essential equipment). A small 12 Volt fluorescent light and an amplifier and speakers were also sneaked into the freight to provide extra luxuries at base camp. (The music was popular until our beloved leader accidentally reverse connected the car battery one day and blew up the amplifier and battery charger in one swift move).

When packing the freight we made sure the battery was drained and the acid stored separately in a strong plastic container to prevent spillage. The radios were padded and spares included for radios and generator.

During the journey to base camp we had a 2 day stop-over in Julianehab, where we noticed a 60 ft mast and radio aerial outside the towns Radio Shop. Rob, Andy G and myself enquired inside and were introduced to Herluf and Anny Rasmussen who run the place. To our surprise we discovered that we had been expected and that a letter we sent over a year ago had actually arrived but it was only the reply which did not get through. Both Herluf (Ras) and Anny are licenced radio amateurs and had a lot of useful information and interesting stories to tell, as well as providing sandwiches, cakes and beer and making the expedition radio operators very welcome in their home. Two fascinating evenings were spent in their company and as we left we were given T-shirts from the shop for the whole team. Waving goodbye next morning was like saying goodbye to long time friends.

The next development was in the KNI office in Nanortalik where we tried to arrange an emergency frequency to call for help in the event of disaster. Unfortunately after explaining where we would

be, we were told that we would not even get a signal out of there if we tried! It was eventually decided that our only hope would be to contact them via the UK and leave it at that. This caused a little concern but was something we just had to live with as we were going to be surrounded by mountains and the only way to get a signal out was over the top of them using shortwaves.

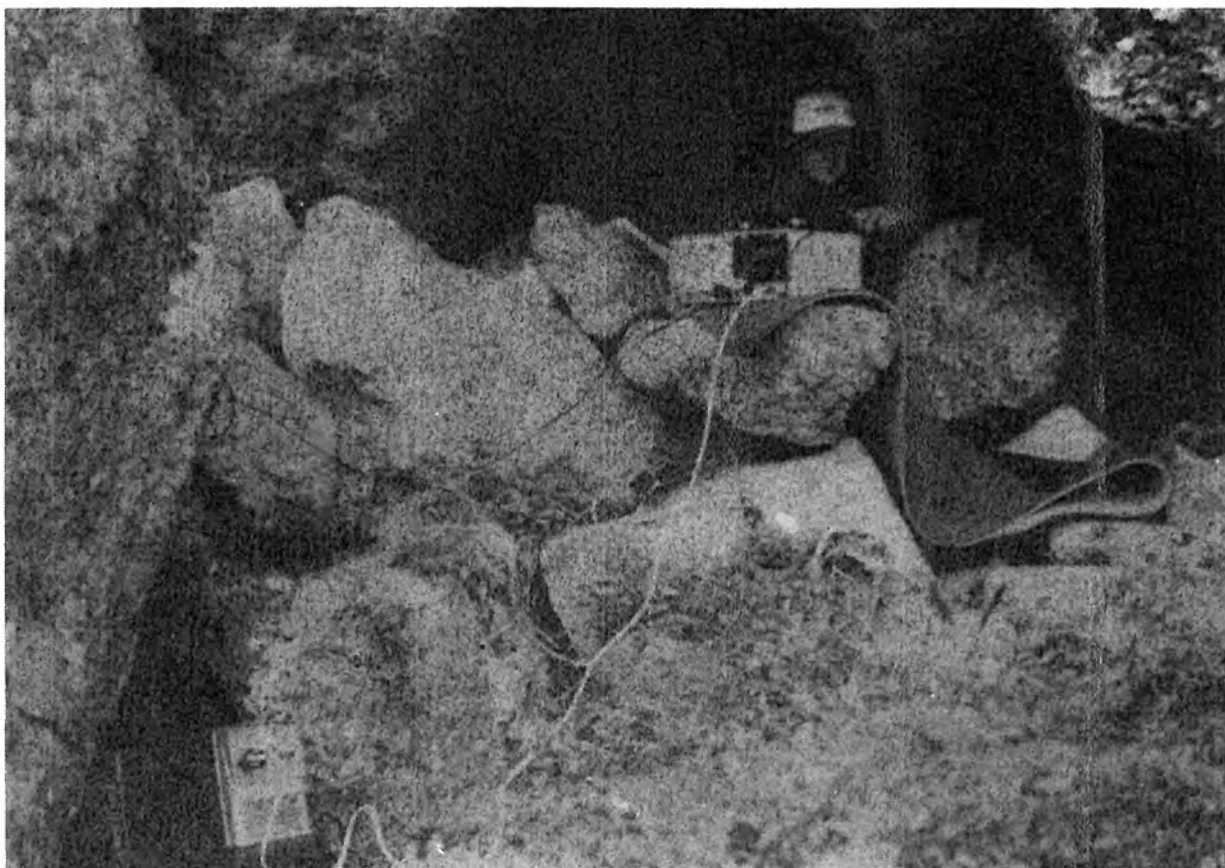
After all the initial setting up of base camp had been done it was time to sort out the radio and a suitable place was found on a small hill behind base camp. A dipole aerial was made out of copper wire and erected on bamboo poles. After a short while tuning the thing, it was orientated to fire signals towards the UK and hopes immediately dropped. This was obscured by the peak to our east (peak 1580m) and was probably the worst possible direction. Not giving up all hope, we tested first the generator and then the battery and radio and tuned on to the frequency we had arranged to use at the pre-arranged time. Nothing but hiss came from the speaker. We tried calling but to no avail and finally decided to tune round the band looking for any British station. The results were not very promising and all we could hear was the USSR and Scandinavia which were in a straight line through the eastern col and a relatively clear path from us. That night the wind blew up and flattened the radio tent and forced a retreat to base camp and a rethink.



