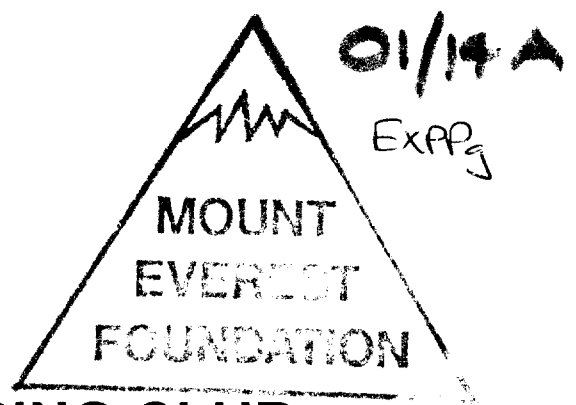


BMC



# SCOTTISH MOUNTAINEERING CLUB EAST GREENLAND EXPEDITION 2001



Photo Colin Read

**The South Face of Sussex, Emmanuel and Tupilaq from Basecamp**

The expedition members acknowledge the financial support of The Mountaineering Council of Scotland, The Mount Everest Foundation and the Scott Polar Institute.

ExpPg 01/14/14A



# SCOTTISH MOUNTAINEERING CLUB EAST GREENLAND EXPEDITION



## 2001



DPC Reference 532-319

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The expedition members wish to acknowledge the financial support of The Mountaineering Council of Scotland, The Mount Everest Foundation and the Scott Polar Institute.

## 1 Expedition summary – Colwyn Jones

### Scottish Mountaineering Club East Greenland Expedition 2001

The 6-man expedition went to The Staunings Alps in the Northeast Greenland National Park from 22nd July to 17th August 2001. The team consisted of three Scottish Mountaineering Club members, Colwyn Jones (Leader and Medical Officer), Chris Ravey, Brian Shackleton, plus three Lake District climbers, Jim Fairey, Colin Read and Nick Walmsley.

They travelled on a scheduled flight from Glasgow to Keflavik, transferring to Reykjavik by coach and flew onward to Akureyri later the same day. At 09.30 hours on 23rd July they flew in a small, chartered turboprop (Fairchild Metroliner 23) from Akureyri to Mestersvig, a gravel airstrip in Greenland (1 hour 55 minutes). Two members were flown by helicopter to basecamp that evening. However, as the helicopter pilot had exceeded his daily flying quota, the other four had to wait until next morning for the final leg of the approach from Mestersvig to basecamp on the Great Cumbrae glacier. The glacier had previously been explored and named on the 1998 SMC Greenland expedition.

After a day of basecamp preparation and rifle practice they reconnoitred the South Face of Sussex confirming it was huge with a problematic bergschrund. Next day they all skied up the Great Cumbrae and Read and Jones climbed a short pitch on the J/F spur before following the others back to basecamp. On 26th July all six made the first ascent of Keswicktinde by the northwest ridge. The route was graded AD and followed a grade 2 couloir up to a col where a long exposed snow ridge lead to the summit block. The barometric altitude was 2430m.

After a rest day Read and Shackleton made the second recorded ascent of Sussex (2390m) on the 28th July via a new route on the southeast face. It was 650m long and graded D.

Ravey and Walmsley attempted a new route on the northeast ridge of Sydney (2300m) and got to within a frustrating 60m of the summit, but reached an impasse of an unstable snow ridge.

Fairey & Jones attempted a huge ridge which dominated the SE end of the glacier basin. This was the southwest Spur of the western outlier of Sefstromsgipfel. The route was 555 metres long and graded ED with two of the 25 pitches requiring some simple aid. The route was started at 0830 and they climbed continuously through the day and relatively mild night taking 28 hours to reach the summit. Retreat was by multiple abseils into a long gully on the eastern flank of the spur, which took a further 8 hours. While descending the gully, and in full view of the other four team members who had come out to meet them, Fairey was caught in an avalanche of the deep granular surface layer and was swept 300m into the bergschrund at the foot of the gully. The proximity of the four other team members allowed an immediate crevasse rescue and he was hoisted out completely unhurt. The ridge, which was composed of excellent granite, was named the Jones-Fairey Spur (2570m) and the descent gully named Jim's Gully. Mild frostbite (frost nip) in two toes of one foot attributed to wearing only rock boots while climbing through the night was diagnosed in a team member.

Mild conditions between 28th July and 8th August made snow slopes and couloirs unreliable, although the avalanche also alarmed team members. A number of ski tours up unexplored glaciers were made confirming the enormous climbing potential of the area.

As most rock ledges were now clear of snow, attention focussed on the unclimbed South Face of Sussex. The team took the opportunity to ferry equipment to the foot of the face

during the 3rd August when it was cloudy. By noon on the 4th, however, mist had begun to roll in around the summits and in the afternoon there was light snowfall. The following day was again sunny and clear so an attempt was made on the intimidating South Face of Sussex. After negotiating the bergschrund, the technical difficulties were much harder than expected and the team retreated after 3 hard won pitches. It was clear that this big wall would require big wall tactics.

Early on the 5<sup>th</sup> August Fairey and Jones attempted to climb the west ridge of Emmanuel. After climbing 12 pitches, with technical climbing up to ED and A2, but less than half way up the ridge, they reached a steep wall which barred their way. They retreated by abseil into an adjacent couloir which they then pitched in descent! In general the rock had been good the exception being a pitch up a chimney filled with jammed blocks.

A further couple of days were spent ski touring and on 10<sup>th</sup> August Ravey, Read, Shackleton and Walmsley made the first ascent of the southwest ridge of Mears Fjeld (2100m) graded PD. They first attempted an adjacent peak to Mears Fjeld but failed to achieve the summit due to dangerously unstable rock. Fairey and Jones made the first ascent of the delightful 200m southwest ridge of the Pap of Cumbrae (1885m), a shapely minor peak at the junction of the Little Cumbrae and Cantebrae, graded AD.

Over the 13/14th August, Fairey and Jones snatched the first ascent of the south face of Tandlaegetinde (tooth doctors or dentists peak) with a barometric altitude of 2350m. The route took 24 hours to climb, was 500m long and graded TD. Descent was by multiple abseil back down the excellent granite face.

The return was scheduled for 15<sup>th</sup> August with one spare night on the coast in Mestersvig before flying to Iceland the following day. However, the weather on the 15<sup>th</sup> was poor with low cloud hiding the tops of the surrounding peaks. They packed for departure but left the tents standing as it was evident that they might have to spend one more night on the glacier.

The following morning saw clear weather and an early arrival of the helicopter which flew them back to Mestersvig in 2 loads of 3 climbers, gear and all rubbish. Base Camp was left clean.

From Mestersvig they flew south late in the evening over the Staunings Alps giving magnificent views in the evening sun. Arriving in Reykjavik they spent a very short night in a local hotel before leaving early for Keflavik on 16<sup>th</sup> August arriving in Glasgow by mid morning at the end of a very successful trip.

Overall, the weather was good. Over the 23 complete days on the glacier, there were two days when there was light snowfall and five other cloudy days when they went skiing. The minimum recorded temperature was -8°C, but there were several occasions when no overnight freeze took place resulting in the snowpack remaining soft. A number of avalanches were observed in south and east facing couloirs and a major powder avalanche was triggered by a serac collapse on a north-facing slope.

Daylight (and the need for sunglasses) was continuous throughout allowing uninterrupted climbing and removing the need to carry bivouac gear. The Arctic sunrises and sunsets, with the sun shining low on the horizon were staggering in their beauty, especially when seen from a summit. The first sunset at 72°N is on the 8<sup>th</sup> August.

A note to anyone who is planning to organise a trip to Northeast Greenland. DON'T, try to get someone else to do it.

One feature with this trip was the use of two person tents so that people were effectively split into pairs. Each person had to be able to tolerate and support his tent-mate. They also had to raise £2340 each.

### **Expedition Aims**

The expedition aim was to have a safe and successful mountaineering expedition around unclimbed peaks in the South Central Staunings Alps

### **Objectives.**

1. The first ascent of the South Face of Sussex (a towering wall of golden granite).
2. The first ascent of the South Ridge of Dansketinde (highest peak in the range) and
3. A number of first ascents of peaks in the area.

The commercial maps available are inaccurate and of such a small scale that they do not contain sufficient detail for serious expedition planning. Access to photographs from aerial surveys plus expedition reports from 1961, 1986 1989, 1994, 1996 and 1998 allowed us to identify the unclimbed peaks and an area of flat uncrevassed glacier where the aircraft could land safely.

The best map we have been able to obtain is hand drawn from an original in a guidebook written by Donald Bennett in 1972. The information our research provided allowed us to correct and improve the original. One further objective is to improve on existing information by using global positioning satellite handsets.

The area for the Scottish Mountaineering Club East Greenland Expedition 2001 was the Northern Staunings Alps lying between 72°N to 72° 30' N and 24° to 26°W.

Scoresby Land forms the northern part of a large peninsula. To the south is Scoresby Sound and Nordvest Fjord – reputedly the Worlds largest fjord. Cape Tobin and Cape Brewster sit at the northern and southern limits of the mouth of Scoresby Sound respectively, with the only settlement in the area, Scoresbysund, lying on Cape Tobin. To the east of the peninsula is the Arctic ocean and further north King Oscars Fjord divides it from Trail Island. The Northern tip of the land mass is Cape Petersen from where the Alpe Fjord cuts a deep trough southwest to form the final coast of the peninsula. The isthmus joining the peninsula to the mainland is the southern Staunings range which merges westward into the impassive Greenland icecap.

The south eastern part of the peninsula is divided from Scoresby Land by the Schuchert valley running south and the Skel valley going north almost along the 24°W line of longitude. Jamesons Land forms most of this southeastern area where the tundra covered hills are lower and more rounded. The very southeastern tip of the peninsula is the coastal range of mountains of Liverpool Land.

