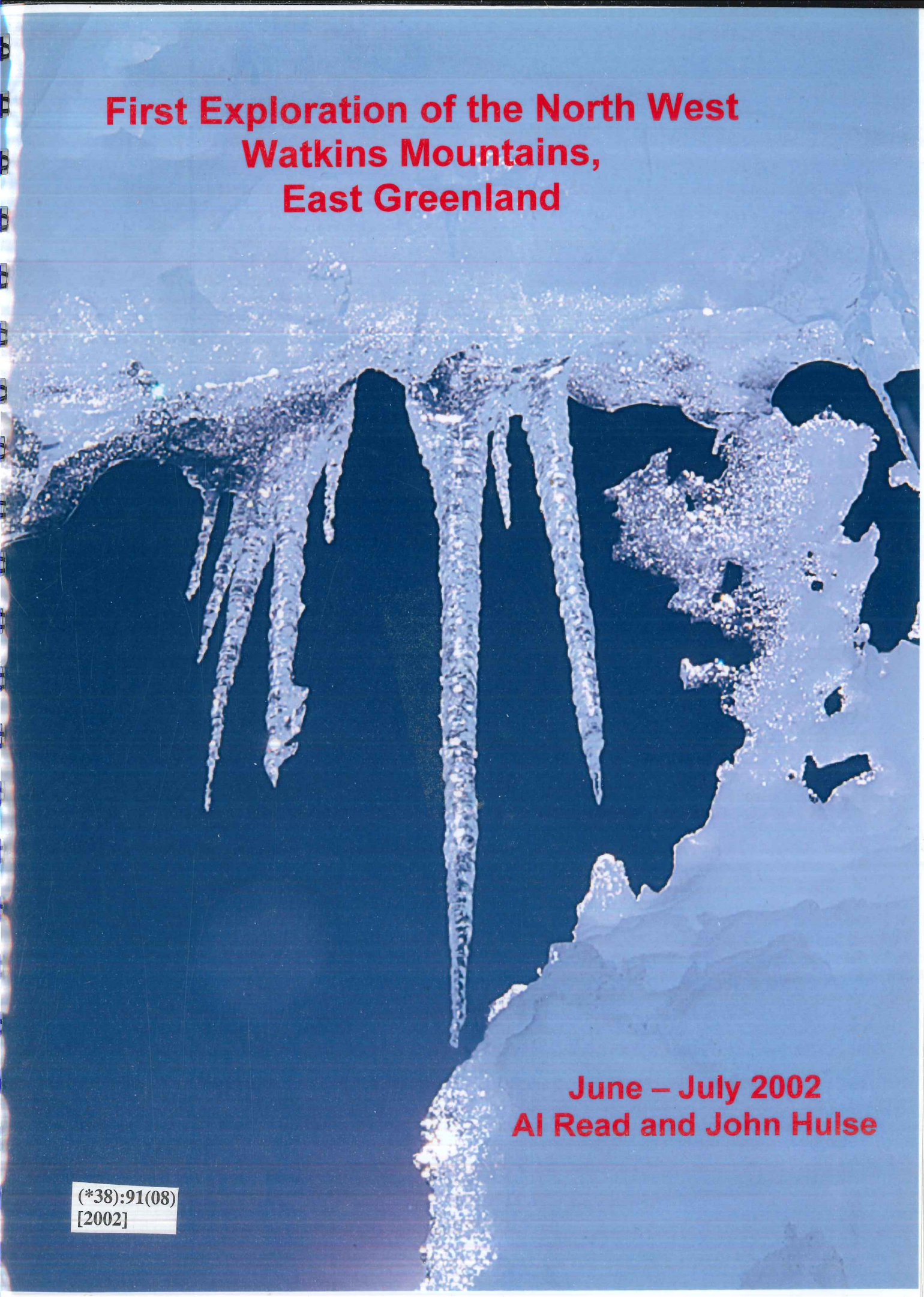
First Exploration of the North West Watkins Mountains, East Greenland



June – July 2002

Al Read and John Hulse

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Route Detail

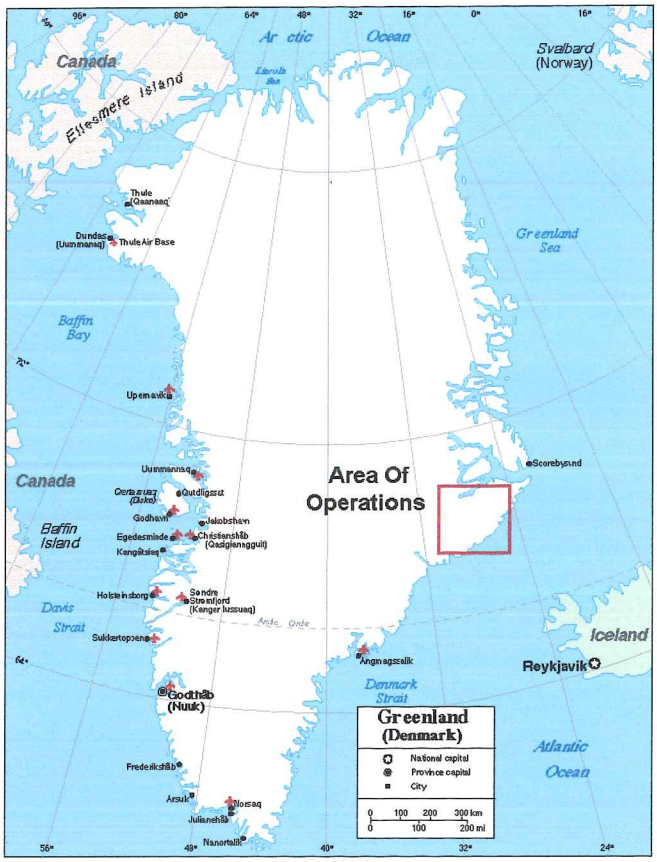

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Figure 1 - Map of Greenland Showing Area of Activity

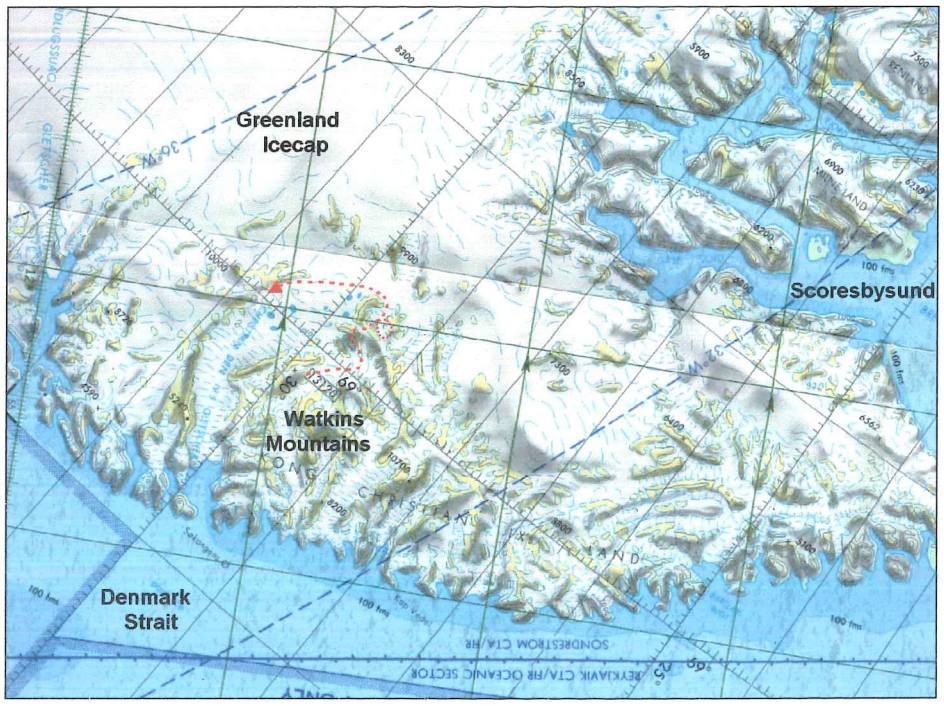


Figure 2 –Watkins, Lemon and Knud Rasmussen Land Area

(From ONC-1 Aviation Chart)

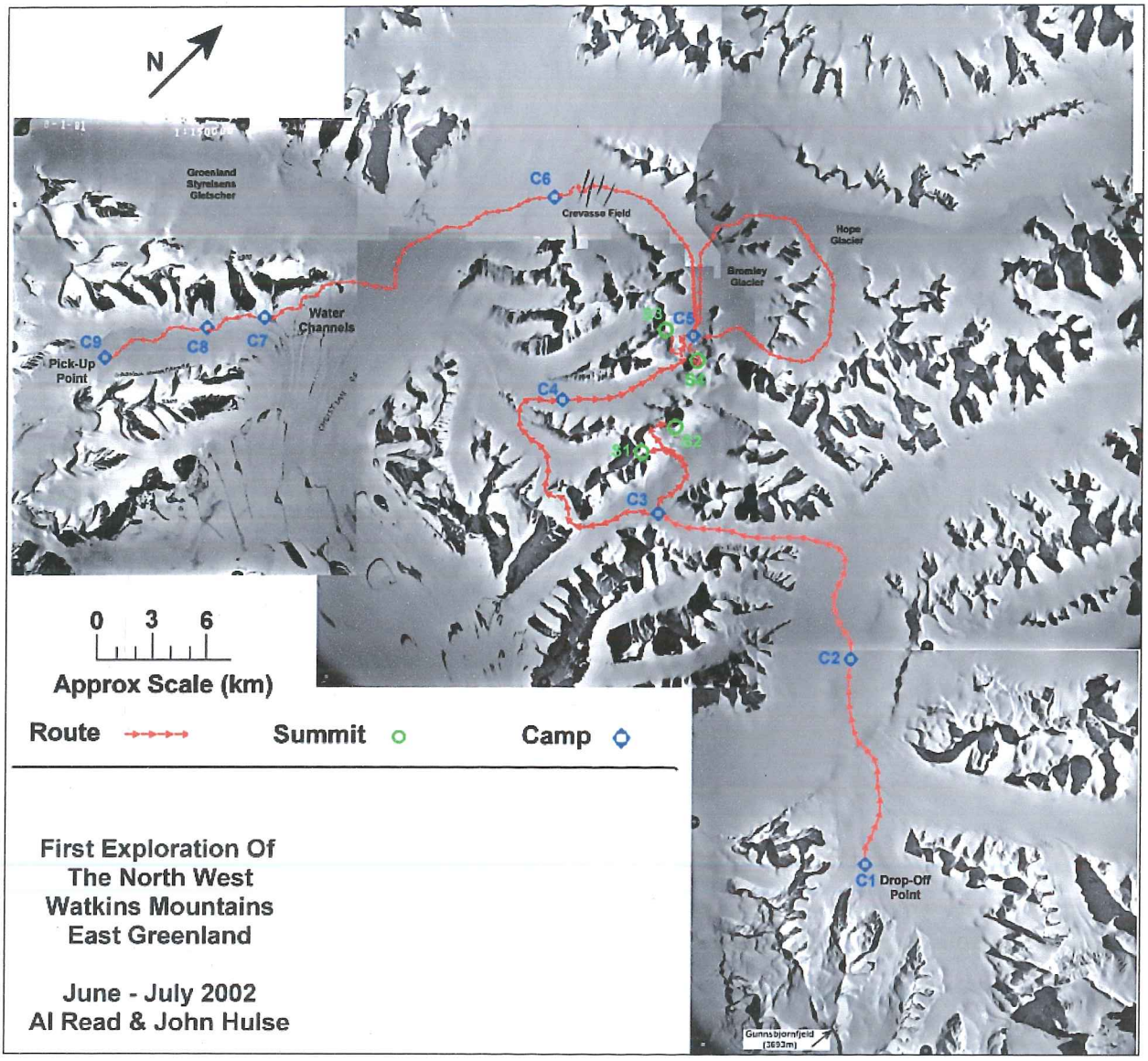


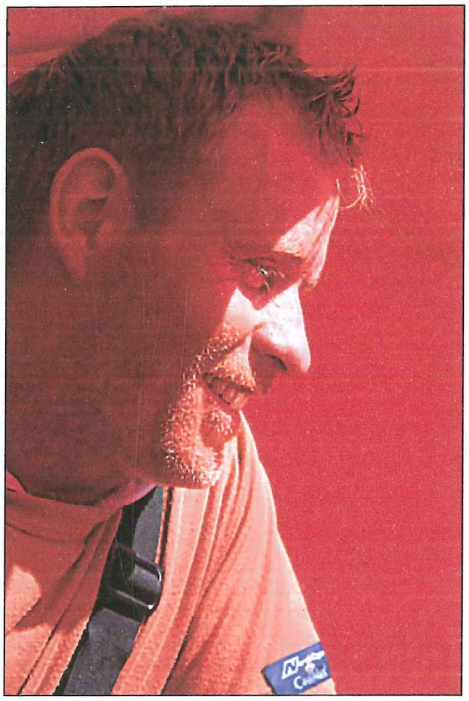
Figure 3 - Route in the Watkins Mountains

The above image was derived from aerial photographs taken in August 1981. The individual photographs were scanned, image corrected and then joined together in Photoshop.