View from the radio shack

For the next few days the radio was set up in the mess tent with the aerial and guy wires amongst the rest of the tents in a prime position for tripping over when going to the toilet, etc. This was tolerated but did not produce any better results and despite lots of listening and calling we still did not get in contact with the UK. We came to the conclusion that we were going to have to move to a different site so the alternatives were considered.

The mountain to the back of base camp (peak 1420m) was a possibility but a lot of work would have been involved in getting the equipment to the top and a 4 hour slog would have been needed every time we were to use the radio. This idea was shelved and the decision was to try a valley across the fjord.



Paul in the radio shack

The journey was about 20 mins in our boat with its sick engine and the site looked reasonable. A cave under a huge boulder was chosen and the aerial set up in front of it, thus using the boulder as a reflector to reduce signals to Canada (through the rock) and hopefully enhance the UK signal (across the fjord). When the aerial seemed OK we turned the radio on and tuned to our set frequency to find someone actually calling us from home! After the initial shock, we made contact easily and soon had our man in England (Chris, G4RBZ) on the air. News was passed of our safe arrival and we chatted for a while until the battery started to fail, then cranked up the generator. What no power?

We spent over an hour trying to repair the generator and set off back to base camp in the boat feeling very miserable. No one else was there, so Rob and myself dissected the beast on the table and checked every component. We then put it back together and tried it again. After 4 goes at taking it apart and putting it together again we gave up and attacked the whisky supplies. Next day it was decided to head for Augpilagtoq and see if we could find components to repair it, or at least charge the batteries.

To cut a long story very short, we effected repairs by putting a head torch battery across the mains output of the generator and starting it. (I have since found that this replaced the residual magnetism which must have leaked out of the iron core due to the cold but at the time thought that God must have been involved somewhere.) Our battery was charged using the town's battery charger and we were on our way again.

The rest of the radio operation was relatively uneventful in comparison and although the signal path to the UK was by no means fully reliable, we usually managed to get someone at the times planned. On some occasions only noise could be heard and this may have had something to do with the Northern Lights which were often visible later in the evening. In all, almost 100 stations were contacted by us, mostly on the 20 metre band in the early evening and thanks must go to those who assisted us in any way to get information through.

As far as the VHF radios went, we had no real problems and found them very useful for coordinating people and food supplies more than anything else. We never had to use them in anger for a rescue situation and did not use them a great deal in total. Fortunately, the excellent weather meant no one was stranded anywhere in a white-out, etc.

The generator was sold in Nanortalik to save shipping it back to Britain and the rest of the gear packed again. Some difficulty was experienced at customs on the return journey of the freight, but this was sorted out without too much trouble. It may, however, be a point for the future that if any equipment is to be brought back as personal belongings, a receipt to say you took it with you and didn't buy it out there may help.

The return journey involved another stop off for Rob, Les and myself in Julianehab where again we were entertained by the Rasmussen's and friends and were made very welcome. We left them with a promise that we would try and keep in touch and hope that maybe one day we would return.

Call sign used in Greenland	GOFDK/OX/P
Frequencies used	14-14.3 MHz, 3.798 MHz
Equipment	FT101
Generator	Erskines 400 Watt 12V/240V
Aerial	20m dipole
Height of Aerial	approx 20m asl
	" 2.5m agl

Medical Report by S T A Chobrzynski-Rawicz

Preparation

In deciding what medical equipment to take to Greenland, we considered the location of base camp and the type of terrain, as well as the activities we would be undertaking, ie climbing and ski-ing.

The nearest settlement was 28km away, by fjord, so we had to take sufficient medications to deal with all the minor problems we might encounter and to cope with more serious problems, such as a broken leg, for a period of several days, whilst additional assistance was being summoned.

Use was made of the excellent book "Medicine for Mountaineers", published by The Mountaineers in Washington, USA (ISBN 0-89886-086-5) which is specifically written for mountaineering expeditions to remote places. Unfortunately, some of its suggestions do require the presence of a medical doctor, but it nevertheless proved invaluable, both as a planning aid and as a field guide.

Advice was also sought from Ken Ball, the Hospital pharmacist at West Cumberland Hospital, Whitehaven, who has not only advised other expeditions, but is himself a mountaineer and has been "in the field" with other expeditions.

Finally, the experience of the expedition members was taken into account. We did not have a doctor with us, however, we had 2 members who had links with 2 Mountain Rescue Teams (Andy L with Penrith MRT and myself with Wasdale MRT) and some of the other members had taken first aid courses for this purpose.

Medical Equipment Taken

The medicine were finally put together from 2 main sources, a "First Aid" case from Dr Tarsh at Salford University Health Centre, consisting of bandages, cotton wool, dressings, etc and a "Medical" case from Dr Lawson, Company chief Medical Officer, British Nuclear Fuels plc, containing drugs and Brooks airways, as well as additional first aid dressings, etc. Inflatable splints were loaned from the Wasdale Mountain Rescue Team.

We were grateful for the involvement of BNFL in supplying the drugs, as this meant that the Cyclomorphine, which is a controlled drug, was issued initially to Dr O'Donnell, who was named as the expedition doctor, and he in turn passed this on to myself, as the named expedition medical officer, responsible for the drug. This had to be signed for and upon returning to Britain, had to be returned to Dr O'Donnell.

Although this had been cleared with the British Home Office before leaving the UK, nevertheless we had some raised eyebrows when the Cyclomorphine was declared upon entering Iceland and the Customs Officials at Glasgow Airport were highly suspicious when we returned to the UK. Any other expedition taking Cyclomorphine would be well advised to obtain written approval from the Home Office to take it into and out of the UK, even though an import/export licence is not required for such a small quantity of the drug.