The Staunings Alps sit within, but close to, the southern edge of the largest national park in the World. The North and East Greenland National Park covers 972,000sq. km and was established in 1974. The Staunings Alps lie 500km north of the Arctic Circle at 72°N and cover an area of some 6000 square kilometres. They are a complex range of granite peaks named after Thorvald Stauning (1873-1942). Stauning was Denmark's leading

Social Democratic statesman, social reformer and an influential Government Minister from 1924 to 1940. He helped to shape the modern state of Denmark and died during the Second World War when Denmark was under German occupation.

The highest peak in the range is Dansketinde (Denmarks Peak) 2795m which forms the natural centre of the impressive northern peaks. From there a number of huge glaciers radiate slowly outwards to reach the northern, eastern and southern coasts. In contrast those flowing steeply west have dangerous icefalls with a name for onerous travel. The mountains have a well-earned reputation for sound granite, soaring faces and complex ridges. Further south the rock is softer, more weathered and the mountains are more rounded reflecting this difference.

To allow ready orientation for those unfamiliar with the area a central pass called Col Major (Majorpasset), which links the Bersaerkerbrae (Bersaerker glacier) to the east and the highest reaches of the Gully Glacier to the west, should be identified. In the only published mountaineering guidebook to the area by Bennett in 1972, Col Major was accurately described as "*The heart of the Staunings Alps.*"

### **History of Greenland**

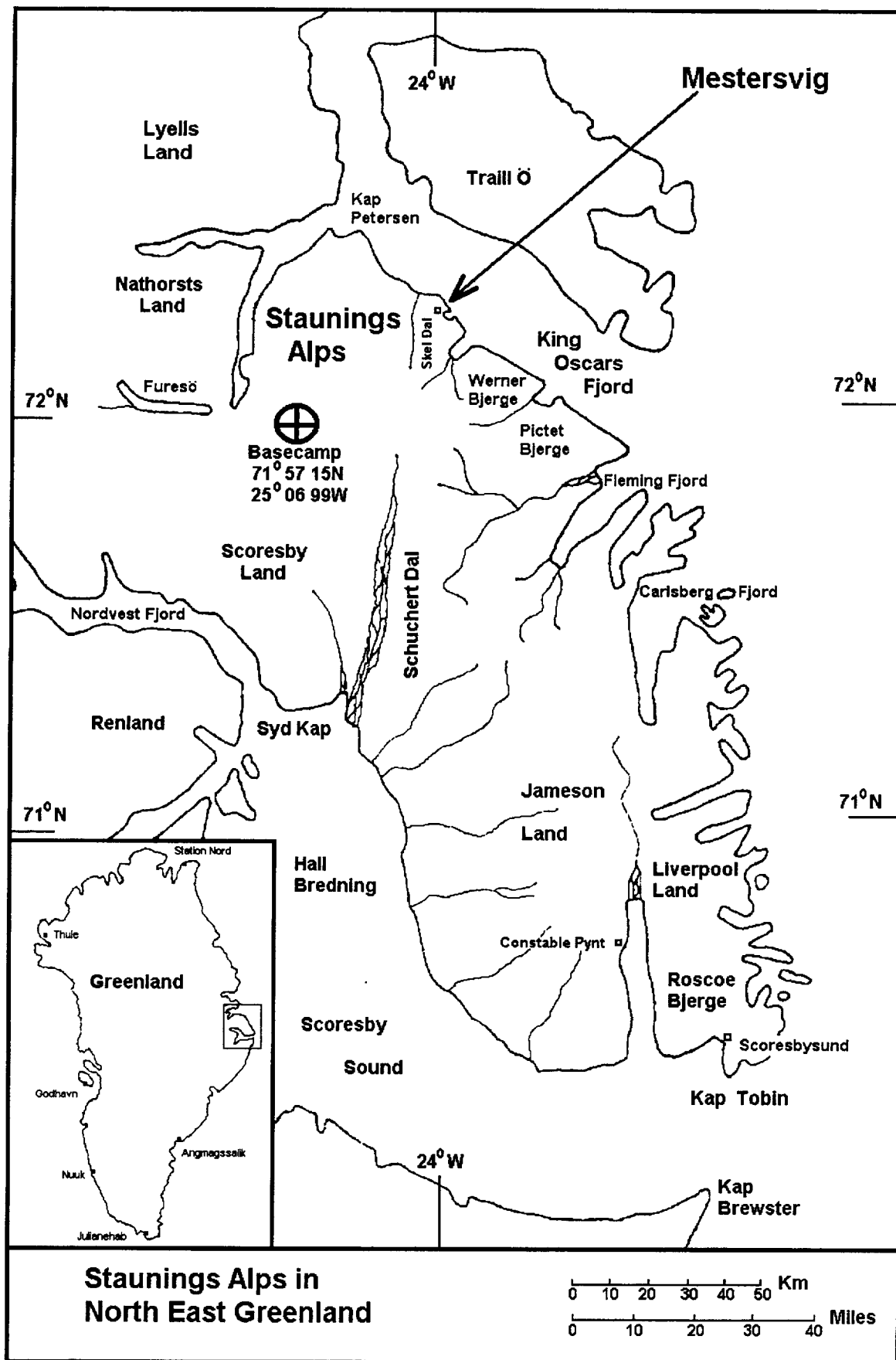
Eric the Red (950?-1003 or 1004?) was a Viking explorer who was the first European in Greenland. Eric the Red (also called Erik Thorvaldson, Eirik Raude, or Eirik Torvaldsson) was born in Norway, but his family settled in western Iceland, after his father, Thorvald Asvaldsson, was banished for murdering a man. Eric later killed two men in Iceland and was banished from Iceland for three years.

After hearing of the discovery by Gunnbjorn Olsson of some islands that lay west of Iceland, Eric decided to sail to these islands during his banishment. With a crew, he sailed due west from the Snaefellsnes Peninsula in 982. He found Gunnbjorn's islands (off eastern Greenland near what is now Angmagssalik) and then landed on the coast of eastern Greenland. He named this harsh place Midjokull (middle glacier). Eric then sailed south and rounded the southern tip of Greenland (Cape Farewell). He again landed on the southwestern coast (this area would later be called Eystribygd, meaning the Eastern Settlement). After spending the winter on "Erik's Island," he sailed up Erik's fjord. He spent the two following winters at the southern tip of Greenland, exploring the area.

In 985, Eric's banishment from Iceland was over, so he returned to Breidafjord, Iceland. He called this new land Greenland (even though it was covered with ice) to make it sound nicer than it was and encourage settlement (Eric was feuding with many people on Iceland and wanted to start a new settlement without his enemies). Eric and 400 to 500 settlers in 14 ships arrived to settle Greenland in 986. They settled in Brattahlid (now called Julianehåb), the Eastern Settlement and Godthab (or Nuuk), the Western Settlement. After doing well, the settlements experienced unusually cold weather. Some of the settlers returned to Iceland (the last recorded voyage between Iceland and Greenland was in 1410), but the rest of the settlers disappeared. It is thought that either the Inuit people attacked the settlers or they died from epidemics and starvation.

Eric had a daughter, Freydis, and three sons, the explorer Leif Ericsson, Thorvald, and Thorsteinn. Eric died sometime during the winter of 1003-1004.

The first "modern" European to set foot on the rocks of North East Greenland was the Scottish whaler William Scoresby in 1822. The following year the English Captain Clavering met a group of Eskimos on the southern side of an island which was later to bear his name. His ill-judged decision to demonstrate the power of a rifle scared the locals



After Bennet 1972, Staunings Alps Expedition Guide, Gaston's Alpine books & West Col Productions

away and this is the first and only recorded meeting with the indigenous people of this side of the coast. There were no inhabitants when the next expedition returned in 1869.

Scottish climbing has a long association with the Staunings Alps starting with the 1958 Scottish East Greenland Expedition. Many of these early pioneering trips of the late 50s, 60s and 70s were organised under the auspices of the Scottish Mountaineering Club, the Junior Mountaineering Club of Scotland and numerous Scottish and English Universities. In the 90s further successful trips to the area rekindled interest among a small number of Scottish Mountaineering Club members.

The region is largely uninhabited and isolated with a reputation for beauty and mountain grandeur. There are only 53,000 people in the whole of Greenland, the majority living in the South and West of the country with fishing, hunting and sheep farming the main occupations. Greenland has been a Danish colony since 1721 and in 1933 the International Court in The Hague granted Denmark sovereignty over all of Greenland following a dispute with Norway. It obtained home rule Status in 1979 and along with Denmark and the Faroes form part of the Danish Realm.

The latitude means continuous daylight during the summer months with the combination of the low angle of the sun and searing white glaciers contributing to the beauty of the area. During the short summer season settled anticyclonic weather and very dry air give extraordinary views especially early in the season. It is with good reason that Scoresby Land has been named the 'Arctic Riviera.'

This report records many details about the organisation, activities and outcome of the expedition and will, we hope, be of interest. Good organisation and logistics proved to be an important factor in the success of the trip and are covered in detail to give future prospective visitors to the area an idea of what is involved.

### **Planning and Logistics      Chris Ravey**

Until mid May 2002 my only concern had been one of acclimatisation. Working and living in Gibraltar for 14 months prior to the trip I had become somewhat accustomed to the heat (not to mention the bolts). Otherwise I was looking forward to arriving back in the UK, dusting down my winter gear and meeting the team at the airport. Of course, I'd been monitoring the weekly e-mails regarding the organisation of the trip, but it all seemed a little distant from the sun, sea and endless limestone of the Med. And anyway – others more experienced than I in the art of expedition planning had it well in hand.

Little did I know how much that would all change? Within an hour of arriving back in the UK during Mid May, I heard that the original coordinator of the trip had been forced to withdraw from the expedition due to personal circumstances, and that as a result the expedition was likely to reduce in numbers from 8 to 6 persons. As the original trip had planned for two teams of four to climb in different areas, a new itinerary and associated travel planning was needed. During an emergency meeting of the six remaining members I enthusiastically volunteered to take the role of expedition planner and coordinator. In retrospect I note that the coordinator of the SMC 1996 and 1998 Greenland Expeditions kept quiet and happily accepted my (youthful?) enthusiasm. "**Fools rush in where angels fear to tread**" – an appropriate statement I now note was used in at least one past report by the above-mentioned member.

Fortunately at the time I accepted this task many contacts had already been made and the expedition wheels were in motion. Thanks to Steve Reid for this early work.