Expedition Members

The trip was planned and completed by both members of the expedition who have known each other, climbed together and have been active members of the same busy mountain rescue team for the past 18 years.

Al Read



Al has been a Team Leader with the Ogwen Valley Mountain Rescue Team in Snowdonia for the last 3 years.

This was his third mountaineering expedition to Greenland where he has now made 15 first ascents in the Watkins and Rygnys Bjerg ranges. Prior to Greenland, Al took part in a major expedition to Denali in Alaska and Diran in Karakoram, Pakistan. Al has very strong technical mountaineering skills and is a competent downhill skier.

He has an MSc in Applied Oceanography and retired from the Royal Navy as Lieutenant Commander two years ago. Al is now a defence industry contractor.

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John Hulse



John has been a Team Leader with the Ogwen Valley Mountain Rescue Team in Snowdonia for 15 years.

This was his fourth mountaineering expedition to Greenland where he has now made 24 first ascents in the Watkins and Rygnys Bjerg ranges. Prior to Greenland, John took part in an expedition to Denali in Alaska in 1996.

John has been married for 25 years and works for a major US electronics company as global product manager for a range of high technology products.

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Summary of Route

Original plan was a crossing of Knud Rasmussen Land to a pickup point west of the King Christian IV Glacier at the Gronau Nunatakker with the objective of climbing new peaks in the North West Watkins during the journey. However, bad weather forced the Twin Otter to drop us at the base of Gunnbjornsfjeld in the Watkins which was about 140km south from our requested position. This enforced change of plan enabled us to spend more time in the Watkins Mountains.

This revised plan shortened the overall route to about 160km. Four peaks were climbed, of which 3 were definitely first ascents. The standard of climbing was relatively low, but the joy was enhanced by the sense of pure exploration in a challenging and remote part of the world.

The peaks climbed were:-

Summit	North	West	Height	Comments
Summit 1	69'12.972	29'31.072	3200m	Easy snow summit, highest peak in area. Possible second ascent, but not confirmed.
Summit 2	69'12.737	29'27.505	2900m	More technical, major cornices halted us few metres before summit. First ascent.
Summit 3	69'15.096	29'21.410	2827m	Easy open, rounded peak, good views. First ascent.
Summit 4	69'13.610	29'21.457	2815m	Easy peak, head of 3 glaciers. First ascent.

Nature Of The Route

The planned route was a crossing of Knud Rasmussen Land to be followed by some exploration of the North West Watkins and then across to the Gronau Nunatakker. The enforced diversion straight to Gunnbjornsfjeld changed the character of the route to a more ski-mountaineering biased route.

The actual route is a relatively straightforward ski-touring trip with the exception of enormous crevasses north of Camp 6 and the numerous water channels and potentially dangerous glacial streams in the base of the glacier close to camp 7. Only 3 of the camps were exposed to potential storms. The standard of mountaineering required was about Scottish Grade 2. The area is very isolated, relatively unexplored with the nearest people about 200km away at Scoresbysund. The possibility of rapid rescue is exceptionally low.

Camp Craft

Our camp craft was very strongly based on what we had learnt during our expedition to Denali in 1996 and 3 subsequent trips to Greenland. On the Denali trip we built snow walls around every camp to provide protection against the high winds that we usually experienced. By doing this we survived 4 days at 5800m (17,100ft) with winds of 100mph+ and temperatures of –40°C. An additional benefit to building snow walls is that the tent is covered by snow at a much slower rate. In 1998 in the Rygnys Bjerg area we had a 3 day blizzard but only had to dig the tents out once, whereas the other group in the area experienced their tents being totally buried.

Almost every day on this expedition, we built snow walls using the snow saw and shovels. Initially this took us about an hour but by the end of the expedition we had the whole process of making camp down to a 40-minute process producing regular blocks that any builder would have been proud off. The method we used was that one person would cut blocks and the other lever them out and place around the area for the tent to be pitched. Usually the snow conditions only allowed us to dig out one layer of blocks but by placing the tent in the quarried area we gained some additional protection. We aimed to have the walls built up the height of the tent with enough ground space to allow the pulks to be placed inside the walls.

We used snow stakes and ice axes around the groundsheet to secure the tent and then used the skis for the guylines. We favoured this approach because it meant that if we did experience any significant tent burial then we had almost no digging to retrieve equipment away from the tent.
We always dug a snow pit at the entrance that we used to get into the tent. This greatly eased getting boots on and off.

The process of unpacking the sledges was simplified as much as possible. We used a large nylon rucksack liner to store all the cooking kit and had a further liner for personal kit (sleeping bag, duvet etc). This meant that we only had to unload 3 bags from the sledges. One of us would get into the tent to start laying out sleeping bags and getting the stove going. The other person would sort out the food pack for the next 24 hours and making sure that all our equipment was secure and inside the walls before getting into the tent. Once inside we had little need to venture outside except for calls of nature or to do some photography. (If the weather had been very adverse we had enough plastic zip lock bags that we could have answered a call of nature from inside the tent.)

Daily Sledging Routine

We did not stick rigidly to a daily routine but tried to work around the best temperatures for moving with heavy sledge loads or climbing. This usually meant that we travelled or climbed in the late afternoon and evening and pitched camp at about 1-3am in the morning. Snow conditions would be improving during that time and we found that after about 3am we were tired and cold when putting up the camp. However, by setting out earlier we experienced high daytime temperatures which made us sweat heavily and added to the dehydration problems we were already experiencing.

Our main meal of the day was usually cooked after we made camp so that we would digest it whilst asleep. Breakfast was a smaller affair. We ensured that the daily allowance of sweets and gorp was easy to hand and we prepared a flask of hot chocolate for later in the day. An additional litre of fluid was made up to consume during the day.

Breaking camp was usually done with one person outside the tent placing the bags into the sledges as the other person cleared the inside of the tent. A final check and then we quickly collapsed the tent and folded the outer and inner away placing them on separate pulks. The poles were then cleared away and finally we secured the sledges. We carried a rope and ice axe on the outside of each pulk but had other equipment within easy reach.
Initially we set ourselves the target of pulling as below:

1hr, 1hr, 1hr, 1hr, 1hr, 1hr, 1hr, 1hr with 10-15 minute rest ,

but after a few days we reached the routine of;

1hr, 2hr, 2hr, 2hr, 1hr, 1hr with 10-15 minute rests.

Working this way we felt that we were covering the ground and we aimed to achieve a minimum distance per day. It was very interesting to note that our internal clocks could time the pulling intervals to within a few seconds! We would swap leads every hour and our pace difference was only ever about 100m different over the hour.

Overall the weather on the trip was good and we did not need to use a compass for any serious work.

Expedition Diary

14 June 2002

I woke at 05:30hrs and managed to stay in bed until 06:00hrs. All the major items were already sorted but details such as phone lists, insurance details etc. still needed sorting.
I'd arranged to meet Al at 12:00hrs with the objective of being at Heathrow well before the check-in time of 20:00hrs. Friday traffic can be chaos and I wanted to travel in a relaxed manner, albeit with plenty of time to spare.
Roz was off to work at 08:00hrs, so after an emotional departure, I set about the few remaining tasks. Eventually I decided that enough was enough so I loaded the car and picked up Al on time. The normal North Wales drizzle saw us on our way. After an un-eventful journey, we were soon amid the chaos of Terminal 1 at Heathrow on Friday evening. Amazingly the airport seemed to empty after 20:00hrs and we were now able to browse around in relative peace. Al treated himself to a Sony Minidisc and some discs. Together with the 4 books that we bought, we were set for a very literate and entertained trip.
The plane left on time and the rush caught up with both of us; we were soon fast asleep and did not even bother looking out of the window.
We arrived in the twilight of midnight in Iceland. After the usual transfer bus ride and a mini-bus trip, we were in Snorris Guesthouse. As before, our booking had been lost and they were not expecting us. Eventually we were offered camp-beds in Kristins 'beauty salon' where she does nails, waxing etc. Being tired, we decided that we would not bother with a manicure and amid the traffic noise, fell into a fitful, but brief sleep.

15 June 2002

We woke somewhere around 08:00hrs. Al had not slept well but I had got some sleep. We needed to be at the airport by 10:45hrs so Kristin ordered the taxi for us at 10:30hrs. A few odds and sods were still needed such as lighters, lip salve for Al, post cards and some tonic water for the gin we had bought in London! A G+T had become a bit of a tradition for us before setting off on the ice.

To our surprise, the shops did not open in Reykjavik until 10:00hrs so we needed to hurry with the shopping. Just as we arrived back at Snorris, the taxi pulled up and we still had some final packing to do. Amazingly we were in the taxi within 5 minutes and heading for the local airport. We checked in and were parted from our bags again. This is by far the most stressful part of a journey for me !. By using the now familiar vantage point, I was able to see our bags but not the skis being loaded on the plane.

Our flight left on time for Kukusuk and was uneventful apart from some of the passengers asking the stewardess for the score of the England vs. Denmark world cup match. She returned from the cockpit and gave these people the sad result of 2:0 to England. Needless to say, we dared not openly celebrate. On the approach to Kulusuk, the routine is for the plane to do a low pass over the runway to check for any problems in the surface. This was quite dramatic as it felt as if we were strafing the runway and far too close to the ground. After a quick circuit we were on the ground in Greenland again and the very first person we saw was Benny, the friendly airport manager from Constable Pynt. He did a double-take and recognised both Al and myself. A handshake and greetings sealed the meeting. Kulusuk airport is a real hub of Greenland aviation with flights from the west coast arriving and also local helicopters ferrying to the settlement. Whenever a flight arrives, the whole gravel/mud surface is turned into a mini-dust storm that permeates any gap into the terminal building.

Eventually it was time to leave for Constable Pynt. Benny was doing his usual multitasking as the security guard, X-Ray operator, ticket inspector etc. With a parting handshake from Benny, we were soon on our way north. The flight followed the coastline for much of the route and it was a remarkable sight to see just how complex the coastline is. The sea ice was all the way up the coast with just a few tidal cracks and leads giving the indication of water below. After about 90 minutes, we were flying over some mountains and we both instantly recognised the area as the Rygnys Bjerg. Every peak and glacier system we knew so well was stretched beneath us. This was so unexpected and was a fantastic surprise to see the area from a totally different perspective. We could see familiar features such Shark Fin and the concentric crevasses etc. Soon these mountains were out of sight, but I could clearly see some aquamarine melt water in a large tear-drop shape in the northern part of the Rygnys Bjerg. The familiar coastline of Scoresbysund was soon below us and many icebergs were still locked in the ice. Some leads and cracks were present, but the break-up had not started. The plane banked steeply at the end of

Hurry Fjord and we were soon on the final approach for Constable Point. The fjord was clearly breaking up with lots of grey-brown water visible looking like an exceptionally complex monochrome jigsaw puzzle. There was surprisingly little snow on the mountains as we did the now familiar low pass along the runway; even the normal snowbanks had long gone. After another tight turn, the plane did a superb landing and after a short taxi we were back at a sunny Constable Pynt again; big smiles !!

With no Benny to assist us, we hunted for Klaus, the new airport manager. We soon located him and after brief introductions, we set about the nerve-wracking job of waiting to see if our bags would emerge from the plane. Things take time and we dumped our flight bags in the accommodation block and returned to watch the off-loading of the freight. The first item off was a white coffin that was being treated with great respect and care by the handlers; not a very encouraging thing to see at this stage of the trip ! Soon after, our bags emerged amongst the mail sacks, cases, boxes and the other essentials of life in such a remote community.

One of the items taken off was a large pet container that was inhabited by a 5-month-old dog that was destined to go on to the Danish military Sirius patrols. After some more detective work, we located all the 23 boxes and items of freight that Paul had sent on to Constable Pynt. This was a great relief as we now had all our equipment and food for the trip. Nothing could stop us now and we could begin to relax a little. The helicopter needed to make 3 trips to the town to ferry all the freight and so the evening meal was late at 20:30hrs to allow the pilot to get some food. I had a superb peppered steak (or was it musk-ox) that was absolutely first class. Knowing that we would soon be eating some very unappetising food, I took advantage of all that I could eat.

The personal kit was soon stowed and the satellite phone put on charge. Tiredness soon overtook us and despite it being light at midnight, we turned in and caught up with some precious sleep.

16 June 2002

I slept well but still woke up tired ! In the far north and distant south, we could see clear blue skies but we remained under stubborn grey cloud cover. The plan today was to sort through all the food and equipment as and arrange things in a more relaxed manner.

We had a good Danish breakfast together with 2 other guests at the airstrip. One was a teacher at Scoresbysund and the other was the daughter of one of Paul's friends from the town. They were going to fly north with the group tomorrow as a sight-seeing opportunity. It was quite interesting talking with them about life in such a remote location. They told us that the shop had run out of lots of items and the supply ship was still 1-2 months away. They were salivating at the selection of foods available at the airstrip comparing with their limited selection in town. I was surprised that there is such a heavy Danish influence in the town with all the key roles filled by Danes and even the school teaches in Danish rather than Greenlandic. Brigite told us that most of her class of 14-16 year olds cannot understand her and she cannot understand them !