Upon arrival at base camp, the medical supplies were split into 2 parts. One part stayed at base camp for general use, and the second part and one copy of "Medicine for Mountaineering" was sealed into plastic bags, to form a small package and was deposited at an equipment dump at the eastern col. The theory behind this was that if an accident occurred whilst any group was out, the eastern col was fairly central to the areas we were in, and at least 4 hours closer than descending to base camp and returning. Each member carried a personal first aid kit, the contents of which were decided by each member individually.

In the event of a serious accident occurring on the ice-cap, it was envisaged that an evacuation could be carried out, using one of the varepulks as a stretcher.

Flares were kept at base camp and at the east col, for the purpose of showing positions in the event of needing an evacuation by helicopter, and in addition a smoke canister was kept at the eastern col, for showing wind speed and direction.

As it turned out, had a serious accident occurred, we would have had some difficulty in obtaining assistance from a helicopter, unless either we were able to send a message using the radio transceiver, through the UK, or the inflatable dinghy was able to get to the nearest settlement. Both of these options would have not been possible in the event of bad weather!

<u>Item</u>	<u>Size</u>	<u>Qty</u>
Uvstat, sun screen,	factor 10	24
Uvstat-L, lip salve		24
Neutrogena, barrier cream	52g	24
Spenco, Adhesive knit	10"x6"	12 sheets
" , Blister Kits		4
" , 2nd Skin		1tub
Daktacort		10pkts
Imodium		5pkts
Vermox		1pkt
Stugeron		4pkts
Cyclomorph 15	1ml	10 ampules

Nupercainal ointment	30g	5 tubes
Canesten	20g	5 "
Anthical cream	25g	2 "
Hydrocortistab ointment	15g	3 "
Fucidin ointment	10g	3 "
Oil of Cloves	5g	1 bottle
Minims (Amethocain Hydrochloride)		20 sachets
Otosporin (ear drops)	5ml	3 bottles
Centicin (ear/eye drops)	10ml	2 "
Cicatrín (antibiotic powder)	15g	1 "
Senokot		24 tablets
Aludrox		60 "
Hismanol		30 "
Paracetamol		100 "
Brufen	200mg	100 "
Septrin		100 "
Halcion		30 "
Paramol		100 "
Aspirin, soluble		100 "
Temegesic (Sublingual Analgesic)		50 "
Penicilin V		100 "
Maxolon		30 "
PR Spray		1 canister
E 45 cream	500g	1 tub
Friars Balsam	25ml	1 bottle
Vaseline	100g jar	2 jars
Sterile absorbent gauze,	type13	5pkts
Cotton wool	15g	6pkts
Sterile unmedicated dressing	ex lge	5
Dressing	no. 12	2
"	no. 9	3
"	no. 8	7
"	no. 7 (finger)	4
Crepe bandage	4.5mx15cm	3
" "	4.5mx7.5cm	3
" "	4.5mx10cm	2
" "	4.5mx10cm	2
Elastic adhesive bandage	4.5mx7.5cm	1
Triangular bandage		12
Tubigrip		3m
"		4.5m
Gauze swabs	3"x3"	100
Adhesive tape	1mx10cm	1 roll
Surgeons gloves	no. 7	4 prs
Jelonet	10cmx10cm	10
Savlodic		5 sachets
Melolin	10cmx10cm	7 sheets
Gauze dressings	10cmx10cm	12
Steri strips		30
Scissors		1 pr
Adhesive waterproof tape	5mx2cm	1 roll
Knee/elbow straps		2

Elastoplast, fabric plasters		100
" , assorted		50
Safa, fabric plasters	6cmx2cm	100
Hypodermic syringes		20
Hypodermic needles	16mm	20
Cotton wool buds		200
Lancets		30

Brooks Airways		2
Inflatable leg and thigh splint		1
" leg and ankle splint		1
" ankle/arm splint		1

Books:

Medicine for Mountaineers	2 copies
St Johns Ambulance First aid	1 copy

Medical Supplies Used

In the end we were lucky in not having to use all the supplies taken. Although everyone suffered cuts and grazes due to the nature of the rock and the sharp lichen covering it, we did not have any serious accidents.

Probably the 2 most serious accidents that we suffered were a broken finger and a frostbitten finger tip. Both were only minor injuries and did not require intensive treatment.

In retrospect, we probably had too many wound dressings, cotton wool and other materials for dressings, but had there been a serious injury and evacuation could not take place, then these might have been essential. We could probably have done with more rolls of adhesive tape or plaster, to be on the safe side, although in the end what we had was sufficient.

Summary of Medical Supplies Used

- 1) Spenco Blister Kits - to treat and prevent blisters ***
- 2) Plasters, assorted - numerous cuts and grazes ***
- 3) Canesten - Sweat rashes ***
- 4) Imodium - Diarrhea ***
- 5) Soluble Aspirin - Sore throats and colds ***
- 6) Anthical - Mosquito bites ***
- 7) Plaster and lint - light dressings for larger cuts and grazes (excluding blisters) **

- | | |
|--------------------------------------------------------------|----|
| 8) Vaseline - cracked lips and hands | ** |
| 9) Jelonet - Non-stick dressing | ** |
| 10) Halcion - Sleeping tablets | ** |
| 11) Elasticated Bandage - Sprains | ** |
| 12) Cotton Wool - dressing | * |
| 13) Cicatrin Powder - antiseptic | * |
| 14) Paracetamol - Headache | * |
| 15) Syringe - cleaning ears | * |
| 16) Aludrox - Indigestion | * |
| 17) Penicillin - infected wound | * |
| 18) Hismanol - bad mosquito bites | * |
| 19) Brufen - anti-inflamating following sprained
ligament | * |

Everyone also made considerable use of the Uvstat sunscreen, lip salve and Neutrogena hand cream.