Differing from the SMC 1996 and 1998 Expeditions (both of which used a chartered Twin Otter aeroplane to get into the mountains combined with a long ski/walk out), it had been



decided at an early stage to use a helicopter to transport the expedition from the Greenland coast into the Staunings Alps. This fitted well with the plans to be air lifted out of base camp at the end of the trip to avoid a long ski/walk to the coast and hence maximise climbing time.

Whilst researching the logistics of this mode of transport an excellent contact was made with Mr Hague Anderson (Logistics Officer at the Danish Polar Centre). During e-mail exchanges Hauge mentioned the possibility of the DPC coordinating all of the expeditions travel plans from Glasgow to the Staunings Alps. Although a few pence could possibly have been saved using budget airlines to Iceland, the reduced hassle factor and increased security of being 'accommodated for' in the event of delayed flights etc won the day. The package finally provided by DPC included return flights from Glasgow to Iceland, overnight accommodation within Iceland, internal transfer within Iceland and return flights between Iceland and Mestersvig (NE Greenland).

Due to the late change to the number of members on the team, the expedition finances also had to be re-considered, especially with respect to any shared cost's in helicopter usage. As the helicopter is based at Constable Point (1 hour flying time from Mestersvig), any usage from Mestersvig incorporates the costs for the shuttle between Constable Point and Mestersvig (approximately £1800 to £2800). In view of this and notification from DPC regarding other planned usage of the helicopter from Mestersvig over the summer, the expedition was rescheduled to enable cost sharing of the shuttle with other helicopter users. It should be noted at this point that Hague Anderson of DPC showed immense patience and provided quick and helpful responses to numerous enquiries during this late period of planning. Without this assistance my inauguration into expedition planning would have been far more stressful. Many thanks to Hauge for his tireless answers to my endless questions.

### **STATUTORY REQUIREMENTS.**

**National Park permit.** - The Staunings Alps are in the North East Greenland National Park and by law expeditions of any type planning to visit the area have to be approved. This is governed under Order no. 7 issued on 17 June 1992, from the Greenland Home Rule Authority concerning the National Park in North and East Greenland. The process for getting permission to visit the park is handled by;

The Danish Polar Centre,  
Strandgade 100 H,  
DK - 1401,  
København K,  
Denmark.

Tel & Fax. (+45) 32 88 01 01  
Dpc@dpc.dk

An application form can be obtained by writing to the above address or visiting the Danish Polar Centre website. Expeditions must submit completed application forms by December 31st in the year prior to the planned visit. In addition, applications from any scientific expeditions have to be submitted at least 6 months before the trip is planned.

The Danish Polar Centre website includes application forms for a radio licence, a firearms licence and a certificate of insurance. Instructions for planning an expedition to the area can also be down loaded from the Danish Polar Centre website. On receipt of the application the expedition is given a unique reference number for use with all further correspondence with the authorities.

Central and South West Staunings Alps in Northeast Greenland showing basecamp and the first ascents achieved in 1998 and 2001



Based on Geodætisk Institut 1:250000 series, 72 Ø. 2 Kong Oscar Fjord and 71 Ø. 2 Staunings Alper

The Danish Polar Centre organised all of the flights and accommodation for us, used in transit from the UK to basecamp. This greatly helped in running the trip.

### **Radio licence.**

Expeditions have to take an emergency radio beacon (personal locator beacon: PLB). They can be hired or borrowed and are part of the standard equipment on yachts and other small boats. However, they must be rated to operate for at least 48 hours at low temperatures. A Greenland radio licence is required to operate a PLB. The application form for the radio licence and a photocopy of a current British radio licence was sent to;

Greenland Telecom  
PO Box 1002  
DK - 3900 NUUK  
Greenland

Again, this should reach the authorities 3 months before the expedition is due to leave. There is a charge for the licence of about £50 and we directly transferred money to a bank in Greenland to pay for this licence.

The PLB was one of the items inspected by the Danish Army personnel at Mestersvig. One additional piece of radio equipment hired to us at Mestersvig was a military field VHF radio. Communication was therefore possible with Mestersvig which was essential for the planned pick-up by helicopter. The radio frequencies were 3350mhz and 4050mhz and the agreed daily contact times were 0815 and 1815 hours.

### **Firearms licence.**

Expeditions to the North East Greenland National Park are required to carry a firearm for protection against large mammal (polar bear) attack. Polar bear deterrents such as thunder flashes and flares are also recommended but commercial airlines are often reluctant to carry these.

Clearly a firearms licence is required for transporting a rifle in the UK. Northern Constabulary in Inverness were very helpful and issued a temporary firearm licence for the carriage of the firearm and ammunition and for the purchase of 20 rounds of ammunition. This was applied for 3 months before the expedition left to allow time for the necessary security checks on the person to be licensed. The licence started one week before the expedition left the UK and expired one week after our return. It was necessary to make sure that ammunition was available to be collected during the week before the trip left. This was purchased from Grahams in Castle Street Inverness at £24 for 20 rounds of 0.303 soft nose ammunition.

Previous experience and advice suggest you should contact the Airline and the ground company, probably on a number of occasions, to ascertain what the carriage regulations actually are. It appears that the ammunition must be carried in a metal box.

We had the kind loan of a 0.303 BSA rifle. It was kept loaded ready to fire with the safety catch on when on the ice.

For Greenlanders the use of firearms (rifles and shotguns) is, it appears, unregulated in Greenland, except in the National Parks. Handguns are illegal and it is also questionable whether a pistol of any calibre would be effective in stopping a polar bear attack. The firearms licence application form, a copy of a British firearms and the charge of about £50 were sent to;

The Chief Constable  
PO Box 1006  
DK - 3900 NUUK  
Greenland

Travelling through Iceland en route to Greenland, you need a firearms transit licence and you should contact Icelandic customs at Keflavik well in advance of your date of travel. The rifle was sealed in its carrying case at Keflavik and the seals had to be inspected on arrival in Akureyri.

Rifles and polar bear deterrents (thunderflashes etc.) should always be declared at national borders and also on return to Iceland and the UK.

### **Chapter 3      Travel & Base Camp - Jim Fairey**

#### **UK to Mestersvig, Greenland**

In late June the bulk of our food, tents and climbing gear were freighted to from Glasgow to Mestersvig to reduce the overall luggage costs. However, despite these prudent calculations we arrived at Glasgow airport on 22<sup>nd</sup> July to find our luggage to be 80Kg over the limit. We had no option but to pay an excess of £350 even after negotiating a reduced rate on the spot. For future expeditions we recommend that the airline is contacted in advance, regardless of who booked the tickets, and a generous baggage allowance can be arranged.

The Icelandair flight from Glasgow to Keflavik was short (2 hours) and comfortable. On arrival we had to transfer from the International terminal to the national terminal in Reykjavik by bus which proved to be extremely busy. The gun was taken through Customs with little fuss – in fact outside of the UK everyone was very relaxed about it. We then took an internal flight to Akureyri arriving around 6pm in time for a café supper in the town.

Next morning saw us on the flight from Akureyri to Mestersvig at 8.30am arriving around noon. The weather in Mestersvig was clear and warm but the mosquitoes were out in full force causing us to take shelter in the Mess Hut after we had rearranged our gear into 3 loads for the helicopter flight to base camp.

#### **Mestersvig to Base Camp**

The plan was to fly onwards that day to base camp before nightfall but it was clear that with the helicopter running behind schedule that this would not happen. We had packed our gear so that the helicopter would make 3 flights taking out teams of 2 climbers with all their kit per flight. Eventually the helicopter returned from it's previous carry and Colin Read and Brian Shackleton lifted off to find a suitable site for base camp on the Great Cumbrae glacier. This took longer than expected as the pilot had not performed a glacier landing before and was very cautious about where to set down. Colin and the pilot eventually chose a flat and crevasse free site above our objective the south face of Sussex. After probing for crevasses this was established as Base Camp at;

71° 57' 15.8" North 25° 07' 04" West Altitude 1730m

By the time the pilot returned he was out of flying hours and so it was determined to fly the remaining 2 pairs the next morning. We slept in one of the bunkhouse huts and enjoyed a cooked breakfast next morning. The pilot had a very heavy schedule that day and so planned a 7.30am start but the airfield was completely socked in with heavy sea mist. This

is a common feature of the weather on the coast and the mist is usually only 50 – 100m deep so the pilot did a short recce flight to confirm that the interior was clear. This being the case the next pair of climbers, Chris and Nick were flown to base camp. Their arrival was much earlier than expected and they landed as Colin and Brian were still in their tent.

The helicopter then returned and picked up Jim and Colwyn to complete the transfer. By the time they arrived at 9.30am, Base Camp was well established with toilet block, tent areas and cooking pits.

The rest of the day was spent with organisation of Base Camp, training and practise use of avalanche transceivers, instruction and practise use of the gun and a comprehensive look at and instruction in how and when to use the First Aid equipment and medication.

### **Base Camp back to Mestersvig**

Our return to Mestersvig was scheduled for 15<sup>th</sup> August to sleep there one night before flying out the following day. However, the weather on the 15<sup>th</sup> was very poor with low clouds hiding the tops of the surrounding peaks and it was reported to be very windy at Mestersvig. However, we prepared for departure leaving only tents standing which proved to be fortunate as by the end of the day it was evident that we would have to spend one more night on the glacier.

The following morning saw clear weather and an early arrival of the helicopter which flew us back to Mestersvig in 2 carries of 3 climbers, gear and all rubbish. Base Camp was left clean and any rubbish not taken back to Mestersvig was burnt.

### **Mestersvig to UK**

For our return we ensured that our baggage was within the allowed limit and left the remainder of our kit to be freighted back to Glasgow after us. Our return flight to Glasgow via Reykjavik was very straightforward. From Mestersvig we flew south late in the evening over the Staunings Alps giving magnificent views in the evening sun and arrived in Reykjavik to spend a very short night in a local hotel before leaving early Keflavik on 16<sup>th</sup> August arriving in Glasgow by mid morning.