We carefully sorted through each food box and placed all the milk, tea, coffee and sugar into a separate container for each week. It was surprising to see that we had 3 times the milk we needed, yet only half the sugar that we expected. Also, we had specifically told Paul to give us mackerel and not sardines. Guess what we had .... Fortunately there were some spare cans of tuna abandoned from previous trips together with more sugar in the kitchen. It only seemed right to liberate them from the airstrip. This spare food saved the day for us and allowed us to build up food packs in a structured way. The food looked depressingly similar to the 2000 trip. Unfortunately, we also found a block of mouldy cheese in the packs! After the food had been sorted, we assembled a mosaic of the photocopies of the aerial images that I got from Llandudno. This enabled us to see the route again and after some time, late into the bright night, we completed the work.

Brigite arrived and excitedly told us that she had seen a herd of musk ox when looking from the control tower. We looked to the north but there was nothing to be seen. However, about 30 minutes later, I saw some movement in the far distance and suddenly the small binoculars enables me to see a herd of 7-8 oxen at a range of about 3km. Soon after we spotted an Artic Fox hunting just beyond the near river about 500m away. The flashes of white as it moved betrayed it's position. Bed called and I was soon fast asleep; I even forgot about the G+T !!

17 June 2002

With most of the preparation and sorting of kit completed yesterday, we were a little more relaxed. Yet again we had a good breakfast and then began to do the final odds and sods. Once this was done, we went for a quick walk towards the river at the north of the airstrip. Al found a birds nest that had been raided; probably by a fox. Some big clumps of goose feather were seen. During this walk, my right knee felt very tight and uncomfortable which was a real worry. Fortunately it did not cause me real problems in the mountains.

Paul Walkers group arrived and departed within the hour for the northern regions. It was nice to see Paul again and a shame that we did not have a chance to natter. John Starbuck was in the group and the first thing he said after I greeted him was "I'm not sure why I'm here again..." This was a really strange reaction for someone so close to the start of his first of 2 expeditions for the year.

After lunch, we had a siesta and relaxed for most of the time until dinner. After the meal, I went for a walk down to the harbour to see how the knee was doing. After a couple of hundred metres everything felt fine and I continued to the sea which was covered in breaking pack-ice. After some photos in the low evening light, I wandered slowly back to the hut and the knee felt fine which was great news.

The rest of the evening was spent with some strong G+Ts nattering about alls sorts of things. Suddenly it was 02:00hrs and we wobbled to our rooms.



Figure 4 - Twin Otter at Constable Pynt, Greenland

18 June 2002

Splashes of rain initially threatened the departure but a visit to the control tower and the ever-friendly met-man told us that the Twin-Otter would be here at 11:30hrs and that the weather in the Watkins was reported by the Tangent group there to be clear and fine. After breakfast we loaded up the bags ready for the flight. The overcast weather did not improve much and by 12:15hrs, the Twin Otter had still not arrived so we had another meal !

On the way out, someone told us that the plane would be landing in 5 minutes ! Fortunately everything was ready and by the time the plane had landed and shut down, we were ready to leave. A lot of kit for the Alpine Club expedition to the Lemon Mountains was off-loaded and replaced with our kit. By 13:15hrs we were speeding down the runway towards the overcast, drizzly skies all around us. After a turn over the airstrip, we headed south and no mountains to the south could be seen through the clouds; not a good sign. I began to think that the planned drop-off would not be viable as the area we wanted to go to was somewhere in the clouds which were solid to more than 3500m. After 40 mins of flying with excursions up and down in altitude trying to find a clear slot, the pilots called us up and told us that they would not be able to drop us at the planned point. The only option was to carry on to the Watkins Range

and be dropped off there. It was indeed fortunate that we knew the area and had the set of aerial photos with us !!
We kept flying south and eventually the skies lightened and we could see bits of rock and snow beneath us. Suddenly I could see Trafalgar peak and the Col J area (year 2000 expedition). Again, it was a real surprise to see these mountains from the air again. A couple of minutes later we were landing alongside a camp at the base of Gunnbjornsfjeld in strong bright sunshine; what a total contrast to Constable Pynt. After circling the camp twice to compact the snow, the plane stopped and with the engines running we got out onto soft, sticky snow. The waiting group greeted us and were clearly very glad to be going home. It transpired that the weather had been mixed and they had not got a great deal done. It had taken them 3 attempts to summit Gunnbjornsfjeld due to poor weather.



Figure 5 - The changeover at Gunnbjornsfjeld base camp

Their kit was soon loaded and we exchanged best wishes with the group. The pilot then apologised for dropping us here and sheepishly offered us his North Atlantic aviation map in case we were lost! The plane then took-off down the slope and disappeared to Iceland leaving our ears ringing with the unaccustomed silence.

We automatically dropped into the routine of camp building and erecting the best walls we could with the poor soft snow. After about and hour we were inside our sleeping bags looking at the fantastic view ahead of us. The sun soon swept behind the nearby mountains and the temperature plummeted within minutes. I'd forgotten just how much the sun dominates the temperatures in Greenland. Three mugs of tea later, followed by some photos, we settled down for the night. Al had been feeling rough since we landed (altitude/hangover/dehydration?), but by 02:00hrs he had recovered and we were fast asleep in the snug bags.

19 June 2002

Due to the poor snow conditions during the heat of the day, we decided to wait until night before moving north along the glacier. A good snow surface was essential as we knew that we had to cross some large crevasses in the move down the glacier. The delay in departure meant that we could do nothing for most of the day apart from eat and drink lots of tea !! Tough life.

Everything seemed so familiar; the routine, the cold and the place. The meal of savoury mince and some yellow stuff also seemed a bit too familiar and the same tastes as 2 years ago filled our mouths. Eventually the mince and yellow stuff was ready to eat and surprisingly it tasted OK. However the semolina pudding was disgusting so we both abandoned it.

We packed up the camp and under heavy but clearing high cloud, moved off at about 21:00hrs. Soon we were in the crevassed area and navigated carefully through the rather intimidating area. Fortunately we saw no big holes and made good progress to the lower section of the glacier. It was strangely familiar to be pulling the sledge again and the old discomforts reminded me that sledge-work is hard work. However, it was wonderful to be back in Greenland again surrounded by amazing mountains with the rising moon behind us.

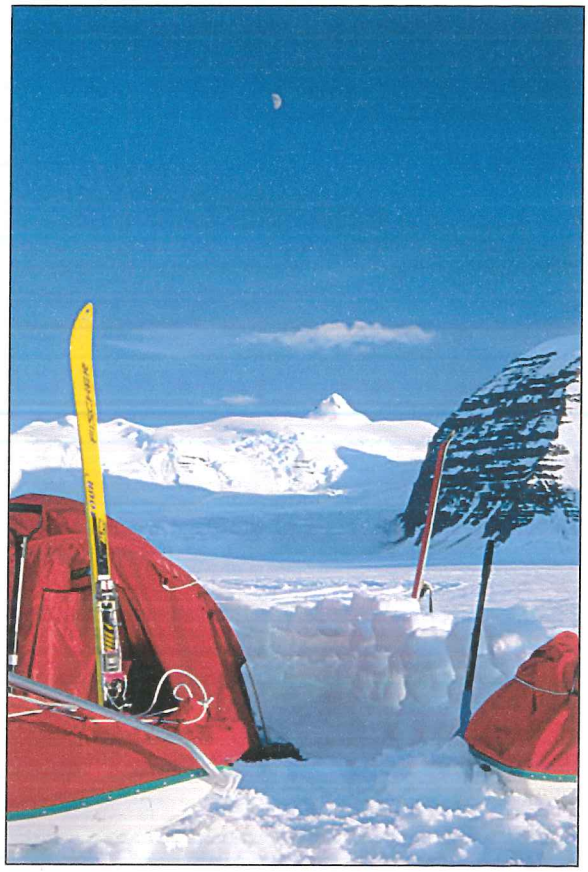


Figure 6 - Cone Peak From Gunnbjornsfjeld Base

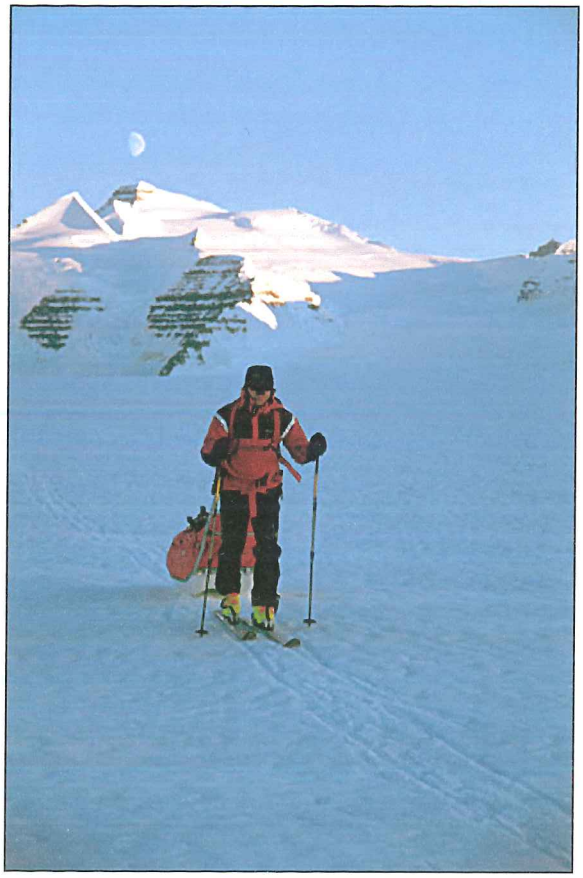


Figure 7 - Moving towards Camp 2

By 03:30hrs, we were safely across the crevasse zone, getting tired and so made camp for the remainder of the night, not far from the site of the year 2000 camp. The cloud had cleared, sun rose and we were bathed in a beautiful soft light. The hard work continued as we needed to cut blocks for the walls. The surface was hard and there was an ice layer that was virtually un-cuttable, even by the snow saw. This proved the hardest work so far ! The camp was built and we reluctantly moved into our tent. After a very welcome brew of lemon tea, we were asleep and had no plans for an early start.

20 June 2002

The plan was to leave in the early hours of the next morning so this gave us a very leisurely start. The objective was to move up the glacier to the south that runs parallel to the one we came down in year 2000. The main meal was at midnight and we planned a short nap to digest the food. Unfortunately, this turned into a longer snooze and we both woke at 04:00hrs (21/6/2) torn between not wanting to leave the warm sleeping bags, but wanting to get going.



Figure 8 - Across the King Christian IV Glacier towards the Gronau Nunatakker and the Icecap

21 June 2002

In the very early hours we were treated to amazing views over to the Lindbjerg Mountains and the central Watkins area (Figure 8). After a quick brew we packed the tent and headed away again. Inevitably we needed to gain a lot of height and we were faced with a long slog up the chosen glacier. As the sun was getting higher, the temperature seemed to rocket just as we were beginning to work harder gaining height. The stops became more frequent as we headed up the glacier. Looking behind, we were treated to stunning views of the north-eastern Watkins stretching far away from us (Figure 9).

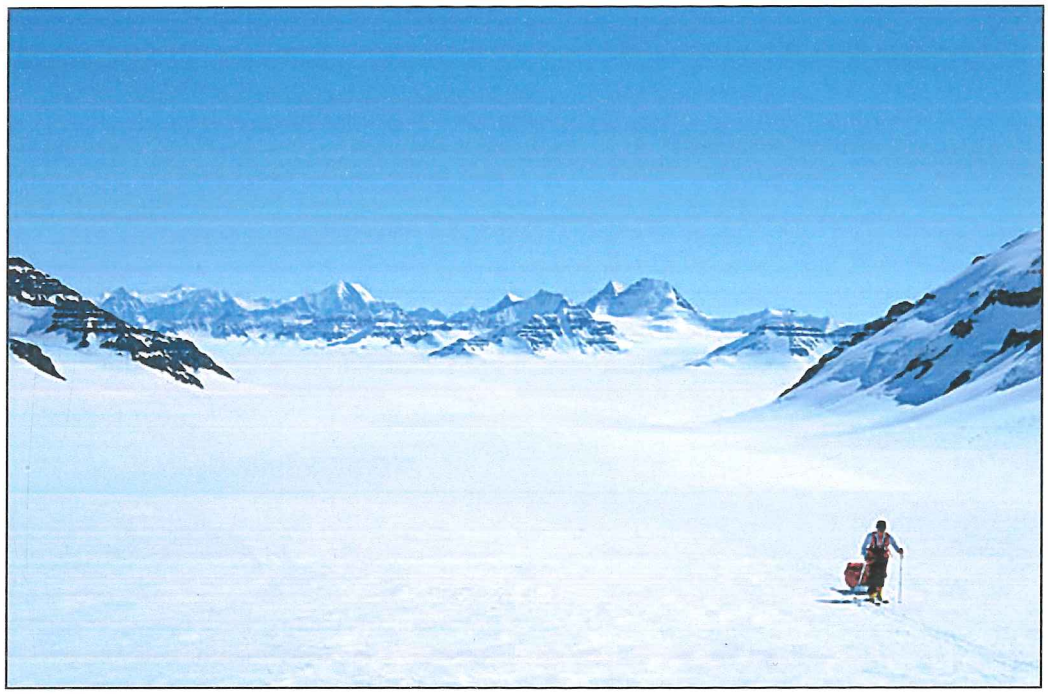


Figure 9 - Moving up towards Camp 3 with the North Eastern Watkins behind

In the hurry to move from Camp 2, I forgot to fill one of my drink containers and I soon ran out of fluids. I got increasingly de-hydrated but it was too early in the climb to stop. Somehow, I kept on going and we eventually reached a plateau that was fine for the camp and had great views back down to the north eastern Watkins. As usual, the walls needed to be built and again the surface was very icy which made the wall building task really hard work in the heat of the sun. The dehydration and effort needed for the walls eventually caught up with me and I had to stop work and make a brew. The new MSR stove was fired up and roared away like a jet engine. A very welcome brew was made and we soon felt invigorated enough to complete the walls.