*** - used frequently

** - used occasionally

* - used once or twice only

We are very grateful to the following companies, organisations and individuals who donated the following medical equipment.

Mr J Woodford Boehringer Ingelheim Ltd Bracknell	Uvistat sun screen and Uvistat-L lip salve.
--------------------------------------------------------	------------------------------------------------

Mr Beaken Spenco Medical (UK) Ltd Steyning	Blister Kits and 2nd Skin.
--------------------------------------------------	----------------------------

Mr A S Thompson Janssen Pharmaceutical Ltd Wantage	Daktacort, Imodium, Stugeron and Vermox.
----------------------------------------------------------	---------------------------------------------

Mr K J King Neutrogena (UK) Ltd London	Neutrogena hand cream.
----------------------------------------------	------------------------

Dr E Tarsh
Salford University
Health Centre

Comprehensive first-aid kit.

Mr W Pattison
Wasdale Mountain
Rescue Team
Cumbria

Inflatable splints and Brooks
airways.

Dr A B Lawson
British Nuclear Fuels plc
Seascale

General medical supplies.

Financial Report by D R Cooper

After many months of discussion and initial research into the objectives and expedition area, a financial commitment by the members was made and an account opened as a sub-account of the Students Union, 19 months prior to the departure date. The organisation of various fund raising possibilities and expedition budget followed.

An initial estimate of the budget for the purpose of our expedition prospectus was as follows:

Expenditure	£
Travel	3800
Insurance	600
Food	1000
Freight	1800
Equipment	1200
Boat charter	600

	£9000

plus contingency	£10000

The income was estimated to be of the following proportions:

Personal	40%
Grants	11%
Donations and fundraising	5%
Sponsorship	44%

Following discussions with our referees and advice from the Expedition Advisory Centre, the income estimates were modified as follows, although for printing purposes, the prospectus remained unchanged.

Our modified estimate was

Personal	70%
Grants	15%
Donations and fundraising	5%
Sponsorship	10%

The consideration of resale of expedition equipment was absorbed into the above estimates

Application for sponsorship and grants

It was clear that a large number of sponsorship letters were to be sent, but we were fortunate in not having to be selective in that the Students Union were to bare the cost of postage, etc. To help in the respect of typing so many letters, a standard letter

was composed with the help of our University Bank branch manager, which was stored on the wordprocessor, to which an additional paragraph of particular relevance to the firm concerned could be added. With each application, a prospectus was sent, thus making a presentable package.

Generally, we had a poor response for financial aid with probably only a 5% success rate (those who sponsored us can be seen in the list of sponsors); concerning equipment and food, we were far more successful, with many free supplies or generous discounts offered.

Insurance

As mentioned earlier in the report, it was necessary to apply to the Ministry of Greenland of Greenland to obtain permission to visit the area to climb. As part of the bargain, we had to prove that we had insurance that would cover search and rescue fees of DKK 200,000.

The following insurance requirements for the expedition were given to various insurance companies to tender.

- a) Names, ages and all climbing experience of all members.
- b) A guarantee in the favour of the Ministry of Greenland to the value of £16,000 for search and rescue operations.
- c) Personal cover:
 - i) £100,000 medical expenses,
 - ii) £800 personal equipment,
 - iii) £500 loss due to cancellation.
- d) Communal cover, ie cover for expedition equipment other than personal equipment for £3,000.
- e) Extended cover in case of delayed return flight. The boat and outboard motor were to be covered by the existing insurance policy which the Students Union already had, and an additional premium of £25 was paid separately.

Insurance firms declined the offer to tender and others would only insure us partly to our requirements. The company which gave us all the above cover was Endsleigh Insurance Services Ltd and the premium was £925. The premium represents approximately one tenth of expedition expenditure and it is what the Expedition Advisory Centre quotes.

Foreign Currency

Due to the nature of the sub-account at the Students Union, it was necessary to open an account with a High Street Bank. This

gave us the facility to use Eurocheques and it was probably the best way to take currency to Greenland. We had no difficulties in exchanging cheques or making any payments to KNI or businessmen in Greenland who all readily accepted the Eurocheque payments. We noticed that Visa or Access were not so readily accepted as we might have hoped.

Finally, a note about the nature of the work as Treasurer. There was not a professional accountant between us which meant that some strange accountancy techniques from time to time baffled 1 or 2 members. However, by the time the expedition was over, no single member owed very much to the expedition account and I would like to take this opportunity to thank the other members for their patience when I asked for yet another donation!

My thanks once again for the financial support of all companies and sponsor bodies who made this expedition an affordable experience to us all.

In 1986 the exchange rate was DKK 12.35 = £1

Income	£
Personal 8 @ £875	7000
Philatelic Covers	35
Raffle	260
Grants/Donations	1615
Account Interest	106
Other	76

	£9092

Expenditure	£
Flight 8 @ £412.50	3300
Helicopter Narssarssuaq to Narssaq 8 @ DKK 280	187
Helicopter Nanortalik to Narssarssuaq 5 @ DKK 420	175
Ferry Narssaq to Nanortalik 8 @ DKK 325	217
Ferry Nanortalik to Narssarssuaq 3 @ DKK 363	91
Accomodation in Iceland	26
Accomodation in Greenland DKK 3100	259
Boat charter DKK 7000	560
Food	385
Equipment	1285
Insurance (Expedition)	925
Insurance (Boat/Engine)	25
Insurance (Marine, Denmark-Greenland)	70
Insurance (Marine, Greenland-Denmark)	70
Insurance (Marine, Britain-Denmark)	21
Insurance (Marine, Denmark-Britain)	20
Freight (Denmark-Greenland)	402
Freight (Greenland-Denmark)	75
Freight (Britain-Denmark)	256
Freight (Denmark-Britain)	180

Raffle Prizes, tickets printing, licence, etc	83
Postage of postcards to sponsors	24
Maps, aerial photographs, etc	53
Other	115

	£8804

Re-sale	£
Food	140
Equipment	835

	£975

Grants/Donations	£
Salford University Students Union, Excellence Fund	150
Salford University	150
Mount Everest Foundation	300
British Mountaineering Council	200
De Witt International Ltd	100
British Nuclear Fuels plc	65
Chancellors Prize (awarded to A M Greenwood)	250
Duke of Edinburgh Trust No. 2	250
Convocation Office	50
Mick Burke Memorial Trust (awarded to B J Hull)	100

Total	£1615

We are very grateful to the following companies, organisations and individuals who donated the expedition grants and awards.