### **Global Positioning Satellite readings for Basecamp**

The variation in GPS readings taken with a Garmin Etrex handset in the cooking area of the Jones/Fairey tent varied throughout the trip. The extreme readings are reproduced below.

71Degrees 57.166' North 25 Degrees 06.99' West

71Degrees 57.165' North 25 Degrees 06.981' West

71Degrees 57.163' North 25 Degrees 06.99' West

They show that the Latitude varied by 0.002 of a minute and the longitude by 0.009 of a minute.

# S.W. Staunings Alps, SMC Greenland Expedition 2001



After Bennet 1972, Staunings Alps Expedition Guide, Gaston's Alpine books & West Col Productions

22nd July

Glasgow to Keflavik by Icelandair. Bus from Keflavik to Reykjavik. Internal flight from Reykjavik to Akureyri, overnight in Hotel Bjork.

23rd July

Akureyri, Iceland to Mestersvig, Greenland on Fairchild Metroliner, arriving 11-15am. Colin and Brian leave by helicopter at 11pm for 1/2 hr flight to Great Cumbrae glacier. Helicopter GPS position of Basecamp set at 71 degrees 57' 15"North, 25 degrees 7' 4" West, elev 1730m. Remainder of team overnight at Mestersvig

24<sup>th</sup> July

07.30 hours. Half hour helicopter flight to Sefstroms glacier (Helicopter GPS 71° 57' 15"N, 25° 06' 99"W, 1770m). Chris & Nick flown in at 07.30 hours. Jim & Colwyn flown in about an hour later. Afternoon reconnoitre on skis of route from camp to Sussex south face.

25th July

Reconnoitre on skis to head of the Great Cumbrae glacier and into upper glacier basin to 2060m. The superb spur dominating the basin confirmed to be of excellent sound rock.

26<sup>th</sup> July

First ascent of "**Keswicktinde**", 2410m, by couloir and northwest ridge, following exposed snow crest to summit block, Grade AD (3 ropes of 2).

27<sup>th</sup> July

Rest day, Colwyn cleaned recalcitrant MSR stove for first time. Topless sunbathing - at least for a few minutes. Overnight -5 celsius

28th July

Second ascent (Colin and Brian) **Sussex**, 2360m, by new southeast face route, Grade D, 650m. Approach by couloir shared with Chris & Nick in attempt of second ascent by a new route on Sidney, 2300m. Attempt thwarted by impasse of dangerous snow 60m below summit.

Colwyn and Jim to upper glacier basin for First Ascent of "**Jones-Fairey**" Spur, the southwest spur of the western outlier of Sefstromsgipfel. Latitude & longitude of base of spur - N 71° 56.390', W 25° 04.490'.

29th July

Colwyn and Jim reach summit of J-F spur, 2570m at 11am after 28hrs of climbing in some 25 pitches, Grade ED, 555m. Descent by abseil to gully on eastern flank. Jim avalanched down final section of gully into bergschrund resulting in late afternoon crevasse rescue by remainder of team.

30th July

Rest day (all team) stove maintenance

31st July

Ski Tour by Chris, Nick, Colin & Brian up Cantabrae Glacier and then up final icefall to basin below Newham Col (2300m) Reconnoitre of unclimbed peaks on east side and examination of Sussex south face from different direction.

1st August

Colwyn & Jim to upper basin of Great Cumbrae on ski to view J/F spur and the avalanche site. Rest Day for others.

2nd August

Ski tour by Colwyn & Jim down Great Cumbrae, then up the Little Cumbrae to below Cantabrigia. W ridge of Emmanuel seen as a possible route. Chris and Nick, with Colin and Brian following, reconnoitre peak adjacent to Keswicktinde. Return to camp due to soft snow (avalanche and crevasse hazard)

3rd August

No overnight freeze due to cloud cover. Afternoon transport of equipment down glacier to near south face of Sussex

4th August

Colwyn and Jim to foot of west ridge of Emmanuel as light snow and rain. Chris and Nick, with Colin and Brian to foot of Sussex moving previous day's gear dump. All team members return to basecamp as mist closes in. Snows until about 6pm, then clears during evening

5th August

Colwyn and Jim attempt on West ridge of Emmanuel. 12 pitches up to E2 and A2 to halfway then retreat by abseil to adjacent couloir. Chris, Colin and Brian attempt on south face of Sussex. Technical difficulties force retreat after 3 pitches

6th August

Colwyn and Jim return at 6am from Emmanuel W ridge attempt. Ski Tour by Chris and Nick, with Colin and Brian down to site of 1998 Basecamp on the Seffstroms Glacier to assess possible resiting of present basecamp. Wet snow and melt streams below 1500m level make prospect unattractive.

7th August

Rest Day for most apart from further short reconnoitre by Colin and Brian in the afternoon of peak adjacent to Keswicktinde.

8th August

Cloudy and mild, snow very soft. Another Rest Day

9th August

Ski Tour by team down Great Cumbrae and up the Little Cumbrae to below Cantabrigia. Climbing potential of pillars around upper glacier basin recognised.

10th August

First ascent (Colwyn and Jim) of "**Pap of Cumbrae**", 1885m, at junction of the Little Cumbrae and Cantebrae by south west ridge, Grade AD, 200m from bergschrund.

First ascent (Chris and Nick, with Colin and Brian) of "**Mears Fjeld**" 2100m, on ridge between Cantabrae and Little Cumbrae by southwest ridge, Grade PD after abandoning an attempt on the adjacent rock pillar due to dangerously unstable rock.

11th August

Rest Day (all team)

12th August

Cloudy weather. Another Rest Day



13th August

First ascent (Colwyn and Jim) of "**Tandlaegetinde**", 2350m, by the south face, 500m, Grade ED. Reconnoitre (Colin and Brian) of lower rock buttress of Tupilaq containing curving crack. Ski Tour to Cantabrae by Chris & Nick to take photographs.

14th August

Colwyn and Jim return at 7am after 24 hrs on their route, descending by abseil down the granite face. Day spent in basecamp with overcast skies and some light snowfall in the afternoon.

15th August

Scheduled day for return to Mestersvig. Helicopter takes off but is turned back by snow. A further day on the glacier with cloud and mist around basecamp.

16th August

A clear and cold morning with arrival of the helicopter at 9.15am. Team flown to Mestersvig in 2 flights of 3 climbers with all equipment and all rubbish. Afternoon gear sort / pack, then walk around before dinner. Direct evening flight over the Staunings Alps to Reykjavik and overnight in hotel. Left 20.45 hours in Fokker 50. Arrived 22.55 hours

17th August

Morning Icelandair flight from Keflavik to Glasgow

## **Chapter 5. Equipment**

**Chris Ravey**

### Introduction

The following review summarises the personal clothing systems and primary camping, climbing and skiing equipment used by members of the expedition.

Four of the six members had previously climbed and traveled within the Staunings Alps resulting in an accumulated pool of experience regarding the need for and performance of different types of equipment. The details of pieces of equipment used by each member, including comments on performance, are given in the Table below.

### Footwear

It is interesting to note the choice of new generation leather mountaineering boots by three of the expedition members. This probably being prompted by the anticipated warmer temperatures of a late summer trip and the intentions to climb rock as a preference over snow and ice. Two of the members with leather boots chose the full mountaineering model whilst one member opted for a lighter slightly flexible model which were used instead of rock boots on major rock routes. The leather boots were found to be very good although one member experienced cold feet occasionally whilst around camp. Two of the 'leather boot brigade' took ski mountaineering boots (Scarpa Denali's) whilst the third skied in his leather mountaineering boots. Apparently this is not recommended.

The other half of the expedition opted for plastic mountaineering boots. Two of these members also skied in their mountaineering boots. Although excellent for climbing and walking, the Asolo AFS101 have no facility for adequate tightening of the inner boot which resulted in blisters on the heel. In addition, the inner lacing loops on the outer boot ripped out.

Being the only member of the expedition with Nordic skis and the third member of the plastic boot brigade I took a second pair of leather Nordic ski boots. Cold toes were a

recurrent problem during climbing days, possibly as a result of having to change from warm ski boots into cold mountaineering boots at the bottom of each route.

Various combinations of sock were used according to personal preference. Neoprene vapour barriers were not used.

Surprisingly, one member opted not to take gaiters.

### Clothing systems

Despite the successful use of the buffalo clothing during the 1998 trip, the anticipated warmer temperature convinced me to opt for a more conventional layering system on this trip. The layering worked extremely well, allowing very little to be worn during rapid ascents of couloirs whilst allowing layers to be added when belaying or moving in the shade. A goretex jacket was taken as part of the system but never worn. However, had the expedition had to travel during periods of low cloud, the waterproof jacket may have been useful.

Four of the other members also opted for a layering system, utilizing powerstretch, micro-pile, fleece, pertex and goretex materials. A Buffalo mountain shirt and a Buffalo belay jacket were incorporated into the layering systems of two separate members.

One member opted for the complete Buffalo system although a polyester top was worn instead of the Mountain Shirt when conditions became too sweaty.

A variety of glove systems were used and all found to be good. Daytime temperatures were such that cold hands were not a problem and I personally tended to use light-weight cotton gloves for most climbing (rock and snow) unless they became too wet when I would change to the Extremities mitts.

### Climbing Equipment

Due to the original intention to climb the South West Face of Sussex, climbing racks were orientated towards a large alpine style rock climb. Each climbing pair generally had one full set of wires, a comprehensive range of camming devices, a selection of rock pegs, 8 to 10 quick draws and numerous long slings. The original intention was for two climbing teams to join forces for this route and hence create a double rack available for climbing and setting up belays. Twin half ropes were taken by each pair (one pair opting for 60m lengths) along with two additional half ropes intended for fixing on the approach or lower pitches of Sussex. Snow and ice gear comprising a selection of screws and deadmen or snow stakes were also carried.

Following close examination and a foray onto the lower 50m of the S W Face of Sussex, it was deemed that siege tactics would have better suited the abilities of the party. In retrospect (what a wonderful thing) it was considered that 400m to 500m of static rope should have been taken to allow a 'day trip' style ascent and 'fixing' of the lower part of the face followed by an alpine style finish on the upper half of the face. The lack of snow (and hence water) on the ledges and the poor snow conditions in the alternative descent route from the summit (abseiling back down the route being a more favorable option) also being factors in favour of a 'partly fixed' ascent.