By 17:00hrs, we were in the tent with the stove roaring. It had been 11 long hours since we left the previous camp, we had covered about 14.4km and gained about 500m of height. After a bowl of cereals and another brew we discussed plans for the following day. The prime objective was to bag some new (but easy) peaks. Al was clearly rather keen of technical peaks, but I was quite clear about wanting to start off with easy peaks. Next to the camp, there was an impressive bulk of a mountain that dominated the immediate area with its impressive ridge lines and other sweeping features. These would have been high on Al's list. Tiredness soon overtook both of us and we drifted into a deep sleep by 20:00hrs.

22 June 2002

Midsummer day. Despite good intentions, we woke late and relaxed in the tent whilst the sun beat down on us. The intense reflected light from the surrounding mountains made the tent a welcome refuge. Yet again the meal was curry and rice; the third such meal in 4 days !. The plan was to ascend the easy looking peak to the right and west of the camp. As this involved a climb, all the hardware, ropes and axes were fitted to the bulging rucksacks. The objective was to leave later so we could get some sleep and also have better lighting for photography. We finally left the camp at 15:30hrs and headed steadily towards the base of the chosen mountain. Al believed that it has already been climbed following an earlier discussion with Paul Walker. Despite moving towards the mountain, we did not seem to make much progress. After about 2.5hrs of steady uphill work we reached the start point of the route and changed from skis to climbing gear.



Al led off to the left onto the nose and we agreed that we would move together for most of the ascent. The snow was angled at a steady 25-30' degrees and had sections of hard ice which the crampons barely marked. We weaved our way around 4 rocky cinder outcrops on the broad ridge line during the ascent.

Nearing the summit, we were both moving rather slowly and found progress quite tiring; this was put down to increasing altitude and our heavy loads. In common with so many mountains in Greenland, the scale was a deceptive and we seemed to be making little impact on the peak. Eventually at about 20:30hrs we reached the summit, tired yet very pleased. The summit photo was brief due to the cornice and a huge drop to the glacier far below. The summit height was 3200m and the location 69'12.972N, 29'31.072W.

We were amazed that this innocuous mountain was the highest peak in the area and we had superb views all the way back to the drop-off site at the base of Gunnbjornsfjeld. The area towards the pickup point at the Gronau Nunatakker was clearly visible and we could see glacial streams and lakes far below; not good news. With a steady cold wind blowing, we did not linger long. The descent was easy and rapid on a good surface in the shadow.

We were back at the skis at around 22:00hrs and as Al could ski well, we agreed that he should go ahead whilst I wobbled my way back to camp. He shot away and was back at the camp in just over an hour whilst it took me 2.25hours to do the same descent ! However, I stopped a couple of times for photographs on the pristine, stunning glacier. Eventually I arrived back at the camp, stowed the gear and downed the first of several lemon teas. Following the excitement of the day, we nattered for a while and fell asleep at about 03:00hrs.

23 June 2002

We woke at around 12:00hrs and fitfully dozed until about 18:00hrs. The weather had deteriorated with high-level cloud and a mackerel sky creating lovely dappled effects with continuously changing shadows on the distant mountains. The plan was to climb the neighbouring peak north of the previous summit. Again, it looked very accessible and give superb views. After a meal of savoury mince (yet again) we set off at 22:00hrs back up to the same location that we placed the skis the previous day. However after about 30 minutes into the journey, my right knee started hurting again; a re-occurrence of a relatively recent problem. I proceeded very quietly and avoided sharp movements and eventually the pain subsided. As we ascended, the weather cleared to the south, west and north leaving just Gunnbjornsfjeld in heavy grey clouds. After about 2 hours, we were back at the original halt. In the shadow a cold downhill wind forced us quickly into all our heavy gear.



Figure 10 - Resting at the col before Summit 2

I led off uphill and after a long and un-eventful trudge up the bowl past some crevasses, we reached the col and were treated to superb views to the west and north. The low midnight sun bathed the icecap and the surrounding mountains in a soft orange/pink light. Again, we could see lakes reflecting on King Christian IV glacier that we will need to cross towards the pickup point at Gronau Nunatakker.

There was not a breath of wind and it would have been very easy to stay longer, however the long ridgeline to the summit loomed ahead. The ridgeline had a few steeper sections and it looked harder than we had originally thought. We started up the ridge avoiding the cornice risk on the left by keeping on the right hand side. This meant that we were forced to move downhill a little onto the steeper, icy ground in the shadow. Eventually we reached a shattered rock step that marked a distinctive step in the ridgeline and it was an obvious place for Al to take the lead onto the steeper ridge. I belayed to a large block and sat back with incredible views to a glacier far below. Al led off and soon placed an ice-screw runner. In no time, the full 60m of rope was out and Al had belayed to 2 more ice screws with the huge 50 degree convex icy slope sweeping far beneath him. It looked very impressive and a bit intimidating. All of a sudden, the seriousness of the position was rammed home and I felt a little nervous about being able to move safely on this new, steep and potentially very dangerous ground. The drop below now looked huge and I felt very isolated as a slip here would have dire consequences.
We swapped over at the ice-screw belay and Al led off again with the ropes looping easily down the slope below. The stance was just a cut-out in the ice slope for one boot to avoid loading the ice-screws.



Al completed the pitch in his usual quiet and competent manner and brought me up using an axe belay. The next few pitches were easier but still no place to relax or even think about taking a photograph. We eventually reached a flatter section and I brought Al up to a position below the final step in the ridge with some major cornices to the left leading to the summit. This was not good news. Al led off cautiously to inspect the way ahead and soon got onto steeper ground with massive double cornices on either side of the ridge. After a brief discussion we agreed that discretion was by far the better course. We way-marked the position as it was the highest point that could be safely reached. The location was 69'12.737N 29'31.072W at an altitude of 2900m. Although we had not reached the true summit, we were close enough and were totally blocked by enormous cornices. It would have been stupid to proceed.

As usual, I started the descent with Al behind me and I found that I could avoid most of the icy slopes by walking carefully along the crest of the ridge to the rocky step. We dropped down the ridge to a shale-like rock area and after a photograph we descended straight down into the bowl. After about 30 minutes of swift movement down the back of the bowl, we were back at the skis with little incentive to linger in the cold early morning shadow.

Al set off and rapidly became a dot in the far distance. I plodded down and was soon in the warm early morning light that cast a gorgeous pink/yellow light over the entire scene. It was tranquil and absolutely beautiful with all the stresses and worries a million miles away. For no apparent reason, my right knee started hurting again and I needed to stop for a rest and an ibuprofen. This seemed to help my knee but it remained tender for the remaining 2 hours back to the tent. Eventually the tent came into sight and Al was working outside in the glorious early morning light. I was really glad to be back at the tent and eagerly drank the lemon tea that tasted like nectar.

The climb had been quite long with us leaving camp at 22:00hrs, ascending a moderately technical peak and then returning to camp at 09:00hrs. We made an Ops Normal call to Roz and it was great to hear her again. She had even managed to send a text message of detailing the North Atlantic weather data to us ! As usual, sleep soon overtook us.

24 June 2002

By the time we woke it was 18:00hrs and the tent was shaking violently with the winds blasting from the Icecap. The original plan had been to move away at 22:00hrs, but this was abandoned due to the inclement cold weather. After a debate, we decided to move at 06:00hrs tomorrow morning to the next camp. This decision was absolutely right in the prevailing conditions; offering us more time in the nice warm sleeping bags !

25 June 2002

When we got up at around 04:00hrs weather had settled down. Despite the cold, the wind had dropped and it was much easier work breaking the camp. We finally left the camp at about 06:00hrs and headed downhill on the glacier to the south which lost a lot of valuable height. All the time, the view over the lower King Christian IV glacier improved and unfortunately showed a lot of water being held in sumps etc. This was not very attractive as we needed to cross that glacier higher up about 8-10 days later.

As we descended to the required side glacier, we could see some water pooling and a lot of brown-stained wash-down from the slopes. As we got closer, the size and scale of the water erosion became apparent. When we got to this point 69'13.553N 29'38.894W at about 1900m we could see running water and three small sump pools that appeared semi-frozen. This was very unexpected and a real surprise.



Figure 11 - Moving up Easter Island Glacier

The route was up the side glacier north west of these ice pools uphill into a very cold wind over rough sastrugi. On the ridgeline to our left there were two distinctive pillars of rock that looked like figures from Easter Island.

The only way to make progress on this difficult ground was to focus on each step forward and ignore the scale of the task ahead. Eventually after 2-3 hours of hard, quiet work we gained a smooth col at the top of the glacier. The view was superb on all directions and compensated for the difficulty in attaining this position.

Due to the cold we soon left the col at 69' 14.130N 29' 39.665W and skied down a superb flat, smooth surface past impressive views to the north that were reminiscent of the Denali range in Alaska.



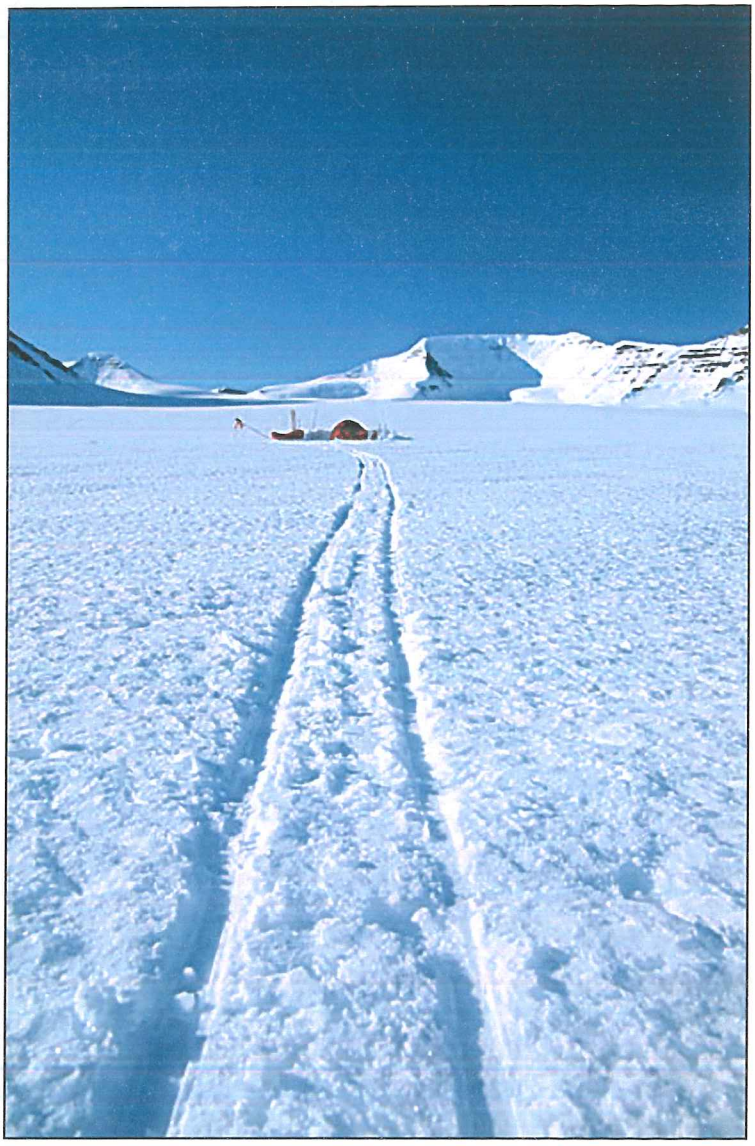
Figure 12 - Moving across the high Glacier

We followed this excellent surface all the way to the bottom and then ascended a small hill to get a view of the way forward up the next glacier that eventually lead to the Bromley Glacier. Some big crevasses stretched about a third of the way across the glacier and we plotted a route past these crevasses and set off in the warm sun towards the glacier. It was far from ideal conditions to be moving near crevasses due to the lateness of the day, but we had little option but to move on with great care.