Mr W H Ruthven
Mount Everest Foundation
Preston

Mr B McGrath
Duke of Edinburgh Trust No. 2
London

Mr Kilsby
Academic Division
Salford University

Mr M Hutchinson
British Mountaineering Council
Manchester

Prof J Ashworth
Vice Chancellor
Salford University

Salford University
Students Union Executive

Mr L J Godfrey
De Witt International Ltd
London

Mr R J Toon
Mick Burke Memorial Trust
Wigan

Mr J A Preece
British Nuclear Fuels Ltd
Warrington

Miss M Alcock
Convocation Office
Salford University

Norse Settlements by L Turnbull

Although Southern Greenland is strewn with the remains of old Norse settlements, there are still some that do not appear on the map or have been catalogued. In the early days of the expedition at base camp, we moved a lot of rocks to weigh down the valance of the tents. It was while doing this that Paul noticed that they were all of roughly equal size and were in straight lines, like a drystone wall. Time had reduced the structure to just 3 walls which were flush with the vegetation and difficult to notice immediately, but once we had realised what we were looking at, the regularity was obvious. Each wall consisted of 2 parallel lines of rocks of a size just manageable by one person and any gaps between were filled with smaller rocks and presumably at some time, earth. There was thought of removing vegetation from the area which would have been the centre of the house just to see if anything of interest lay underneath, but after the initial excitement, we forgot about it and left it alone.

On the other side of the delta there were a number of similar remains, some of which stood proud of the ground by 1m or so. At least 3 small "houses" were identified along with the large 2 roomed "Big House" from which the peak Igdlorssuit Qaqat gets its name. During our occasional sorties by boat to our surrounding area, we discovered that almost every suitable piece of vegetated flat land with a water supply contained similar ruins.

60°40'N

NØRREARM



▲ Apostelens
Tommelfinger

LINDENOWS
FJORD

SØNDERARM

14▲

18▲

17▲

21▲

16▲

Big
House

20▲

5▲

7▲

8▲

10▲

9▲

12▲

Base
Camp

22▲

1▲

4▲

KANGERSSUNEQ
QINGORDLEQ

6▲

3▲

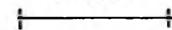
11▲

15▲

13▲

2▲

Scale



5Km

ILUA

PRINS CHRISTIANS SUND

44°15'W

43°25'W

60°3'N

Peaks Climbed by B J Hull

An advance base camp was established ($60^{\circ}22'N, 43^{\circ}58'W$) on the glacier at the end of the north-west ridge of peak 1580m. All sledging journeys started from advance base by ski-ing over the eastern col, north-east towards Sonderarm, then south between peaks 1500m and 1544m.

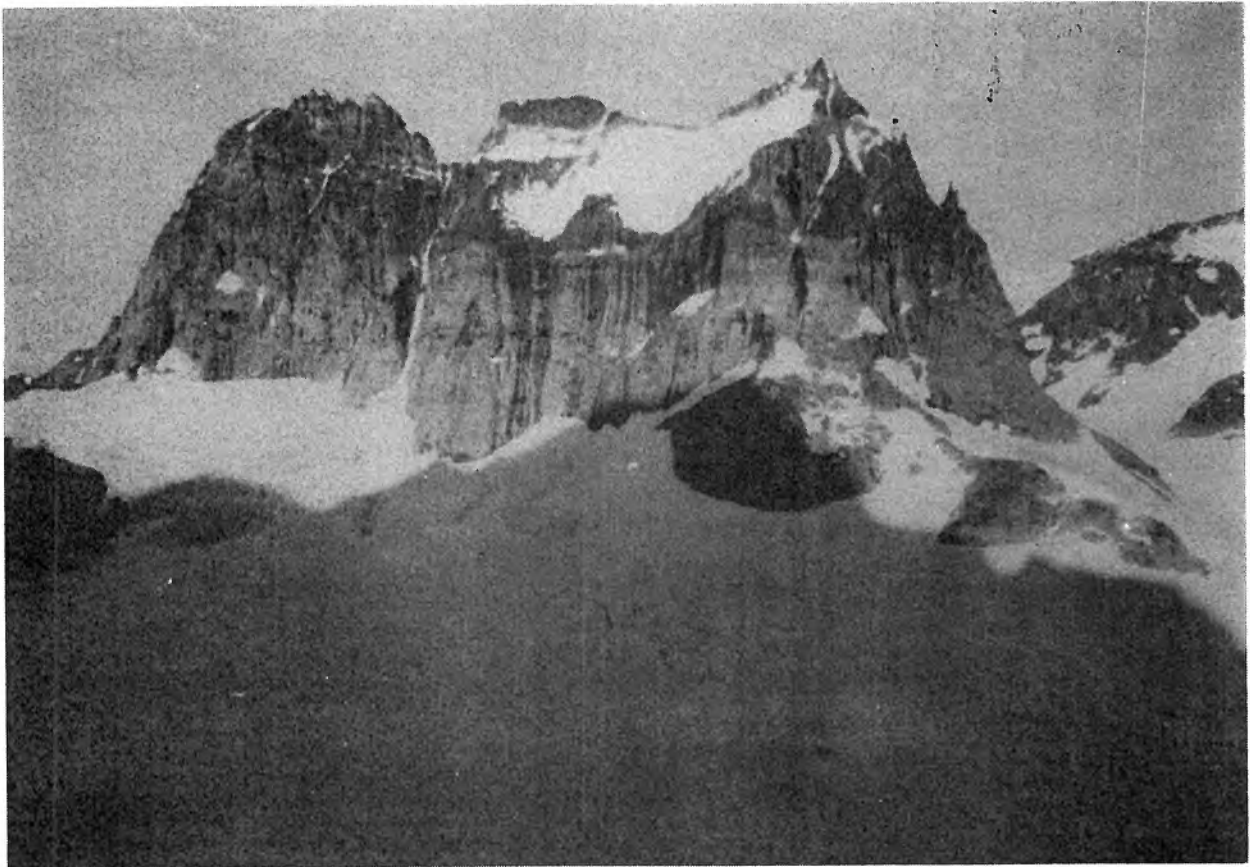
1. Peak 1580m Lichen Peak. South-west ridge. ($60^{\circ}22'N, 43^{\circ}55'W$).