Despite the failure on the SW Face of Sussex, four long and hard rock climbs were completed in the area. All of these routes were undertaken by a party of two climbing alpine style with a standard rock climbing rack and twin 8.1mm diameter, 50m ropes.

Belays in couloirs were generally on rock in the side walls. Adequate belays on the fine summit ridge of Keswicktinde were noted by their complete absence. The two snow stakes and one dead man showed their value on this occasion, the only complaint being that we didn't have more of them.

Grivel 2F crampons were popular although Charlet Moser S12's and Grivel G12 were also taken. 'Old fashioned strap on crampons' were used successfully for couloir descents with the pair of medium weight leather mountaineering boots.

Ice axes varied to suit personal preference. No steep or technical ice climbing was encountered and therefore general mountaineering axes would have been just as useful as modern technical ice tools. In fact, the axes were used extensively for belays on Keswicktinde and as such, straight shafted tools won the day. The only complaint regarding axes related to a set of Mountain Equipment Vertige's. The rubber grip on these axes became striped after the first day climbing. Interestingly, the same member took the same axes on the 1998 expedition when the same problem occurred. The grips had been replaced by Mountain Equipment following the 1998 trip.

### Skiing Equipment

Everyone used the type of skis he was most at home with. This resulted in five people using alpine ski-mountaineering equipment with either climbing boots or ski mountaineering boots and one person (myself) using Nordic touring equipment. The ski's were used predominantly to travel between base camp and the foot of the climbs, although a number of short day tours were undertaken between climbing trips.

Although grip waxes were used successfully on the Nordic skis in the colder temperatures of the 1998 expedition, the warmer snow conditions during the 2001 expedition favoured the use of skins for all ski types.

The debate regarding ski boots continues. Ski mountaineering boots were highly regarded for the skiing by those who took them. The problems of sore feet occurring when the same boots were used for climbing. Conversely, two of those who took only climbing boots noted the poor performance (and in one case very bad blisters) for skiing but comfort whilst climbing. Although light and comfortable for touring, the Nordic equipment requires a change of footwear at the base of climbs, contributing to a heavier rucksack on the ski-in and the potential for cold feet. The choice is yours.

### Camping Equipment

Tents were shared by climbing partners and included one Terra Nova Terra Firma (2/3 man), one Wild Country Super Nova (3 man) and one Terra Nova Quasar (2 man). The Terra Firma and Super Nova provided almost luxurious base camp dwellings. The Quasar being of the same design although a little smaller. A combination of skis, sticks, axes and snow stakes were used for pitching the tents.

Four members chose Rab down bags (900 or 1000) with a Mountain Equipment Red Line and a Macpac 3 season bag making an appearance. Due to old age the Macpac had lost some down and consequently cold spots were experienced during some of the colder nights. Thermarest's were used by all members, often in conjunction with a further layer of insulating material underneath.

MSR XGKII multi-fuel stoves were used by all camping units with one complete spare taken. Two of the camping pairs experienced problems with their shakerjet stoves, requiring numerous complete strip-downs and replacement of parts. The third stove, an

ageing and pre-shakerjet model, experienced no problems. A1 aviation fuel was used in the stoves.

Acknowledgements. Many thanks to the following companies who provided advice and equipment to team members. Needlesports, Terra Nova, Cassin, North Cape.

### SMC Greenland Expedition 2001, Equipment Review

Equipment	N Walmsley	C. Ravey	C. Read	B. Shackleton
Boots	Asolo AFS 101. Comfortable boot with customised insoles. Good for climbing, problems when ski-ing as inner boot could not be adequately tightened causing blistering on the heel. Inner lacing loops on outer boot ripped out, a design fault requiring re-stitching.	Koflach Clima. Well worn in. Good all round. Experienced cold toes possibly due to changing from ski boots. Sewn in lacing hoops on the inner required re-stitching prior to the trip. Lacing holes would last longer.	La Sportiva Nepal externe Very good all round performance. Cold feet when worn around camp.  Five Ten rock shoes, oversized with Socks for comfort.	Scarpa Vega Plastic (Well worn in) Goretex KSB Boots around camp to allow inners of plastics to dry
Sock system	Medium weight Thorlo's.	Two pairs (thin & thick).	Two pairs (thin & thick).	Two pairs (ultimax)
Gaiters	Berghaus Yeti enclosed gaiters	Lowe Alpine conventional (boot not enclosed) gaiters with leather ski boots. Extremeties enclosed gaiters with plastic climbing boots.	Aiguille Alpine plastic boot Gaiters.	Bergaus Yeti Extrem
Trouser system	Powerstretch tights and pertex overtrousers. Excellent light and warm system – never cold. Silk longjohns used for sleeping in.	North Cape Powerstretch pants and pertex overtrousers. Excellent. North Cape fleece pants - not required. Thermal longjohns only used for sleeping in	Extreme fleece sallopettes with Thermal long johns under. Comfortable and warm.	Fleece Salopettes with Thermal Long Johns
Core under-layer	Light weight thermal long sleeved shirt.	North Cape Cool Max Thermal T-shirt. North Cape thermal shirt for sleeping.	Lowe Alpine base layer. Sprayway power stretch shirt.	Lowe Alpine Dry Flo
Core mid-layer	Marmot 'Schoeller' fabric top. Good as a lightweight top when climbing or ski-ing.	Microlight Fleece Jacket.	Berghouse and Craghopper fleeces	Lowe fleece

Core over-wear	Knoydart pile / microfibre top. Used at colder times or when at rest during trips. Excellent piece of gear, light but bulky. Unfortunately no longer manufactured. A Rab down jacket was taken but only used at camp in the evenings.	Pertex Shell. Buffalo Belay Jacket, and Goretex shell. Pertex shell used mostly, over micro fleece. Belay jacket used at camp and occasionally during breaks whilst climbing. Goretex not required although may have been useful if needed to travel during the day of cloudy weather. Rab Kinder Guide down jacket for camp.	Pertex shell. Buffalo belay jacket And Marmot three ply Goretex shell. Belay jacket worn around camp in cold periods was excellent.	North Face Gortex Jacket North Face Gortex Overtrousers
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EQUIPMENT	C. Jones	J Fairey
Boots	Scarpa Nepal Extremes – new. Good for climbing and warm enough. Not ideal for skiing. No ankle support. Full Berghaus gaiters. Boreal rock boots	Touring boots on glacier Sportiva mountain ¾ shank boots – excellent for climbing (except smearing) and very comfortable. No rock boots.
Sock system	One pair of thick socks thorlo	One pair of thick thorlo socks
Gaiters	Berghaus Yeti. Good	None
Trouser system	Buffalo Expedition Salopettes.	Fleece salopettes
Core under-layer	Polyester top – very good for wicking. Wore on own when temperature too hot to wear Buffalo shirt.	North Cape wicking shirt Patagonia longjohns
Core mid-layer	Buffalo Mountain Shirt.	Buffalo shirt
Core outer-layer	Buffalo Belay Jacket. Buffalo hood. Vander jacket, Goretex equivalent	Goretex over trousers Goretex light weight top

Equipment	N Walmsley	C. Ravey	C. Read	B. Shackleton
Gloves	Extremities Thinny Glove inner and Ice Glove outer shell used in combination. Worked well in conditions encountered, would be not warm enough if it had been any cooler.	Combination of Extremities Thinnies, very old leather palmed North Cape medium weight gloves and Extremities mitts (fleece inner & waterproof shell). Due to warm temperatures, the medium weigh gloves were favoured, although when they got wet the mitts were used.	Extremities thinny gloves. “Sticky windstoppers” Porelle waterproof and breathable ice climbing gloves. All specially adapted for left hand, which has missing finger and thumb, all excellent no cold hands.	Mammut Glove system for climbing snow/ice. Windstopper gloves for skiing and general purpose around camp

Crampons	Charlet Moser Super 12.	Grivel 2F. Great all round crampon.	Grivel 2F for ski mountaineering boots and Charlet Moser Rambo for climbing boots, excellent.	Grivel M12 general mountaineering crampons
Axes	Simond Piranha, well used and tested.	Simond Piranha (double bent shaft). Well weighted axes although straight shaft preferable for axe belays.	Mountain Technology Vertige. Rubber grip totally trashed after one route.	Charlet Moser Pulsar Bent Shafts
Tent	Terra Nova, Terra Firma, 2/3man tent ideal as base camp tent with roomy interior. Bubble wrap and foam underlay.		Terra Nova Quasar with extra space blanket ground sheet.	
Sleeping bag	Macpac 3 season down bag. Due to old age had lost some loft and cold spots developed during night. Should have been re-conditioned prior to trip. Thermals and fleece worn to bed. Thermarest over Karrimat used.	Rab 1000 (10 years old) with thermarest over karrimat. Cool on two or three nights but always comfortable.	Rab 900 with thermarest over Karrimat. No problems encountered.	Rab 900 with thermarest over Karrimat.
Stove	MSR XGK11. No problems. K jet used.		MSR XGKII shaker jet. Fine up to mid point, when jet and flame spreader needed replacing, though it had previously had a lot of use.	
Comments	Pleased with layering system approach, as was able to adapt to all conditions. Would recommend going for warmer rather than lighter sleeping bag choice	Due to anticipated warmer temperatures in July/August, opted for conventional layering system as opposed to the buffalo system which worked successfully in May 1998. Worked well ie only required t-shirt for colour ascents in the sun but fleece and pertex needed when in the shade.	Layer system worked well. Gortex hardly used.	Layer system for clothing well proven on previous trips and successful again. Boots, Crampons and Axes also familiar and well proven

EQUIPMENT	C. Jones	J Fairey
Gloves	Tog 24 fleece mitts Dachsteins when cold – climbing and touring.	Damart inner fingerless mitts "Extremities" gauntlets for skiing and climbing
Crampons	Grivel 2F – well worn. Excellent for type of mixed climbing encountered. Sharpened prior to trip	Old fashioned strap-on crampons to suit midweight boots
Axes	Grivel Rambo Axe Chacal Hammer Both well used previously. Good mountaineering combination.	Curver axe and hammer
Tent	Wild Country Super Nova 3 man dome Excellent size inside.	