Tiredness was beginning to take its toll and we decided to make camp as soon as we had safely cleared the crevasses. We started setting up the camp at around 16:00hrs and it was so hot that we needed to stop for a brew to re-hydrate. By 18:00hrs, we were gratefully inside the sleeping bags and starting to cook. The meal was an ultra-hot Asda Mexican chilli and Al could not finish his meal despite being intensely hungry. This camp was in a pleasant location with great views across the King Christian IV glacier towards the pick-up point at the Gronau Nunatakker.

26 June 2002

The alarm went off at 04:20hrs and it was a real struggle to get out of the cosy, warm sleeping bag. Outside, it was very still and the sun was just peeping around the mountain to the north and east. The stove was hard to light due to the cold and after a brew I went outside to take some early morning photographs in the superb light. The whole area looked serene with clear blue skies and the hard frozen snow reflecting the soft light. Exposure compensation rules evaded my early morning cold brain and I ended up over-exposing the film by 1 stop, which subsequently needed special processing. However, some moody shots were obtained.

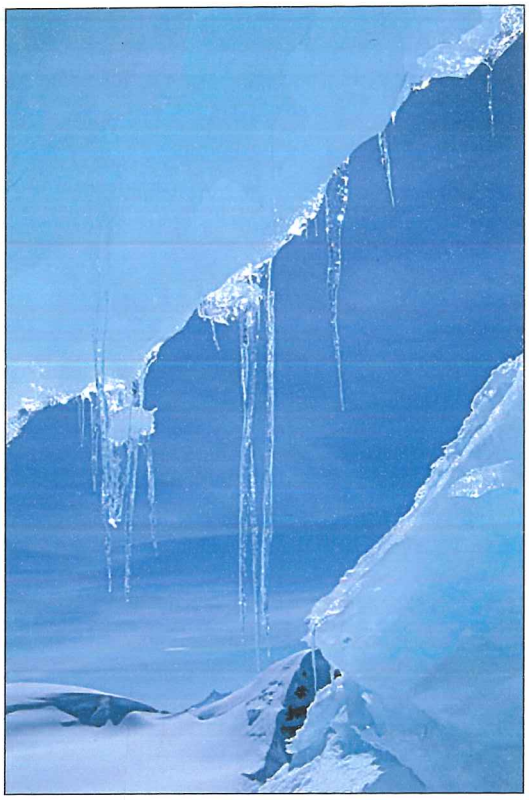


Camp was cleared and the rest of the day was a long but relatively pleasant pull up the glacier towards the col that led to the Bromley Glacier. One of the flat-topped mountains to the west and near the top section of this glacier was topped with enormous cornices that looked like the overhang of an aircraft carrier flight deck. The "Nimitz" would be an apt name for this mountain.

The final few hundred metres towards the col was steep and very hard work. The slope angle was too much for my ski skills and so I removed the skis and continued using crampons. Eventually I reached the top and met up with a smirking Al who had managed to ski up the col on his new skins. By this time I was exhausted and we decided to make camp relatively nearby. After all the hard work to gain the height we skied off downhill towards a bowl that would provide shelter for the camp. However, when we got there we found that the snow conditions were awful and we were suddenly reminded of our conclusions from the previous trip to this glacier where we found that the snow was the worst and most crystalline of the journey. The snow had a thin surface crust and sugar-like loose crystals that went down for at least 0.5m. Wall building was very difficult and loose snow was piling into our boots as we worked. Eventually, some poor walls were constructed and we gratefully fell into the tent. Despite it being the worst camp so far, we were very glad to be finished for the day. Al made the best meal of the trip which consisted of tomato paste added to savoury mince, salt, pepper and butter poured into the dried potato. The bags beckoned and we were asleep by 21:00hrs.

27 June 2002

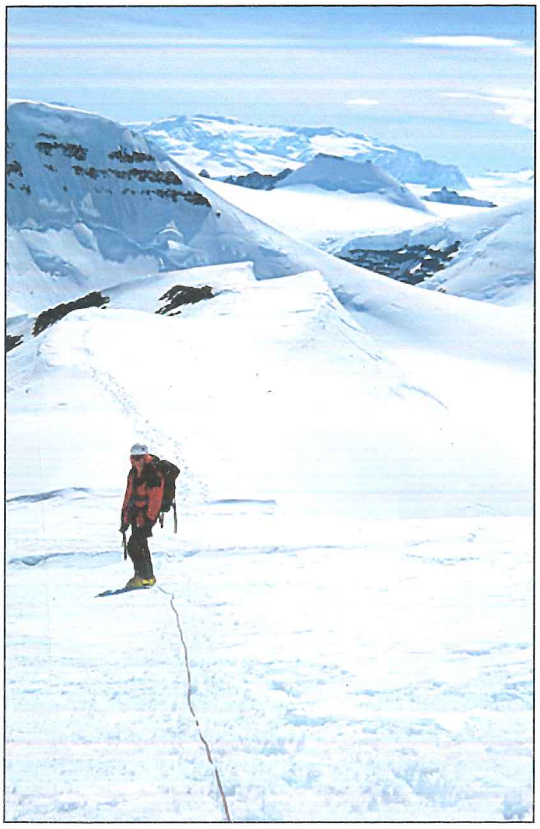
The alarm went of a little later at 06:20hrs as compensation for the previous hard day. Despite the early morning alarm, we did not get out of the bags until 08:00hrs after a couple of welcome brews. The day was clear with a light but cold wind coming from the col. A shorter day would allow us to catch up on domestic issues. The obvious target was the minor summit and also the round-topped peak that overlooked the camp to the west. At about 10:00hrs, we set off on skis up to the col and were treated to magnificent views of the Watkins. The intended route looked OK and I led off on the easy ground. Near the top of the minor summit, I spotted an exposed crevasse with hanging icicles that overlooked the slope.



This provided an excellent photo opportunity and Al belayed me as I clambered into the crevasse that was actually a crack across the entire summit. A steady breeze from the depths of the slot confirmed this observation. I delicately entered the crevasse trying to avoid the icicles but tripped, fell against my axe and knocked off two large icicles !

This was a difficult place to photograph as the sun was shining into the slot and I wanted to capture detail on the icicles whilst retaining detail in the darker distance. I really needed graduated filters, a tripod and lots of time, but the usual compromise of snapshots resulted. Wide bracketing in half-stop increments was used but in the end, the results were mediocre at best. After a few shots, I left the slot and swapped places with Al. After that pleasant diversion, I edged towards the summit mindful of the crack that splits the area. The GPS reading was 69'14.776N, 29'21.567W and the height about 2,700m.

We then moved along the ridge towards the main summit. At first, the snow just collapsed cleanly underneath us and soon we were dropping to waist depth in some places for no apparent reason. To avoid this horrendous surface, we diverted to the deep brown rock and shale to the right. Red, green, blue and yellow clusters of lichen provided splashes of colour against the dark rocks. Soon the snow surface improved and we regained the ridge line and continued easily to the rounded summit (69'15.096N, 29'21.410W at 2827m). It was a superb feeling to have another first ascent in the Watkins! This location provided superb views of the Watkins and across to the Ice Cap. After a couple of usual photographs and a quick rest, we left the cold summit and headed back down the ridge which looked very alpine with our footprints zigzagging around. I would like to name this peak after Coronelli, the great 17th century Venetian cartographer.



When we were back on the ridgeline in the rocks, we decided to stop for a break out of the wind together with an opportunity to take in the views. Eventually it was time to move as the sun was getting hot and melting snow all around us which would result in yet more balling of the crampons. On the final part of the decent, we both fell into crevasses and in both cases we lunged forward to avoid dropping into the holes. We had a good laugh once we were very well clear of the crevasses.

Half an hour later, we were back at the skis and Al shot off to the camp whilst I wobbled down. It was a great pleasure to get the sweaty and dirty clothes off and change into nice dry gear! This had been a great, fun mountain day. We chatted for ages after the meal and fell asleep around midnight.

Roz sent a text message to us that indicated that there were lows systems all around us. Al gave an "Ops Normal" call to Di who said that Paul Walker was trying to find out what we were doing and wanted to confirm that we would be at the planned pickup. We phoned Lucy Walker to try to clear up this strange confusion.

28 June 2002

The alarm went off at 06:20hrs but I did not hear it. Al woke me at 07:10 by opening the tent door; I was dead to the world. The plan was a long ski tour across the Bromley Glacier and into the Hope Glacier through the area we saw from Col J in the 2000 trip. We set off at around 10:00hrs and made steady progress to the col at N69' 12.298 W29' 16.119. After a quick bite we descended into the new glacier and we were treated to views of Gunnbjornsfjeld framed through a gap in the valley to the south. Al skied down but I walked down this slope as this was by far the fastest and safest way for me to get to the base and this was no place to take a fall.



Figure 13 - Travelling across the Hope Glacier

When we reached the base of the slope, it was midday, very hot and was had a long way to go. The mountains around us were quite technical and had a very fast receding snowline. As we made our way north/west, Col J became clearer and the size of the ice cliffs were even bigger than I remembered in the year 2000 trip. At one point, we were alongside a cliff to the left that was in a continuous state of rockfall, probably caused by the sun melting snow high up and then the underlying rocks becoming insecure. It was quite impressive to watch these spectacular falls from a very safe distance.

The Hope Glacier seemed to go on for ages and was much bigger than we expected in the hot sun. We were both beginning to suffer in the heat and reflected light. A couple of times we looked for a breakout onto the Bromley Glacier but first one and then the next option was not feasible. We trudged on and eventually spotted a col that we could ski through. As usual this looked a lot closer than it really was and it took ages to reach the crest of the col. However, when we did finally attained the col, the Bromley Glacier was spread out across our path. The sun was still beating down despite the time being 18:15hrs. After a quick break to admire the superb view and to drink some of the precious remaining fluid, we set off on the long trek back to the camp. Some interesting high key photos were obtained of Al drinking from the water bottle whilst silhouetted against the blinding white snow.



Figure 14 - Approaching the Bromley Glacier

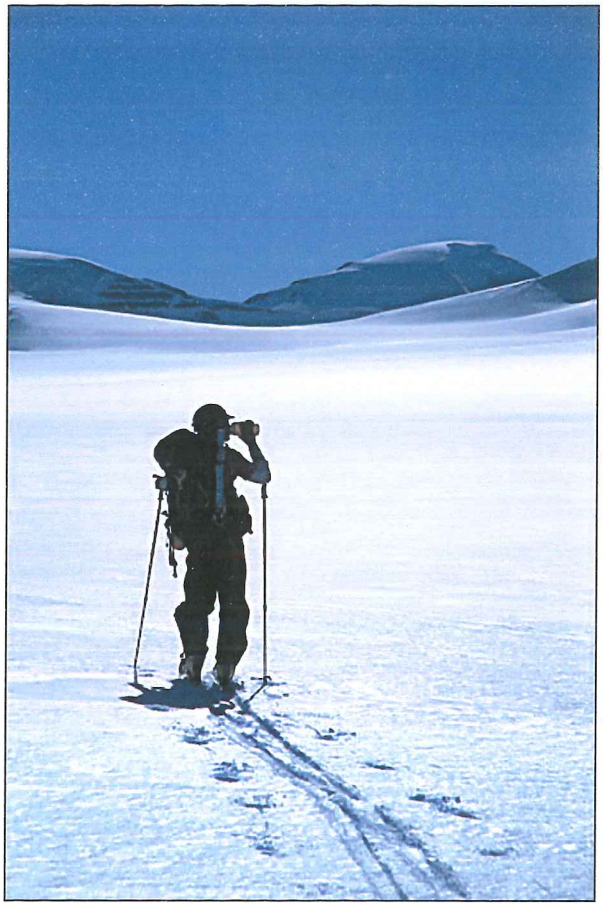


Figure 15 - Last drops of fluid

Soon after this stop, my sore, soggy and sweaty feet began to complain so I suggested to Al that he went ahead whilst I worked on the feet to resolve the issue. In the dazzling sunlight and reflected light, it felt phenomenally hot. I took off the boot and everything was absolutely saturated with sweat, which meant that the socks offered little protection. Also the inner book was wringing wet, which did not help at all. At this stage all I could do was dry the foot, inspect the blister, put a Compeed on it, put on a spare liner sock, grin and start the trek back to the tent. Al was a barely visible dot in the white light far away and with no camp visible, the scale of the area became clear again.

I made slow but steady progress by getting the left foot to do the hard work and the right foot was kept static in the boot to avoid worsening the blister on the heel. After about 2 hours of hard work I arrived in a sweaty heap back at the camp. After a welcome brew of lemon tea and a wipe down I felt vaguely normal again. However my right heel was blistered and this was a blow that could curtail some activities. I was amazed how wet my feet had become and were showing the first signs of immersion foot problems. To start the healing process, I let the feet dry off in the warm evening sun and it felt wonderful on my tired limbs.

A snack and a meal finished off this long day that had taken us more than 25km through a lot of new mountain territory. The plan is to finish our time in the Watkins with a shorter day climbing a summit before the snow surface becomes unusable. We would then move towards the pick-up point using hard snow surfaces. Sleep pounced on me again.