First ascent by S Chobrzynski-Rawicz, A Leslie, M Sluce and L Turnbull on 17th July 1986.

Grade AD+. Time for ascent 15 hours.

From advance base camp, ascend the glacier between peak 1580m and Sulugssugut (peak 1791m) to a ridge. Scramble along the ridge until the obvious steep first pitch. This first pitch was the crux of the climb on very crumbly rock (10m). 10 pitches of climbing ranging from Diff to Severe on poor rock to gain a series of terraces and the summit. Final pitch needed one point of aid.

Descent was by 6 full abseils to gain the main ridge.



Peak 1560m from Peak 1580m

2. Peak 1470m Kalibu Peak. South ridge. (60 19'N, 43 43'W).

First ascent by B Hull and A Leslie on 21st July 1986
Grade PD. Time for ascent 3 hours.

Ski up steep slope amongst large crevasses to gain the ridge.
Walk for approx 800m to gain the summit blocks. The summit
was obtained after a 15m pitch of V Diff of free climbing.

Descent as for ascent.

3. Peak 1300m North face. (60 20'N, 43 40'W).

First ascent by M Sluce and L Turnbull on 29th July 1986.
Grade PD. Time 2 hours.

From the bivvy ledge on a rocky outcrop, north of peak 1300m,
walk up the north side to gain the summit arete.

Descent as for ascent.

4. Peak 1380m Fergy's Leap. East face. (60 22'N, 43 47'W).

First ascent by A Greenwood, P Hodgkins and B Hull on 23rd July
1986.
Grade AD. Time for ascent 7 hours.

From the eastern side, ski up the very long, hard and ever
steepening slope to the north-south rock ridge. Skis were
dumped here and the ridge was obtained after a delicate
crossing of a snow bridge. The summit consisted of poor
quality ice and was decidedly unstable. Climbed on the day of
the royal wedding of Sarah Ferguson to Prince Andrew.

Descent as for ascent.

5. Peak 1560m Collgate. East ridge. (60 24'N, 43 56'W).

First ascent by P Hodgkins, B Hull and A Leslie on 30th July
1986.
Grade D. Time for ascent 9 hours.

From advance base camp, ski over the eastern col to gain the
east ridge of peak 1560m. 8-10 rope lengths of scrambling, plus
2 pitches of V Diff climbing leads to the steepest part of
the ridge. Then 2 pitches of Severe to VS climbing obtains
the unstable rock summit.

Abseil down the four pitches then descend as for ascent.

6. Peak 1791m Sulugssugut. South ridge. (60 21'N, 43 57'W)

Unsuccessful attempt by S Chobrzynski-Rawicz and M Sluce on
24th July 1986.
Grade PD. Time for ascent 6 hours.

From base camp ascend the RHS of the glacier between peaks 1791m and 1460m then climb the steep snow slope to gain the south ridge. Ground very broken with loose unstable rock. No obvious route visible onto the easy plateau.

Descent as for ascent.



Peak 1380m from Peak 1544m

7. Peak 1544m Friend. North ridge. ($60^{\circ}23'N$, $43^{\circ}47'W$).

First ascent by A Greenwood, P Hodgkins and B Hull on 26th July 1986.

Grade D. Time for ascent 10 hours.

From a bivvy ledge between peaks 1544m and 1380m ski to the col between peaks 1544m and 1290m to gain the north ridge. Ski up the eastern part of the north ridge to gain rock. 8 pitches of Diff to Severe climbing to gain a steep snow slope. Walk up the slope until the summit rock ridge is obtained. Climb 3 pitches of Diff and 2 pitches of VS to gain the summit.