Sleeping bag	Rab 900 with a silk liner and a Rab pertex bivi bag and full length thermarest. Slept naked and always warm.	ME Redline with silk liner and a goretex bivvy bag and full length Thermarest. Always warm.
Stove	MSR XGK11 Shaker Jet (K jet). Many problems initially with poor heat and very smoky. Eventually changed the entire set of replaceable parts for a new set and it worked, although still a bit smoky.	
Comments	Buffalo system good for extremes of temperature. Beal Iceline 8.1mm ropes used and one got trashed abseiling off Tandlaegetinde.	All functioned well but new crampons with cup bale would have been better.

EQUIPMENT	N Waimsley	C. Ravey	C. Read	B. Shackleton
Ski's	Fischer SC4, old but serviceable ski	Asne's Sondre. Nordic touring skis.	Kastle Tour Montagne	Atomic Tourcap Guide
Bindings	Silvretta 404's, simple, heavy but effective.	Rotterwieller 3 pin bindings with heel cable.	Fritschi Tour automatic	Fritschi Tour automatic
Ski Boots	Asolo plastic climbing boots used.	Garmont Tour (single leather)	Scarpa Denali. Excellent. Inners used as camp slippers, warmer than climbing boots.	Scarpa Vega climbing boots used
Poles	Black Diamond flicklock type poles taken. No problems encountered	Swix powder (complete with repair following breakage on 1998 trip)	Black diamond expedition telescopic.	Black Diamond Expedition telescopic
Skins/Waxes	Ascension Skins with top and tail fastenings. Bought new for the trip and worked very well in all conditions.	Various warm temperature waxes used successfully early in trip. As snow temperatures increased reverted to using skins.	Pomoca	Coltex with front fixing only
Harchisen	Taken but not used.	Not taken. Set of articulated crampons taken for leather ski boots. Not used.	Fritschi. Not used.	Not taken. No steep ice encountered during ski tours
Comments	Problems encountered with boots not being supportive enough on longer tours. This led to both ankles being rubbed raw. Would experiment with a different type of climbing boot or consider taking dedicated ski-mountaineering boots.	Light weight Nordic touring skis ideal for the non-technical skiing. However, need to change boots at base of climbs resulted in cold feet.	Combination of mountaineering and ski mountaineering boots, proved much better than just mountaineering boots on 1998 trip.	Scarpa Vega boots for skiing proven from previous expeditions

EQUIPMENT	C Jones	J Fairey
Ski's	Salomon X-mountain tours carving sidecut	Salomon X-Mountains P7
Bindings	Silvretta 500s, carbon fibre equivalent of 404s and take a rigid climbing boot	Fritschi Damar
Ski Boots	Scarpa Nepal Extremes, not very good for downhill skiing as poor ankle support but go there eventually! Lot of rubbing going uphill so boots must be laced tight.	Scarpa Denali
Poles	Vintage Look downhill poles heavy duty plus a spare Black Diamond telescopic expedition pole	Fixed 125 cm
Skins/Waxes	Colltex synthetic skins, rear hook and front bale	Pomoca 66mm parallel
Harchisen	Not taken	Fritschi Damar



## **Chapter 6. Weather and Snow. Brian Shackleton**

### **General Summary**

Overall, the weather during the expedition was excellent and stable. For the 23 complete days at basecamp on the glacier, there were only two days when short periods of light snowfall occurred (less than one centimetre) and five other days when there was overall cloud cover. During the entire expedition, winds were light or variable in direction at glacier level, there being little change with altitude to cause any difficulties whilst climbing. When the sky was clear overnight, a gentle katabatic wind blowing down from the upper glacier basin assisted in freezing the snowpack with air temperatures being recorded down to a minimum of -8degC. More typically, overnight lows were -5degC whilst temperature would barely drop below zero degC when the sky was overcast or misty. In the middle part of the day, temperatures rose as high as +10degC, resulting in rapid deterioration of snow on southerly and south westerly aspects. After the first week of the expedition, the conditions of shadow and clear skies no longer ensured that snow would refreeze as required giving safe passage in couloirs and approach snow slopes. A number of avalanches were observed in south & east facing couloirs and a major powder avalanche triggered by a serac collapse on a north facing slope below basecamp. Such events were in marked contrast to observations during the May 1998 expedition when snow conditions were more reliable and there was minimum avalanche activity until a snowfall near the end of the trip.

### **Weather**

Arrival in Iceland on 22nd July saw dull and overcast conditions not unlike those left behind in Scotland and these conditions prevailed during most of the flight from Akureyri in northern Iceland across the Denmark Strait to Greenland. The sky cleared on the approach to the Greenland coast and we stepped off the Fairchild Metroliner at Mesters Vig on a sunny day with a cool breeze. We were informed that although now settled, there had been a period of unstable weather in early July resulting in considerable snowfall in the mountains and unusually gusty winds around the coast. Indeed, as a result of the winds at Mesters Vig, one of the expedition boxes, freighted out and awaiting our arrival, had been blown away without trace. During the evening of the 23rd July when the helicopter flew us to basecamp, the sky remained clear with little wind to trouble the helicopter whilst setting us down to establish basecamp.

For the initial period of the expedition up to 1st August, which included the ascents of Keswicktinde (26th July), Sussex (28th July) and the J-F Spur 28th/29th July) the days remained mainly sunny and clear. Early cloud on the mornings of the 26th and 30th July dispersed quickly and a thin veil of upper cirrus on the morning of the 31st also failed to herald any real change. Overnight temperatures remained low enough until around the 28th to adequately refreeze the soft snow pack but with warmer days and less cold nights, the overnight freeze by the 2nd August was insufficient to establish a proper safe surface. The arrival of more high cloud later during 2nd August finally marked a change in the weather with both the 3rd and 4th August overcast and a short period of light snow during the afternoon of the 4th.

In the remaining period to the 16th August, the weather was slightly less settled. The three fine sunny days, 5<sup>th</sup>-7<sup>th</sup> which included the attempts on the Sussex Face and West Ridge of Emmanuel, were followed by two days of cloudier conditions on 8th/9th August. The 10th/11th August were again sunny for the ascents of Mears Fjeld and the Pap of Cumbrae, as were the 13th/14th August for the ascent of Tandlaegetinde. The 12th, 14th and 15th August were overcast with additionally, light snow on the 14th and mist around basecamp on the 15th. The conditions on these last two days were also cloudy at Mestersvig with snow reported on the 15th preventing the helicopter from flying over the

mountains to collect us. The 16th August was again sunny, clear and cold after clearance of cloud overnight, thus enabling the helicopter to fly in from Mesters Vig. At the coast, the temperature at 11am was +14degC and with little wind, the local mosquito population was out in force to welcome us.

## **Snow**

On arrival by helicopter above the glacier on the evening of 23rd July, it was clear that many more crevasses were open than we had seen during the May 1998 expedition. The upper glacier basins and the surrounding mountains, however, still showed evidence of the reported snowfall in early July. It was concluded that the normal spring snow melt in late May and June had proceeded as normal, but then been interrupted by a return of colder snowy conditions above 1300m in July. A probe around the selected basecamp area, after setting down the helicopter, confirmed that a firm layer lay beneath the soft upper layer of windblown snow but further down, at 1-2 metres, lay unconsolidated corn mush. Lower again, around 3m, probing confirmed stable glacier ice and no sign of crevasses. During the reconnoitre of the upper glacier basin at 2000m on 25th July, similar conditions were found to those around basecamp although there was a question regarding the stability of steeply angled snow slopes despite there being few signs of avalanche activity beyond small localised "sloughing" off.

The ascent of Keswicktinde gave a better indicator of snow slope conditions on higher slopes. The surface snow in the approach couloir was adequately adhered to the ice beneath although the surface snow became soft 1-2 hrs after the sun came onto the slope. We noted during the descent that adhesion was poor with an increased tendency for the surface layers to detach. Higher still on the exposed NW ridge, the snow was kneedeep in places, heavily corniced on the SW side and lying at a steep angle on the NE side. A number of simple block smear tests, however, confirmed good adhesion of the soft snow to the parent ice beneath. It seems probable that the particular aspect of this exposed ridge and the recent sun had stabilised the snow. This was in contrast to south and east facing ridges and couloirs where the snow had degraded quickly in the sun.

The ascent of the approach couloir beneath Sussex was completed early (prior to full sun) whilst the descent was late in the day in the shade (after the top layers had refrozen). This contrasted to the near disastrous descent of the couloir beneath the J-F Pillar the following day on 29<sup>th</sup> July. By 5pm in the afternoon, this couloir had been in the sun for several hours and the top layer of snow was soft and barely attached to the parent ice beneath. Indeed, a channel of water was free flowing in the upper couloir in common with several others to illustrate the extent of the midday melt. The avalanche involving Jim was as a direct result of the deteriorating snow conditions and marked an end to the team's reliance on refrozen snow in the couloirs.

From the 28th July onwards, increased avalanche activity was seen in the south and east facing couloirs triggered by stone fall or snow slides from above. This was particularly well illustrated during the return from a ski tour to Newham Col above the Cantabrae Glacier on the 31st July when a massive avalanche swept hundreds of metres down the entire length of a wide couloir. The mass of snow and boulders served a warning to keep clear of such places.

The ascent of Mears Fjeld on 10th August relied on old ice in the gully where all loose snow had melted, although this was still unpleasant in the heat of the sun with water and the occasional stone coming from the slopes above. Higher up, a fine ice gully was climbed which was north facing. Above this however, where it was more open, frost shattering of the rock had occurred and much less amenable conditions were found.

Snow conditions for skiing varied from excellent windblown powder in upper glacier basins to soft slush on south facing slopes. Such slush then froze when in the shade to anywhere from breakable crust to rattling bumpy concrete! Mid morning skiing on west or north facing slopes provided the most reliable conditions as one would expect.