Figure 16 - The long haul back to camp 5

29 and 30 June 2002

The alarm went off at 06:20hrs and we slowly started brews and a breakfast. By 09:00hrs, we left camp and headed back towards the col above the camp with the intention of ascending the easier rounded summit on skis. However as we drew closer, the larger, steeper and more dominating mountain to the south became more attractive and we abandoned the original objective. The real problem was the deteriorating state of the snow that was worsening all the time as the sun rose in the clear blue sky. We weaved a way up onto a snow ramp at the start of the left hand ridge. As soon as we stepped off the skis the snow was almost over the top of our boots. Gear was quickly sorted and crampons fitted. Al led off as usual up the side of the ridge with big balls of snow accumulating in the crampons. After a short steeper section we were soon on the flat-topped summit area with enormous cornices on 3 of the main sides. The summit location is 69'13.611N, 29'21.462W at an altitude of 2815m. This peak dominates the glaciers on 3 sides and provided a nice finale to the Watkins portion of our trip.
A reasonably uneventful descent took us back to the skis. The sun was now very hot and the snow was saturated and melting everywhere. Al skied elegantly ahead and I took my time to carefully descend back to the camp with only 1 wipe out.

We made the decision to move at night towards the pick-up point to take advantage of the better snow surfaces. The plan was to pack up and start moving around midnight when the surfaces will be frozen. During the remainder of the day we washed and dried the worst and most disgusting of our clothes. The soapy washing water turned instantly brown/grey as the garments hit the pan. The vaguely cleaner washing was hung to dry in the fading sun from an improvised washing line. However, the sunny side of the garments gently steamed whilst the shadow side remained stubbornly frozen.

The evening meal was a re-hydrated Beanfeast, which tasted good at the time but had rather unfortunate and long lasting consequences. We packed and left the camp at around 01:00hrs on **30/6/2**. Even in these colder temperatures we could hear enormous cornice collapses that sounded like artillery barrages. The soft low lighting on the nearby peaks provided some nice near-mono images.



Figure 17 - The following storm

Fortunately the majority of the Bromley glacier was downhill and enabled us to make good progress. After about 5 hours we were at the end of the glacier and able to see the pick-up point in the far distance. Straight ahead was a large open glacier (Gronlands Styrelens) that lead onto the icecap that could be used as an alternative way to the pickup point. The new glacier spread downhill to both the right and left with our route to the left. The route ahead involved a long crossing of the King Christian IV Glacier into a light but cold headwind. We inspected the route ahead and it looked OK in a direction of 292' true.



Figure 18 – Travelling Towards the Ice Cap

We set off again in the colder wind and suddenly found ourselves in a large crevasse field that had been hidden from our previous location. We could not believe that we were enmeshed in enormous, complex and multi-directional crevasses having said to one another only 10 minutes earlier "it looks OK from here..." I set off in the lead and after many changes of direction and intakes of breath whilst hurrying across vast snow bridges, we reached the other side of the field with great relief. This crevassed area was not evident on the aerial images that we had learned to trust. Al complimented me on the navigation through the crevasses!
We soon had the tent erected with minimal walls as the surface had deteriorated again. Kit was thrown into the tent and after a quick brew of the now familiar lemon tea, we were ready for sleep after more than 24 hours on the go, a new peak and about 18km of new travel.

1 July 2002

The day started at 02:00hrs with the move from camp 6. Again despite the early hours, I was quite comfortable in just the black Lowe Powerstretch top and bottoms that had become standard wear on this trip to Greenland. Fortunately there was little or no wind. We stayed roped for a short while to ensure that we were well clear of the crevasse field, as this was still no place to relax. We made very good progress heading steadily downhill towards the left hand side of the glacier that leads towards the pick up point at the Gronau Nunatakker. A very distinctive snow slide at 292' true in the far distance provided an apparent clear way past the crevasses and the water. Every couple of hours we stopped for a bite and a drink together with a scan on the binoculars to re-check the way ahead.

As we were losing height we saw glacial leads and small lakes in line with our intended track which caused us to veer towards the right. The expression "it looks OK from here" was used several times and soon became a totally doomed phrase. As we descended, the snow became softer and wetter with the odd patch of blue water ice that appeared mushy. At this stage we simply thought that the day was becoming warmer faster than usual causing the melting action. Our descent continued and more bluish saturated snow appeared. Together with the overcast grey sky, the whole area was not very appealing and I was seriously thinking about the wisdom of heading down when there was a perfectly good glacier (Gronland Styrelens) to the right that looked OK. The difficult lighting conditions made precise evaluation of the surface more difficult. I spotted some water ice that had water running underneath and this oozes out when I trod on it. This was totally unexpected and I was amazed and became very cautious having heard about the dire consequences of falling into concealed streams. Suddenly things were taking shape. The curious "white noise" that we had heard from the higher mountains was in fact water flowing which then drained into a sump then into the large bowl that we were descending into. Not a desirable combination.



Figure 19 - Weaving around the channels

The alternative glacier (Gronland Styrelens) was yelling itself as a sensible option even though it was now far less accessible due to our loss of height and the appearance of large crevasses to our right. We kept on heading downhill, however Al was confident about the route that we were becoming committed to.

Suddenly water oozed out from a hole made by my ski stick; this was the last thing I wanted to see. As a precaution in case I dropped into an underwater stream, I undid the leashes on the skis, released the sledge harness straps and proceeded very gingerly. Al said that the water was just running above an ice layer but I was less than convinced. He said that although it was unpleasant, it was not serious. We continued and it became apparent that the only way ahead would be to veer to the right as a leads, channels and sumps now blocked our intended course. The impassable channels ran as far as we could see down the King Christian IV glacier. Although we had suspected that there was going to be some water here, the sheer scale of the channels and lakes was stunning. The surface below the skis became totally saturated and our sledges broke through the weak ice layer but were held by stronger layers below. At first, this breakthrough was alarming but it happened so often that it became routine and we ceased to care about it.

Below us in the murk, we could now make out a medium size lake with brash ice at the left hand side. Surely there should not be a lake here at 1700m next to the Greenland Ice Cap ! However there was lake and we had the problem of working a way around the right hand side next to the cliffs as this appeared passable with care. The sledges ploughed through the slush and we eventually arrived at the side of the lake. We needed to cross an outfall from the lake that flowed towards the crag to our right. At one point, the streams narrowed and there was an island in the middle. This was clearly our only way across the flowing waters. We moved the sledges across by placing them right on the edge of the channel and dropped the handle across. The other person had already jumped to the other side and would then quickly haul the sled across as quickly as possible. The channels were crossed in this rather spectacular and muscular manner. The area was very un-inviting, spots of rain began to fall and the air temperature was a balmy +12'C. The only one option was to continue onto the glacier ahead of us. Some very careful route finding allowed us to move across the slushy and broken surface over numerous channels.

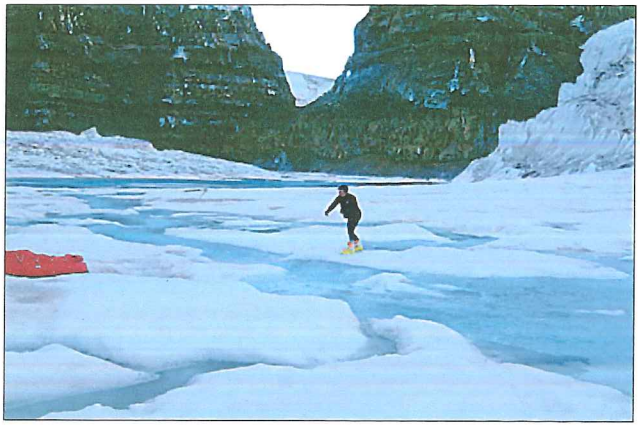


Figure 20 - Channel crossing



Figure 21 - Hard Work

A lot of zig-zagging was needed to find the driest route. At one stage, we were on a section of dry glacier that was shaking occasionally as the glacier moved. These mini-earthquakes were very uncomfortable. The surface of the dry glacier was heavily potted with curious circular holes containing a lump of rock in the bottom. At one stage, I badly strained my left ankle through falling in one of these holes; this needed an ibuprofen tablet immediately as I knew it would hurt later. During all this time in the bowl, conversation had dried up as we concentrated on getting through the horrendous terrain.
After crossing one fast stream using an elderly snow bridge, we decided that enough was enough and we needed to camp as we had worked hard that day and a lot more work would be needed to escape this area. As we did not plan to be in the area for any time and the snow was totally saturated, we did not build walls. The 10 hours hard work had taken their toll and we were tired, hungry and somewhat dismayed by the position we had got into. The rain got a little harder as we snuggled into the tent. A perfect end to a perfect day ! We then spent a lot of time studying the aerial photographs to work out what was going on. The detail of the aerial photos taken in late August 1981 showed pools and channels

that we had crossed. A potential route was plotted and we needed to move early to ensure that at least some of the surface would be firmer.
The following day was especially important as it was my 25th Wedding Anniversary and I really wanted to be clear of this area so that I could make a call to Roz and genuinely tell here that everything was fine.

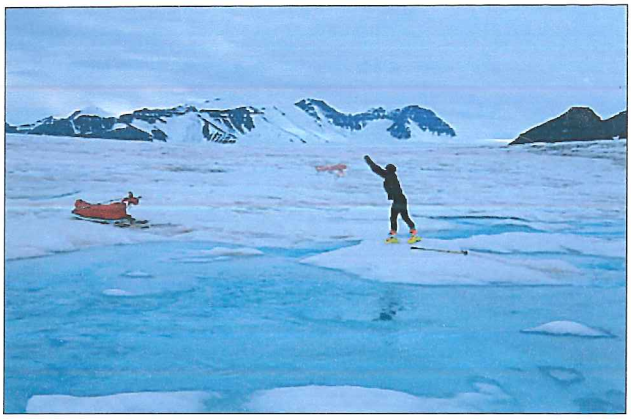


Figure 22 - Throwing a rope across a channel

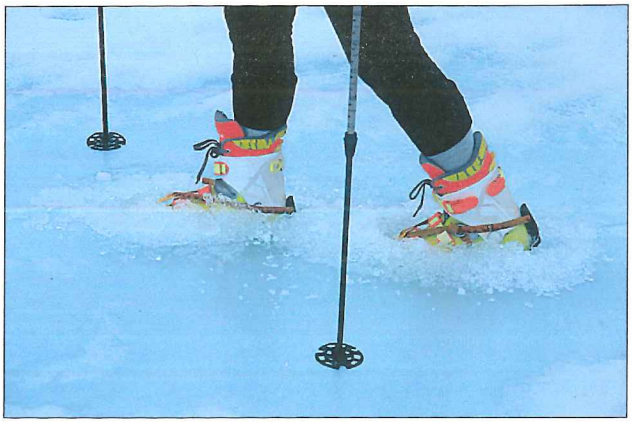


Figure 23 – Moving through slush on the edge of the Icecap



Figure 24 - A stream channel

2 July 2002

We started early to give us a chance to clear the difficulties by the time I wanted to call Roz (06:30hrs GMT, 07:30hrs BST). We were now far more confident in our abilities to navigate through these channels and get back to solid glacier. Rumbles of rock fall and waterfalls from the adjacent crag provided some amusement. We set off promptly at 01:00hrs and soon found ourselves at a surge channel that had been gouged out by a flood of water from a minor glacier above us. There were blocks of snow and ice strewn along the sides of the channel that testified to a sudden surge of water not many days earlier. The first channel had little water in it and proved easy to cross; our spirits improved now that we were making progress. However the next channel was different in character and was a very fast flowing stream running in a glass-smooth ice runnel that was just wide enough for us to jump across. First my sledge was launched over the channel and then Al's. His sledge had his skis and ice axe on top secured under the bungee cords. For some reason, his sledge tipped sideways during the launch over the channel; a bungee cord snapped and suddenly his skis were dangling within inches of the torrent. His prized ice axe dropped into the channel and was whisked away out of sight by the current. I leapt across to grab the

skis whilst Al stopped the sledge tipping further into the water. Soon things were back under control but the ice axe was missing presumed drowned.

The loss of the axe was a blow and sentiment caused a search that recovered the axe within about 20 minutes some 150m downstream on a muddy bank. Al smiled again. It had taken us about 1.5hours to go just 500m from the last camp.

The next stream was wider still and could not be crossed without getting wet. We checked to the left and the right but things just got worse either side. We found a shallow section that was wider (about 8m) but had reasonable access on both banks. We decided to wade across and float the sledges behind. The plan was to remove the skis, both socks and inner boots which were then stowed on the sledge. The crampons were attached to the outer boot and we would then wade through the icy water using ski sticks for support. It was now about 02:30hrs on the morning of my 25th Wedding Anniversary and here I was about to wade across an icy arctic river ! The whole scenario was too bizarre for words. Al went across first with me belaying him from the rear of the sledge down the steep bank and then across to the other side. He was very cold when he got to the other bank and needed to dry the feet before anything else could be done. I went next and the weight of the sledge following me down the bank almost pushed me face first into the water. Somehow I teetered on and managed to regain control of the errant load that was bobbing behind me. My feet were suddenly numb and I lost feeling within seconds in the icy water. I was very grateful that the water only came up to below the knees and not further. Soon the other bank was reached and I rushed to remove the outer boots, pour out the water and dry my numbed feet. The feeling returned to my poor feet and we both started laughing uncontrollably about this totally unexpected set of events.