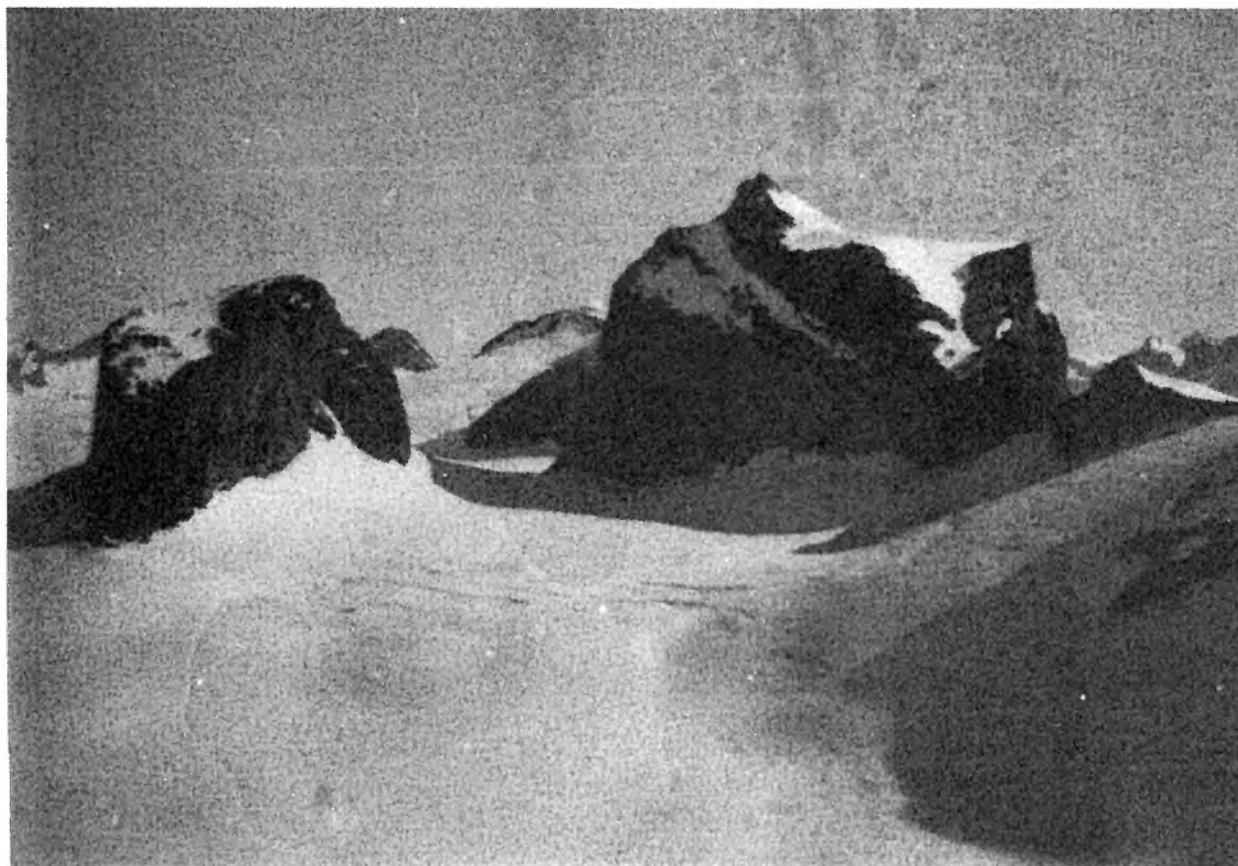
Descent as for ascent, with abseils on difficult rock section.

8. Peak 1290m Foe. South-west ridge. ($60^{\circ}24'N$, $43^{\circ}46'W$).

First ascent by P Hodgkins and B Hull on 7th August 1986.
Grade D+. Time for ascent 6 hours.

6 pitches of VS to HVS climbing, then 10 pitches of Severe gains the overhanging summit block. Rock generally good except for a few places near the end of the climb.

1 abseil and a lot of downclimbing then descend as for ascent.



Peaks 1544m and 1290m

9. Peak 1150m Dragon's Crown. South-west ridge. ($60^{\circ}23'N$, $43^{\circ}38'W$).

First ascent by S Chobrzynski-Rawicz and R Cooper on 30th July 1986.
Grade F. Time for ascent 2 hours.

Ski to join the southerly ridge and cross a bergschrund.
Scramble up the ridge to the summit.

Descent as for ascent.

10. Peak 1200m Marzipan Mountain. South-west face. ($60^{\circ}24'N$, $43^{\circ}40'W$).

First ascent by A Greenwood and B Hull on 15th July 1986.
Grade F. Time for ascent 2 hours.

Ski up the steep south-west side of the mountain until the summit ridge is reached. Walk up the remaining snow slope to the summit.

Descent as for ascent.



Rob on the summit of Peak 1043m

11. Peak 980m Stripe. North face. ($60^{\circ}21'N$, $43^{\circ}36'W$).

First ascent by P Hodgkins and B Hull on 6th August 1986.
Grade F. Time for ascent 1 hour.

Ski to within a few hundred feet of the summit and easy scramble to the top.

12. Peak 820m Biffer. East ridge. ($60^{\circ}23'N$, $43^{\circ}35'W$).

First ascent by P Hodgkins and B Hull on 6th August.
Grade PD. Time for ascent 1 hour.

Easy scramble.

Descent as for ascent.

13. Peak 1000m (estimated height) ($60^{\circ}19'N$, $43^{\circ}48'W$).

First ascent by M Sluce and L Turnbull on 28th July 1986.
Grade F. Time for ascent 2 hours.

From a bivvy site on the glacier to the north of this peak ski up the easy eastern slope to the rocky summit plateau.

Descent as for ascent.

14. Peak 950m ($60^{\circ}29'N$, $43^{\circ}37'W$).

First ascent by R Cooper, A Greenwood and M Sluce on 7th August 1986.

Grade F. Time for ascent 1 hour

Easy ski to the summit.

15. Peak 1160m West ridge ($60^{\circ}21'N$, $43^{\circ}33'W$)

Unsuccessful attempt by P Hodgkins and B Hull on 6th August 1986.
Grade PD. Time for ascent 2 hours.

Difficult scramble/easy climb up the north-west ridge to the point where it splits and runs north-east. Follow this ridge until it narrows and becomes precarious and then meet an impasse only a few metres below the summit. Cairn now built on highest point reached which is not quite 1160m.

Descent as for ascent.

16. Peak 1013m Hurricane Hill. West face. ($60^{\circ}25'N$, $43^{\circ}27'W$).

First ascent by R Cooper, A Greenwood, P Hodgkins, B Hull and M Sluce on 8th August 1986.