In the final few days at basecamp, the sun's lowering arc meant that mountain shadows were cast for substantial periods on glaciers. The time taken for Hecla's shadow to pass over basecamp increased from a few minutes at the start of the expedition to over 3 hours by the 11<sup>th</sup> August. As the daytime melt became less pronounced, the condition of both surface glacier snow and snow on exposed slopes clearly improved and stabilised once again.

## **Chapter 7. First Aid & safety. Colwyn Jones (medical officer)**

**Good judgement comes from experience,  
experience comes from bad judgement!**

**(attributed to Sierra club)**

### **First aid kit.**

The aim of taking a first aid kit was to be able to provide suitable emergency and short-term medical care until a rescue/salvage team could aid in evacuating injured or ill climbers. The remote area and the likelihood that in an emergency help might take up to 72 hours to arrive, meant that sufficient drugs/equipment were needed for short-term care of up to 3 days. The first aid kit was comprehensive containing what was needed from scenario planning of various incidents.

The kit included the opiate analgesic morphine which is a class 1 controlled drug and a licence to export it under section 3(2)(b) of the misuse of drugs act 1971 must be obtained from the Home Office;

Licensing Section  
Action against drugs unit  
Home Office  
50 Queen Annes Gate  
London SW1H 9AT

The following information, with a covering letter from the prescribing doctor, must be sent to obtain a licence;

- 1 Country of Destination (and transit countries)
- 2 Dates of departure and return to the UK.
- 3 Drug details (name of drug, form, strength and total quantity)
- 4 Outline justification for the need to carry the drug.

The licence does not appear to have any legal standing outside the the UK and import clearance / permission must be obtained from the country of destination (and transit countries, customs usually provide clearance). We took morphine in the form of Cyclimorph (10mg of morphine and 50mg of cyclizine, an anti-emetic) for intramuscular injection. We calculated that at the minimum repeat interval of 4 hours, it was enough to keep one adult pain free for 3 days.

The following items were also carried in the first aid kit.

Drug/item	Dose / form	Number
Cyclimorph	10mg/ml ampoules	20 ampoules
Diclofenac sodium	50mg suppositories	12 suppositories
Paracetamol	50mg tablets	24 tablets
Dexamethasone	4mg/ml (2ml ampoules)	10 ampoules
Flucloxacillin	500mg/vial for I.M. use	12 vials.
Water for injection	2ml syringes & green needles	12 vials
Co-amoxiclav	500 mg tablets,	24 tablets
Chloromycetin	eye ointment/drops	20 single use
Oxybuprocaine (local anesthetic)	eye ointment/drops	10 single use
Povidone-iodine	dry powder spray	one aerosol.
One male urinary catheter	(medium size)	urine collecting bag.

None of the expedition members reported an allergy to penicillin and we carried the broad spectrum antibiotics co-amoxiclav (augmentin) for oral use & flucloxacillin for IM injection.

A steroid dexamethasone (decadron) was carried for IM injection in case of a head injury.

Various proprietary antiseptic solutions and creams with suitable dressings were also carried. Chloromycetin and local anaesthetic gel for snow blindness were included.

Vicryl sutures and local anaesthetic injections were carried for minor cuts and lacerations which did not require casualty evacuation. With 24 hour sunlight and reflected light from the glaciers, sun block was perhaps the most important medication we took.

The first aid kit was not used on the expedition.

Individual members also carried small first aid kits for personal use.

### **Survival.**

Equipment and food for the expedition was left to the preference of each pair of climbers. Expedition equipment (rifle, radio beacon and first aid kit) was maintained by the expedition leader.

Avalanche transceivers were carried by all expedition members.

## **Chapter 8. Climbing Report – Colin Read**

The original climbing objectives were developed by members of the 1998 SMC Expedition to the Sefstroms glacier region of the Staunings Alps who had noted the potential for major rock climbs in that vicinity. Some of the team had also visited the Col Major area in 1996 and again had noted the possibilities there.

Plans were originally laid for a team of eight divided effectively into two expeditions within one. A team of four were to be landed by helicopter near Col Major, to attempt a major new route on Dansketinde. Whilst the other team of four, were to land in the Sefstroms area near Sussex and attempt, amongst other peaks, the unclimbed South face of that mountain.

Unfortunately, almost at the last minute one member had to withdraw. His partner also withdrew being understandably unwilling to go with a stranger. So despite having found a replacement for the first withdrawal, we were unable, in the limited time available, to secure an eighth member. We decided therefore to proceed as a team of six (seven

proved logistically and financially not viable). It was then no longer sensible to divide into two separate parties, so as the original Sussex team of four were still intact, we opted to concentrate in that area.

On the 22<sup>nd</sup> July 2001 we flew from Glasgow to Reykjavik, then on to Akureyri where we spent the night in a hotel. Early on the 23<sup>rd</sup> we flew to Mesters Vig arriving before lunch. The time after lunch was spent sorting and re-packing equipment.

The plan on this trip was to helicopter in and out from base camp. By the time the helicopter was available it was late evening. The first pair with their equipment and supplies were loaded into the Bell 206 and set out. The flight was spectacular, flying directly over the range from Mesters Vig on the coordinates we had given the pilot. We passed over sections of the return routes of both the 1996 and 1998 SMC expeditions, when on both occasions several days had been spent hauling equipment on sledges back to the coast. The flight took 20 minutes!

Locating a safe landing site amongst the crevasses and away from any avalanche risk, proved tense but exciting, it being difficult to read the ground in the flat light of the arctic evening (about 22.30hrs) and whilst traveling at relative speed. A suitable site was located somewhat further up the Great Cumbrae than had been intended, at an altitude of 1730m. It proved to be a good safe site, though in the mid afternoon the sun passed behind the peak of Hecla and put the camp in shade. At the time of arrival this lasted 15 minutes and only just encroached upon the tents, by the end of the trip due to the sun's lowering orbit, it lasted over 3 hours! During which time it was bitterly cold and somewhat of a nuisance on rest days. With hindsight it would have been better to have pitched the tents a hundred meters east, where we would have been in sunlight all day. At night the sun passed behind the range of mountains to the north, rising again in the early morning in the south east, from behind Sefstromsgipfel, which although always daylight gave a definite colder night time period.

The pilot having used up his flying hours, had decided upon his return to Mesters Vig that he was unable to make any further flights that day. So on the 24<sup>th</sup> the remaining two pairs were flown in and the remainder of the day was spent establishing the camp, practicing with the gun and search techniques, with the avalanche transceivers. Finally we all went for a short ski, to near the foot of Sussex.

First impressions of the immediate area were encouraging with some apparently unclimbed peaks, which were not plotted on the maps. Also, some fine looking rock pillars and faces, some of which were vast. The south face of Sussex however looked in the main featureless. Those lines, which could be made out, did not appear to be easily linkable. The main fault lines were streaked black with melt water, from the recent snowfall, which had immediately preceded our arrival. In places large icicles could be seen through binoculars, hanging threateningly above potential lines of ascent (the icicles gradually disappeared over several sunny days, though much of the melt water remained). Conditions generally appeared good, couloirs and snow slopes appeared complete with an even covering of snow and no evidence of much in the way of avalanche or rock fall, rock faces appeared clear of surplus snow. Initially the glaciers were firm with a crisp surface in the earlier hours softening gradually into the afternoon. The weather was at the outset fine and stable.

July 25<sup>th</sup> the whole team skied to the head of our glacier on a recce, where more opportunities presented themselves, in particular a very fine tall pillar on a peak immediately in front of Sefstromsgipfel. There was also a potential line up the south east flanks of Hecla.

On the 26<sup>th</sup> we all opted to attempt an unclimbed peak immediately above our camp. Not marked on our map and situated on the ridge running south east from Sussex to Sefstromsgipfel, separated from Tupilaq by another minor top and bounded on it's right (south) by a large icefall. From camp it appeared straightforward. A broad easy couloir eventually steepened considerably to give a couple of pitches of front pointing to reach a col. Here on the left, a notch avoided the moderate sized cornice and lead out onto the northeast flank overlooking an icefall, perched above the Sefstroms glacier. From here the knife edged northwest ridge looked impressive, almost entirely snow and heavily corniced. There were a few steep icy slopes en- route and with hardly any natural protection, so snow stakes and ice screws proved useful. The summit at 2380m was a small snow cone with room for only one climber at a time. It gave fine views, in particular of the superb rock blade of the unclimbed south east ridge of Tupilaq. Descent was by down climbing the route of ascent to the col. Two abseils down the narrow top section of the couloir, then solo back to the skis on the glacier. 650m of vertical height gain. Grade AD. Camp to camp 14.5hrs.

The following day 27<sup>th</sup> we all rested, repaired/adjusted equipment etc. It was clear, sunny and very warm.

July 28<sup>th</sup> everyone rose early. Chris Ravey and Nick Walmsley set out first to attempt a new route on Sydney 2300m. They followed the couloir from the Great Cumbrae between Sussex and Emmanuel until it forked, taking the right (south) branch, which steepened and gave front pointing on some exposed bare ice, they emerged via snow slopes under the rock buttress on the northwest ridge. Two pitches of steep rock at severe, brought them out onto a snow arete which lead over a crest and down into a notch, a final vertical (circa 60m) blank wall barred the way to the summit. The alternatives where on rotten dangerous snow, so the decision was taken to abandon the climb. Descent was by down climbing the line of ascent. Circa 700m of vertical height gain. Grade D. Camp to camp 17hrs.

Colin Read and Brian Shackelton set out from the Great Cumbrae, to attempt a new route on Sussex 2330m. Following the couloir as above between Sussex and Emmanuel until it forks, then taking the left (north) branch. Moving left again more steeply at the second fork, where massive double cornices overhung the slope above. Reaching a narrow rib of rock, steep bare ice lead up beside it, towards the cornices, where on the left (north) a wind worn funnel lead easily through them and out onto snow slopes, above the glaciated north face of Sussex. A steep slope of snow over hard ice lead to the foot of the first rocks, under the final pyramid of the southeast face. Patches of rotten snow over rock, forced the route left (south) onto the rock. Four pitches following a left trending fault, in places severe, emerged onto the final section of ridge above the south face and via this to the summit, comprising of three stepped rock platforms, where on the highest a cairn was found. Despite being on the summit for nearly 2 hours, we will eternally regret, not thinking to look under the cairn for any possible messages. Descent was by four abseils directly down the southeast face to regain the snow, then by down climbing the route of ascent. Circa 700m of vertical height gain. Grade D. Camp to camp 19hrs.