More channels were crossed with much less drama and we gained some precious height up the glacier. At one stage, we were alongside a channel that was about 60m wide with massive snow boulders strewn down the banks that indicated that there had been a huge surge of water not too long ago (see Figure 25). The route finding became easier and we could see that we would get clear of the tricky ground by keeping to the right hand side of the glacier.



Figure 25 - The flash-flood channel

Time was running on and I really wanted to clear the difficulties by 06:20hrs so that I could make the anniversary call to Roz with an honest statement about my feelings for her and our immediate situation on the glacier.

The gods must have been smiling. We cleared the last channel and broke into beautiful early morning sunshine at 06:20hrs! Behind us the full Watkins Range was draped in a wonderful early dawn crimson light bathing peak after peak against into the clear blue sky. There was no wind, just warm sun and this was a perfect backdrop to my call with Roz. I had saved her anniversary card until this time and retrieved it from the satellite phone box. It was a beautiful card with such kind and open thoughts. The call connected first time. The absolutely stunning natural panorama and newly gained safety only added to the emotion of this special call; absolutely unforgettable and so precious.

We moved on slowly and pitched a lazy camp a little higher on the glacier in the warm sun surrounded by beautiful mountains against the crystal-clear sky. We dozed for the hotter part of the day and decided to move to the final camp at the pick-up point at about 02:00hrs in the morning of the 3rd of July.

3 July 2002

We got up at 02:15hrs and it felt very cold, possibly the coldest night of the trip, even though there was no wind to cool us. The pull up the glacier was easy except for the need to avoid a lot of filled crevasse slots running across the slope. However after about an hour my left ankle started hurting quite badly. The earlier strain or tear on the dry glacier was coming home to roost. After more ibuprofen, I continued but the pain and swelling did not subside. Movement was becoming very painful and despite trying all sorts of ways to change the angle of my foot to avoid pressure on the foot and forward flexing, nothing seemed to help and my pace slowed to a crawl. Fortunately the pain diminished somewhat and I was able to continue the pull up the glacier to the designated pick-up point. In reality, we should have been further up the glacier but I needed to stop because of the pain and I also wanted to remain in a position where we had a view across to the Watkins. It was strange and anti-climatic to be at the end of the trip knowing that we did not have to move on. The whole atmosphere was very different to the year 2000 trip where we had that amazing highlight of the 32nd ascent of Gunnbjornsfjeld after the crossing from the Rygnys Bjerg. This trip had been very different for the following reasons:-

1. We had been dropped in the wrong place,
2. Our planned partial icecap crossing had not happened,
3. We did not achieve a major high point.

However,:-

1. We quickly managed our way quickly through the drop-off problem,
2. We have got 3 confirmed decent quality first ascents and a nice second ascent in the Watkins.
3. We worked through about 160km of new ground in the Watkins,
4. We successfully navigated through a massive crevasse field,
5. We safely navigated the water at the base of the pick-up glacier.

Above all, despite a few silent moments, Al and I remain very solid friends. We decided to shift to a normal daytime routine so that the switch to 'normality' is much less painful later on. After reading the same sentence 4 times late that night, I knew that it was time to sleep.

4, 5 and 6 July 2002

These days blurred together and on the 5th we made the call to tell Constable Pynt that we were in position. Things did not go well and we were told that the Twin Otter would not be coming that day due to a mechanical problem. Although this was a blow, we were sufficiently aware to recognise that what will be will be. However we were told that the plane should be with us on the 6th (Saturday). During this time the rockfall continued, waterfalls rumbled and cornices could be heard collapsing around us. We were glad and very ready to be leaving the area. Our thoughts turned to how the incoming group would fare in these poor conditions.

On the morning of 6th July, we made the call and were told that the plane should be with us this morning despite the overcast conditions with cloud from the north just lingering on the ice cap behind us! This was great news and we started packing up the obvious loose kit, but leaving the sleeping bags and mats in place as there was no guarantee that the plane would arrive.



Figure 26 - The fly-past

At about 11:30hrs, whilst Al was making his mark on the glacier, I heard the distinctive drone of the Twin Otter. After a quick circuit and ignoring my radio messages it was soon on final approach and touched down some way from us. As usual, the plane taxied across the soft surface and parked its wing almost over the tent. The problem was that the exit from the plane was within a couple of metres of our loos. The group disembarked from the plane and we met them near the plane. The leader (Owen) had a clipboard with all his papers attached. Unfortunately he placed this board in the area that Al had just visited. We told him as politely as possible; strangely he was a bit upset by this issue of being in our loo during his first time into the Greenland mountains. The plane was offloaded and it took off again for Constable Pynt to collect the remainder of Owens group together with the Alpine Club equipment that would be dropped off on the return to Iceland.

The new group pitched their tents well away from our loo and settled in quickly. We lent Paul Jennings and his friend my ice saw and 4 snow stakes for their trip. Our tent was soon cleared and everything packed ready for departure. About 2 hours later, the plane arrived with a few passengers. After a brief exchange with the propellers running, we were loaded into the plane and waved as we bounced down the glacier. Within seconds the engines roared and we rolled, bounced along and were suddenly in the air looking back to the small group and the location where we had been for a couple of days.

The plane headed east and gained height. We could see the large number of channels and sumps on the King Christian IV glacier. There would have been absolutely no chance of crossing lower down. After about 30 minutes, we flew over the Lemon mountains which are impressive granite cliffs in total contrast to the flood-plain basalt we had become used to. The glaciers were very crevassed below us and there was no prospect of landing where the Alpine Club wanted. The pilots called us up to the cockpit to tell us. In reality, there was nothing we could add and so they landed the plane on a high plateau some way to the west of the Lemon Mountains. The Alpine Club gear was off-loaded and it looked very lonely in a pile on this snowy plateau as we took off towards Iceland and home.



Figure 27 - Leads and sumps on the King Christian IV glacier

The coastal mountains of Greenland began to appear as we headed east and we were soon over the broken sea-ice. The scale of the area was still difficult to comprehend with the flying time taking about 20-30 minutes to reach the coast from the Lemon Mountains. Once over the sea, it really felt like we were heading home. It was about 120 miles from Greenland when I lost sight of the mountains far to the west. Soon we could see Iceland and I knew that we not going to Akeyuri as I could see us passing the distinctive flat-tops of the mountains at the entrance to Isafjordur. Soon we were on final approach and the pilots told us that we would be refuelling before the final leg to Akeyuri.

During the stop, I wandered towards the lake where the Arctic terns objected to my presence and started to dive-bomb me! Further amusement was had by the fire truck almost crashing into a private plane that was almost airborne on the runway ! Also, the same fire truck came to a dead halt on the runway to allow a family of ducks to cross the runway to the lake! Eventually it was time to depart and we took off for the final part of the run. Soon we were flying in or below clouds across the mixed snow and rocky mountains of northern Iceland. After about 30 minutes, we landed at Akeyuri and were in the hangar unloading our equipment.

We were not sure if we were booked on the flight to Reykjavik that evening so we phoned Frissi who seemed to work some magic and we were then on standby for the last flight that night which was in about 1 hour ! This meant that we had to sort and pack all our gear for freighting to the UK and then get across to the terminal and check in for the last flight!

There was a flurry of activity as the 3 grey boxes were re-packed in strict accordance with the original packing schedule. Lots of excess food was dumpled placed in the hi-jacked wheelie bin. It was strange to be working alone in an echoing hangar full of aircraft and freight. We finally got the gear packed and now even sweatier than before, we hurried to the terminal building carrying all the kit hat we would be flying with. Check-in was casual and we waited in the nearby area. I took advantage of the gents to have a quick splash and review of my new beard. I looked so much older with the grey and black two-tone beard.

Two hours later, I was having a shower in Reykjavik and looking forward to someone else cooking the next meal. It was so strange being back among traffic and people again. Amid the bustle of the high street and the top name fashion shops, Greenland seemed so far away and I longed to be travelling next to the Icecap again. It had been a tremendous privilege to travel and climb in Greenland. The memories will never depart.

Thanks

1. The generous support from the Gino Watkins Fund helped make the expedition possible. We are very grateful.
2. The wonderful support and tolerance of Roz Hulse and Dianne Fisher allowing their partners to climb and explore a new area of Greenland.

Additional Information

Logistics

All the flights, food packs, sleds and communications/emergency signalling equipment was provided by Tangent Expeditions run by Paul Walker of 3 Millbeck, New Hutton, Kendal, Cumbria, LA8 0BD, UK (01539-737757). Paul has many years experience of providing expedition logistics to Greenland and we would have no hesitation in using his services yet again.

Maps

The only map available of part of the area is a US Department of Defense map published in 1965. This map is inaccurate and has a scale of 1:250,000. There is a 1-minute northing error that results in 1 minute needed to be added to co-ordinates. The map covering the Rygnys Bjerg to the eastern edge of the Watkins Mountains is series number 1501, sheet NR 25,26.9, edition 1. The map was not used for any part of the expedition.

It is believed that a map of part of the Watkins has been produced, but this was not available to us.

Aerial Photographs/Satellite Imagery

The best source of area detail was the aerial photographs available from the Danish Polar Centre. These essential photographs enabled much of the route planning to be done well in advance. Paul Walker of Tangent Expeditions can provide these photographs at a price of £14 each and we originally needed 9 photos to cover the entire route with about 30% overlap. Due to the change of plan, we only needed 4 of these photos arranged in a montage. This montage of the route was used for day-to-day route planning. These photos have a nominal scale in the centre of the image of 1:150,000, were taken from around 35,000 feet in August 1981. Considerable edge distortion occurs which exacerbates the planning problems. Unfortunately the photos often provide little indication of the slopes, directions and angles. A full stereographic plan can be viewed if all the photos are purchased to provide the 60% overlap.

Significant Locations

Location	North	West	Altitude	Comments
Drop Off (GBF)	68'57.996	29'43.217	2100m	Gunnbjornsfjeld Base Camp
Camp 2	69'03.201	29'30.017	1800m	
Camp 3	69'10.343	29'33.334		
Summit 1	69'12.972	29'31.072	3200m	
Summit 2	69'12.737	29'27.505	2900m	
Camp 4	69'16.517	29'33.058		
Camp 5	69'14.247	29'19.612		
Summit 3	69'15.096	29'21.410	2827m	Round topped summit
Summit 4	69'13.610	29'21.457	2815m	Head of 3 glaciers
Camp 6	69'22.467	29'22.741		Glacier beyond the crevasse field
Camp 7	69'26.723	29'46.639	1900m	Lakes, sumps, channels and leads
Camp 8	69'28.663	29'53.553		
Camp 9	69'30.007	30'06.209	2300m	Pick-up point

Area Characteristics And Basic Information

The majority of the peaks in the Watkins are around 3,000m in height. Only a small percentage of the peaks have been climbed and many opportunities exist. The rock is layered flood plain basalt and unsuitable for mixed climbing.

Several of the highest mountains in the Arctic are contained within this area and the highest peak is GBF (3,693m). The first ascent of Gunnbjornsfjeld was on 16th August 1935 by Wager and Courtauld's expedition. Less than 38 ascents have been made of the mountain. Al and John made the 32nd ascent in the year 2000.

Much of the area is yet to be explored.

Suggested Opportunities For Further Mountaineering Expeditions

The glaciers centred around Camps 2, 3 and 5 contain many mountains that would offer excellent opportunities for first ascents and exploration. The range between the Gronau Nunatakker and the Gronland Styrelens Glacier contains several peaks that look promising.

It may be best to consider visits to the Watkins Mountains be made earlier in the season to avoid the poor conditions and the relative lack of snow cover on the peaks. This would be especially important for expeditions planning mixed ascents.

The rock throughout the area is multi-layered flood-plain basalt, which is loose and very unstable making rock ascents impractical.

Weather

Our experience of weather in the previous seasons in the Rygnys Bjerg and Watkins area had been mixed and the region seems to be subject to depressions sweeping up the Denmark Strait and the lingering around south west Iceland.

In 1998, we experienced about 3 storm days out of 21 days in the area (June 1 - June 24). For the majority of the trip we had near perfect weather with clear skies and only moderately cold nights (-20°C).

In 1999 (June 3 - June 24), the weather was unstable with regular fronts sweeping over the area every 3-4 days. This resulted in far fewer good hill days (about 5-6 in 20 days). The temperatures were generally quite warm with few cold nights (-23°C). No significant strong winds in excess of 30 knots were experienced with the weather fronts arriving from the south.

In 2000 (June 1 - June 18), the weather was generally very good with only about 3-4 bad weather days in 18 days. For the remaining time, the weather was stable with clear skies and little wind. The temperatures were colder than previously experienced (-30°C on one night), for the remaining time, the night temperatures were between -15°C and -25°C. The strongest winds experienced were about 20 knots.