Grade F. Time for ascent 1 hour

Easy ski and walk up the western slope.

Descent as for ascent.

17. Peak 1380m Marble Curtains. East ridge. ($60^{\circ}27'N$, $43^{\circ}38'W$)

First ascent by P Hodgkins and B Hull on 9th August 1986.
Grade F. Time for ascent 2 hours.

Ski up the easy angled eastern slope and walk up the east ridge to the summit.

Descent as for ascent.

18. Peak 1043m North ridge. ($60^{\circ}28'N$, $43^{\circ}33'W$).

First ascent by R Cooper, A Greenwood and M Sluce on 7th August 1986.

Grade F. Time for ascent 1 hour.

Ski to the north ridge. Scramble up the easy snow and rock ridge.

Descent as for ascent.



Big House Peak from Peak 1420m

19. Peak 1420m ($60^{\circ}20'N$, $44^{\circ}2'W$).

First ascent by French Expedition in 1956.

Grade PD. Time for ascent 3 hours.

The peak behind base camp was climbed by most of the expedition members, mainly as a training climb.

20. Peak 2292m Igdlorssuit Qaqat (Big House Peak). ($60^{\circ}24'N$, $44^{\circ}1'W$).

a) Ptarmigan ridge. South-west ridge.

First ascent by French expedition in 1956.
Second ascent by P Hodgkins and A Leslie on 2nd August 1986.
Support party - A Greenwood and L Turnbull.
Grade AD+. Time for ascent 26 hours.

Scramble up the steep south-west ridge on loose and friable rock to a bivvy ledge at approx 1400m. Alpine climb the remainder of the ridge on very loose crumbly rock to the ridge summit (approx 1750m). An impasse was reached which necessitated a 50m abseil onto a ledge, near to the glacier's ice-fall. Walk up the steep south-west face (delicate crevasse work) to gain the south ridge to the summit.

Descent as for ascent. Difficulty experienced in regaining the main ridge. Aid used.

b) North-east ridge.

First ascent by B Hull and M Sluce on 2nd August 1986.
Grade D. Time for ascent 20 hours.

From advance base camp, walk up the glacier between peaks 2292m and 1560m to gain the eastern ridge (5 hours). Once on rock, 5 pitches of V Diff climbing on crumbly rock to gain a bivvy ledge. 9 pitches of Diff to Severe climbing on poor rock to gain the right-hand-side of the ridge to a snow basin. Cross the snow basin to gain the summit via the north ridge.

NB The two summit attempts arrived within 10 minutes of one another and decided to call it a draw.

Descent as for ascent of south-west ridge.

c) South ridge.

Unsuccessful attempt by R Cooper and P Hodgkins on 15th July 1986
Grade D-. Time for ascent 11 hours.

From the top of the ice-fall, follow the direct line up the snow to gain the glacier and arete. Retreated because of the heavily crevassed glacier.

21. Peak 1130m South-east face. ($60^{\circ}25'N$, $43^{\circ}47'W$).

First ascent by Cambridge expedition 1975.
Second ascent by A Greenwood and B Hull on 15th July 1986.
Grade PD. Time for ascent 1 hour.

Ski up the moderately banked snow to the rock ridge. Walk to the summit on very shattered rock, where a small cairn was found. Now there is a very big cairn on the summit. You get a fantastic view of Sonderarm and Apostelens Tommelfinger.

Descent as for ascent.

22. Peak 900m The Knoll. (60 25'N,43 47'W)

First ascent by French expedition in 1956.
Subsequent ascents by S Chobrzynski-Rawicz, A Greenwood, B
Hull, A Leslie and M Sluce on 13th July 1986.
Grade PD. Time for ascent 2 hours.

This minor peak lies at the eastern col. Climbed mainly for
training and to get a better view of Sonderarm.

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12. Medicine for Mountaineering, by James A Wilkerson published by The Mountaineers, Seattle, Washington.
13. Expedition planners handbook by Shane and Nigel Winser, Expedition Advisory Centre

Acknowledgements

The expedition members wish to thank both individuals and organisations for their invaluable assistance during the planning of the expedition as without their help and encouragement, this expedition would have not been possible.

HRH The Prince Philip, Duke of Edinburgh KG KT, Chancellor of Salford University, for being Patron of the expedition and to his personal assistant Mr Brian McGrath, who kept HRH Prince Philip informed of our progress during the planning stages.

Professor John Ashworth, Vice-Chancellor of Salford University, who gave us the encouragement and financial assistance for the expedition.

The staff of Salford University Students Union, who helped us enormously over the two years of planning and allowed us the unlimited use of telephones and postal facilities. Very special thanks to Helen Burke, Glenda Fellows and Christine Redshaw in the General Office who typed the hundreds of letters we sent and the innumerable phone calls we made at all hours of the day.

Salford University, Students Union Executive 1986 that bought the expedition tents and gave a donation from the Excellence Fund. Special thanks to the President and Deputy President, Finances and Services that endorsed and signed all the cheques sent to our suppliers.

Frank Brooks of the Print Room, Students Union who printed all the expedition prospectuses, headed notepaper, news releases, etc and the photocopying of past expedition reports.

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Wolfgang and Irene Freudinreich of Switzerland, who we met in Julianehab, that gave us a lot of information on the peaks that had been climbed around Lindenows Fjord.

Herluf and Anny Rasmussen, Carsten Schou and Walther Christensen, all licenced radio amateurs, who looked after us and entertained us during our stay in Julianehab. We will always remember the hunting stories and chilling tales of Gravetoq's.

Neil Dowie, Coventry (Lanchester) Polytechnic Expedition 1982, for loaning slides of the Tasermuit fjord area.

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Peter Steer of the British Schools Exploration Society who encouraged us to take cross-country skis and pulks and told us where we could obtain some second-hand varepulks.

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