In 2002 (June 18 – July 5), the weather was generally good with only about 3 poor weather days. However, movement would have been possible in each of these days. The temperatures were much higher than we expected and this resulted in very poor snow conditions during the day and some exceptionally unwelcome melt-water channels and sumps. The coldest temperature was about –20'C. The strongest winds experienced were about 20-30 knots.

An area of apparent localised poor weather was identified in the area of Camp 5. In this area, the snow was distinctly different in character to that in other areas. This effect was seen in the year 2000 expedition as well as the year 2002 trip.

Weather Forecasts

There are a number of Internet sites that provide weather maps and satellite photographs of Greenland. These proved very useful in the weeks prior to the expedition to assess relative stability etc. These sites are:-

Application	Web Site Address
North Atlantic weather charts	http://sunba2.ba.infn.it/images/faxes/Last_24.gif
Satellite Images	http://www.sat.dundee.ac.uk/
10 Day Precipitation forecast for Greenland	http://grads.iges.org/pix/prec2.html
Constable Pynt Weather	http://weather.noaa.gov/weather/current/BGCO.html

Communications

We hired an Iridium satellite phone from Tangent Expeditions. This was supplied with a solar panel charger. The phone gave excellent service and we had no problems at any time with signal strength etc. This phone gave far better performance than the Inmarsat phones used during previous expeditions. This Iridium telephone also had the capability to receive text messages and this facility was used by Roz to send us information about the major North Atlantic weather systems.

The phone was used to give an "Ops-Normal" message home every 3-4 days. In addition, we used the phone to sort out the pick-up arrangements during and at the end of the trip.

Finance

The expedition costs were part funded by a very generous grant from the Gino Watkins Fund who kindly allocated us £1,200 towards the cost of the expedition. The total cost per person was about £3,800 including all flights, food, accommodation etc. This cost excluded new/replacement equipment. We met all the excess costs from our own funds.

Insurance

We both arranged personal and rescue insurance through Tangent Expeditions who used Govier & Ault Ltd., 3 Pullman Court, Great Western Road, Gloucester, GL1 3ND, (tel. 01452-507474). This cost £200 per person including the additional premium for rescue cover for Greenland.

Photography

The environment provides superb photographic opportunities due to the clear air, frequent blue skies and unusual nature of the area and activities. Two cameras were used; John had a mid-range SLR (Cannon EOS33 with Tamron 28-200mm lens, Al used an Olympus compact with a 40-140mm zoom lens. Despite these cameras making extensive use of electronics for focus, aperture control and film advance, no loss of performance was observed even at temperatures around -20°C. The more bulky SLR tended to be used mainly at camps and during rest stops. No problems were experienced operating the SLR when wearing gloves. The compact camera proved more convenient than the SLR for taking spontaneous shots during movement and climbing, however the results were not very good due to exposure problems. Spare lithium batteries were taken for both cameras but not used.
In general, the photographic results were very acceptable with the best quality photographs being obtained at night with the lower sun casting an Alpenglow or from silhouettes. Poor results were achieved during daytime when the sun is high and the reflected light high.

Films

To achieve high quality transparencies, slow, low grain films were used which proved entirely suitable in the normally high ambient light. John used Fuji Velvia 50ASA for the SLR and Al used Fuji Sensia 200 for the compact camera. John used about 12 rolls of 36 x Velvia and Al used about 9 rolls x 36 of Sensia. These films were processed by Cambrian Photography in Colwyn Bay, North Wales who provided a careful, high quality service for these special films.

Filters

John took a range of filters and other equipment with the intention of experimenting in this unique environment. A circular polarised filter was used on the SLR for some shots to increase the colour saturation, however it was found that the saturated effect could become exaggerated in low light shots in the early mornings when shooting at 90° to the sun. The cold conditions at night together with the relative fiddliness of fitting the polariser filter reduced the desire to experiment. A lightweight tripod with quick-release clamp was also taken but this was only used a couple of times for the SLR

Exposure

The high level of lighting at many times made photography quite difficult with it being very easy to over-expose the shots producing washed out results. Aperture locking proved to be an essential function to more accurately control exposures. Despite this, most exposures were bracketed plus and minus half a stop. For the general snow shots the optimum exposure was +0.5 of a stop. A Sekonic light meter was taken and this was used to help in some of the very brightly lit scenes. In reality, the meter on the camera was perfectly adequate.

Circulation of The Report

For further copies of this report, please contact John Hulse by email at john@cambrian-internet.com
The report will be distributed to:-

- Scott Polar Research Institute,
- Gino Watkins Fund,
- Royal Geographical Society,
- Danish Polar Centre.



Figure 28 – Crossing The Cinder Band on Summit 1



Figure 29 - Sunset on the Icecap from Summit 2



Figure 30 - Camp 4 in the early morning

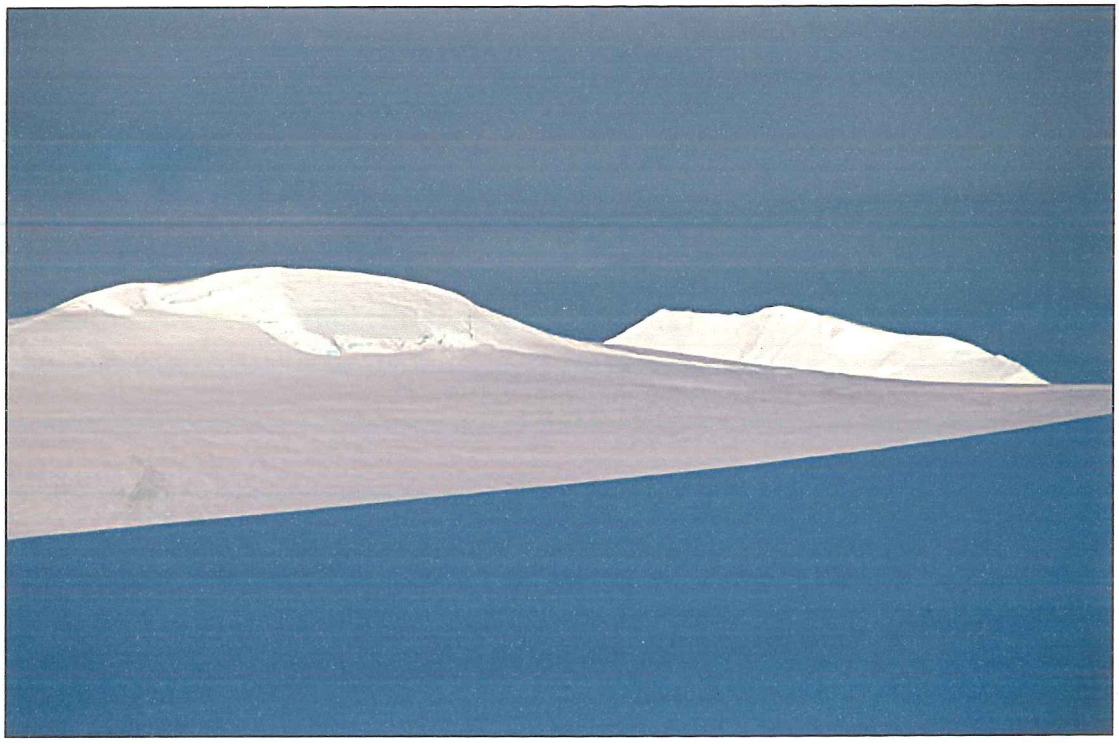


Figure 31 – Looking to the east from Camp 5

Recommendations

Food

We were supplied 18 food packs for the trip by Tangent Expeditions. Each pack contained the food for one day for 2 people. Food is obviously a matter of personal taste and so we try to focus on generic issues.

1. The food needs to be packed into zip-loc bags rather than tied to reduce access problems in cold conditions. Significant filtering of food was done at Constable Pynt to ensure that we knew exactly what was in each pack. Al does not particularly enjoy fish and so the abundance of tins of sardines was not especially welcome.
2. There were too many cans which increased weight yet added few calories.
3. There was only one small bag of sugar allocated to us (300mg). After discovering this, we raided the kitchen at Constable Pynt to find more sugar.
4. The cheeses were welcome.
5. An instant breakfast such as "Ready-Brek" would have been better than porridge, which we did not use as cooking and cleaning would have been quite difficult. The tropical mix crunch was welcome.
6. We supplied and used a Gatorade drink for use when moving rather than the Appeel mix which did not seem to have much calorific load. The Appeel was a refreshing drink, hot and cold, whilst in the tent.
7. The brew kit box containing all the teas, coffees, milk and sugar worked well and is a good idea.

Equipment

1. Two stoves are needed for the tent with the associated stove boards for use when it is very cold and a lot of liquid is needed. This dramatically reduces the time needed to prepare water and meals etc. However for most of the trip, only 1 stove was needed.
2. There were no lighters in the packs; fortunately we had brought our own (2 each).
3. We used about 0.65 litre of heptane fuel per day. Note that we were originally offered Jet-A1 fuel, however experimental tests showed that this would have been a very poor fuel compared with heptane. Fortunately, Paul managed to negotiate this issue.
4. Thermos flasks were essential with us using a 1 litre flask for hot chocolate for travel and then a 1 litre flask for hot water to be taken onto the next camp to start the melting process more efficiently.
5. Screw top bottles were used for many of the small cooking supplements as there are far easier than conventional snap-on lid styles, which are very difficult to open in cold conditions.
6. We used a large, heavy-duty black plastic bag to contain snow/ice ready for melting. This bag was stuffed under the snow valance in to cooking area for easy access. In addition, this bag became a solar still in hotter conditions producing copious quantities of liquid..
7. The snow shovel and ice saw were essential as significant walls were built at every camp to shelter the tent from potential storm conditions.
8. It may be worthwhile taking a set of spare socks and possibly VB boots to avoid saturated footwear in very hot weather.
9. All group equipment, food and fuel were evenly distributed between the 2 sleds to avoid catastrophic loss if one of the sleds was lost in a crevasse etc.

Expedition Equipment

Group Equipment - Camp

Tent (Mountain Hyperspace, TerraNova)	1
Spare Poles	2
Snow Pegs	10
Snow Shovel, Metal	1
Ice Saw, Lifelink	1
Stove (MSR XGK2)	2
Stove Board	2
Fuel Bottle, 1 litre, MSR	3
Fuel Canister, 5 litre	2
Fuel, Funnel/Filler	1
Fuel, Heptane, 13 litres	1
Pot, 3 litre, MSR	2
Pan Holder	2
Lighters, Butane	4
First Aid Kit	1
Thermos Flask, Metal, 1 Litre	2
Repair Kit	1
Knife Set, Leatherman	2

Group Equipment - Climbing

Rope, 9mm, 60m	2
Snow Stakes, MSR Coyote	4
Deadman Plate, DMM	1
Ice Screws, Black Diamond	5

Group Equipment - Emergency

Personal Locator Beacon, 121.5MHz	1
Personal Locator Beacon, 406/121.5MHz	1
Airband Transceiver, Icom	1
Smoke Flare, Orange	1
Satellite Phone, Iridium with solar panel	1
Rifle with 20 rounds of ammunition	1

Personal Equipment - Travel

Skis, Alpine, Pair	1
Ski Poles, Pair	1
Ski Skins, Pairs	2
Boots, Plastic Mountaineering, Pair	1
Sleds, Snowsled, Medium	1

Personal Equipment - Climbing

Ice Axe	1
Ice Hammer	1
Harness, Full Body	1
Tape Slings, 16'	2
Tape Slings, 8'	2
Prussik Loops	3
Karabiners	8
Belay Plate	1
Helmet	1

Personal Equipment - General

GPS, Garmin	1
Binoculars, 10x25	1
Compass, Silva 34, Compensated	1
Rucksack, 50 litre.	1
Map	1
Aerial Photographs, Montage	1
Diary	1
Paperback Book	1
Camera, 35mm, Cannon SLR	1
Films, 35mm, Fuji Velvia	20
Filters, Cokin and Hoya	3
Tripod, Lightweight with quick release clamp	1

Personal Equipment - Camp

Sleeping Bag, RAB Premier, 1100	1
Duvet Jacket, RAB Guide, 750	1
Liner, Sleeping Bag	1
Karrimat, Expedition, Full Length	1
Thermarest Mat, Standard Length	1
Wash Kit	1
Insulated Mug, 0.7 litre	1
Plastic Bowl and Spoon	1

Personal Equipment - Clothes

Jacket, RAB Windproof, Guide	1
Salopettes, Slioch Mountain Rescue Pattern	1
Hat, Mountain, Lowe	1
Gloves, Windstopper, North Face, Pair	1
Gloves, Ski, Extremities, Pair	1
Gloves, Mitts, Extremities, Pair	1
Inner Layer, Lowe Dryflow 120, Top	1
Middle Layer, Lowe Powerstretch, Top	1
Middle Layer Fleece, Mountain Hardware, Top	1
Inner Layer, Lowe Dryflow 120, Shorts	1
Middle Layer, Lowe Powerstretch, Trousers	2
Socks, Thorlo, Liner, Pairs	3
Socks, Thorlo, Mountain, Pairs	3
Gaiters, Mountain Range, Pair	1

For further copies of this report, please contact John Hulse by email at john@cambrian-internet.com

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