Colwyn Jones and Jim Fairey ascended, to near the head of the Great Cumbrae glacier on skis, to the foot of the rock spur which projects southwest, from an un-named summit, laying a few kilometers northeast of Sefstromsgipfel. To the north on the same flank of the mountain, beyond open avalanche prone slopes there is another rock spur. Immediately south it is bounded by a large couloir (used on the descent). The pair crossed the bergschrund at the left side of the spur to gain the rock. 25 pitches of mostly difficult sustained rock climbing ensued. Climbing through the night they continued to the summit of the spur, 2570m. Arriving at 11am on 29<sup>th</sup>. They then continued to descend via 8 abseils into the couloir, joining it at roughly mid height. From here they down climbed unroped, on rotten snow, with at times a stream of open water pouring down the center,

which eventually disappeared underground. Beneath this the slope widened and now they were in sight of the other four team members, who, concerned about their continued absence had arrived on the scene. At this point Jim Fairey was swept away on a small slide of snow, which quickly built into a substantial avalanche, carrying him down the remainder of the slope and into the bergschrund via a relatively small hole. He landed on a bridge of avalanche debris after about 15m, part buried but unharmed. A hasty rescue ensued, Chris Ravey was lowered in to assist him and Jim emerged after much hauling, shaken but not stirred. A fine climb of 555m. Grade ED. Camp to camp 36hrs.

31<sup>st</sup> July after a rest day. Ravey, Walmsley, Read and Shackelton did a ski tour. Descending the Great Cantabrae onto the Cantabrae and up the icefall towards its head, to a point just short of Newham col, along the way plotting unmarked peaks and observing a major avalanche from one of the couloirs on flanks of Trinity. Further evidence of the deteriorating snow conditions. They also kept in touch from time to time with base camp, using the line of site Motorola radios. They were fun to use but of limited use.

2<sup>nd</sup> August after a further rest day, when the snow around camp was particularly soft and people frequently disappeared up to their crotch. Ravey and Walmsley headed up to the next unclimbed peak, along the ridge south of Keswicktinde, to attempt a couloir line. Shackelton and Read, who intended to climb the south face of the same peak, followed them. Both parties retreated after probing at the lower snow slopes around the bergschrund, which were considered dangerously unstable.

3<sup>rd</sup> August Heavy cloud which cleared later, meant no overnight freeze and soggy conditions on the glacier. In the afternoon the entire party, ferried equipment towards the foot of the south face of Sussex. However, the poor snow conditions on the glacier, meant leaving the equipment short of the intended drop off point. Next day another attempt to locate a starting point on the face was made and the equipment relocated at the desired point, by which time the weather had quickly deteriorated and the party retreated to base camp in mist and falling snow. On the 5<sup>th</sup> Read, Shackelton, Ravey and Walmsley, returned to the south face of Sussex in fine sunny weather, climbed the steep slope above the bergschrund, found the rock at that point to be littered with debris. They traversed the slope rightwards to the foot of a crack line and followed it until it petered out into bald overlapping walls. It was apparent that it was going to be a major big wall climb, for which the team was not equipped and the attempt was abandoned.

With hindsight, it would have been useful to have explored other possible lines on the face. Though there was no prospect of this team succeeding, it may have established the best line to attempt. However, once the decision was taken, people developed new agendas and moved on.

Also on the 5<sup>th</sup> whilst the above team were on Sussex. Jones and Fairey were making an attempt on the west ridge of Emmanuel. After about 16hrs and 12 pitches on rock which was difficult with some A2 climbing, they were probably not even one third of the way up this long and complex route. Not equipped for the long haul they abseiled into the adjacent couloir and down climbed it.

August 6<sup>th</sup> Ravey, Walmsley, Read and Shackelton skied down via the Cantabrae, to the site of the 1998 expedition base camp, on the Sefstroms glacier. The intention was to establish if there was another suitable campsite, to which we could relocate. However conditions lower down were very soggy, with melt water running on the surface of the glacier. Also running water could be heard in the couloirs of the surrounding peaks, which were now bare and rubble strewn. It was concluded that we were probably in one of the best locations and would therefore remain there. A very enjoyable tour.

August 7<sup>th</sup> Jones and Fairey skied to the head of the Little Cumbrae to look for possibilities, of which there are a few. Whilst Shackelton and Read skied up the Great Cumbrae to look again at the possibilities there. The following day was completely overcast with cloud, it was mild and snowed lightly. Some cornices and slopes slid off. On the 9<sup>th</sup> the cloud was still present, with light snow showers, but it was colder. We all skied in murky conditions, to the head of the Little Cumbrae, whilst Jones filmed us on a digital video camera, loaned to us by BBC Scotland. Enjoyed, our by now usual card school in the evening, as the weather began to improve.

August 10<sup>th</sup> Ravey, Walmsley, Shackelton and Read skied to a point mid way up the Little Cumbrae, to attempt a distinctive square shaped rock peak, on the ridge between the Little Cumbrae and Cantabrae glaciers. Moving together the party climbed a couloir to the east, easy but strewn with rubble and running with surface water. From a small rock outcrop just beneath the col, the climbing was pitched. Mixed ground lead via a diagonal gully/chimney (grade3) on the northern flank to a belay amongst a group of large wedged blocks. Ravey lead up an open groove filled with more blocks, much of which appeared unstable, he reached a point where the collapse of the rocks around him seemed imminent and with all the party below in the firing line, it was considered wise to abandon the attempt. Descent was by abseil, down rubble littered walls on the north face, to snow. Then easily back to the col. The party then followed the easy snow ridge east, finally over crumbling rock and scree to the summit of the next peak. Mears Fjeld 2100m Grade PD Descent was by entering the original couloir near the top of its right hand (east) branch and down climbing it.

Meanwhile on the same day. Fairey and Jones, climbed a small rock peak at the end of the same ridge at the junction of the Little Cumbrae and Cantabrae glaciers. 200m of pleasant rock climbing up the south west ridge, lead to the summit of The Pap of Cumbrae 1695m grade AD.

After a rest day on the 11<sup>th</sup>, the 12<sup>th</sup> dawned cloudy and mild, which forced another rest day. The 13<sup>th</sup> was fine and sunny, Ravey and Walmsley made a ski tour onto and along the Cantabrae, whilst Shackelton and Read set out to attempt a climb on the flanks of Tupilaq, however Read felt unwell with a stomach upset and the undertaking was abandoned.

Meanwhile on the 13<sup>th</sup> Jones and Fairey, set out up to the next unclimbed peak, along the ridge south of Keswicktinde, which had been approached by the others on the 2<sup>nd</sup>. They spent some time crossing the bergschrund and using skis as anchors left in place a fixed rope. Establishing themselves on the lower rocks of the south face, they followed a line roughly up the center, on excellent rock. Near the top of the rock section, a traverse to the left edge, enabled access up onto the upper snow slopes. Sheltering beside the rock outcrops, they wove a route to the summit, arriving at 21.45 hours. They named the peak Tandlaegetinde (tooth doctors or dentists peak) 2350m. We kept in touch during the ascent via the Motorola radios. Descent was by down climbing the upper slopes and abseiling down the rock face. 500m. Grade TD. Camp to camp 24hrs. Another fine climb.

The 14<sup>th</sup> was spent mostly packing and preparing to leave. The 15<sup>th</sup> dawned cloudy, with low mist and occasional light snow. The helicopter attempted to collect us, but was forced back due to ice forming on the rotors. Some of the party skied up the glacier for a last look. In the evening the remaining supplies of alcohol were drained, whilst many hands of cards were dealt. It was a happy bunch who struggled back to their tents in the early hours. The 16<sup>th</sup> dawned fine and the helicopter arrived as scheduled and within 20 minutes the first three were back in Mesters Vig, followed very soon by the remainder. By 23.30 hours on the same day, the team was back in Reykjavik and by 11.05 hours on the 17<sup>th</sup> back at Glasgow airport. The sudden transition from the calm tranquillity of the arctic mountains, was traumatic, the landscape was so green and lush, that it seemed vulgar



and the noisy crowds seemed overbearing. However, we did have the prospect of the slide photos to be viewed and compiling the report to look forward to! Not to mention work!

## FUTURE CLIMBING PROSPECTS

Within the Staunings as a whole there are still a number of unclimbed peaks. These are in the main lesser summits, on the ridges between the major peaks. However, a few are quite substantial. Most of the peaks already climbed have had only a single ascent, usually by the line of least resistance and therefore other ridge and face lines abound.

The nature of climbing is often long snow couloirs leading onto ridges. There are however some large icy faces on north and northeast flanks. To the south and west are sometimes long ridges, spurs and even faces of rock. In the main they appear solid on good rough granite.

The rock we encountered was in the main good, at times it was excellent. However in some sunless places where frost action had been at work, it was shattered. Sometimes there were areas of tottering blocks. Also, at this time of year, when the snow on the faces was diminished, some areas normally covered in snow for most of the year were now devoid of it, covered in grit and debris with the rock surface shattered, in these instances, a covering of firm snow would have been more desirable. The rock on the south face of Sussex is very compact, with large areas of mainly featureless overlapping walls; though there are lines it was not certain that they interconnected.

The snow at the time of arrival (immediately after a period of poor snowy conditions) was in fairly good condition. Over a period of several days, it deteriorated. The slopes around our base camp, were subject to long hours of warm sunlight and there were some night periods which were overcast, keeping the temperature well above freezing. This caused the more recent snow to slide away, exposing old hard ice. Some slumping of cornices occurred and a few large avalanches were observed (though none were on routes we had followed). For a period the glaciers became soggy and without skis, traveling around would have been very problematical. Towards the end of the period, as the orbit of the sun lowered and the warm day period became shorter, the frosts returned and things began to stabilize.

It was a good period for rock climbing. However descending the couloirs at the warmer times of day was risky. We concluded, therefore, that abseil descents were more desirable.

Within the areas we visited we noted the following possibilities, which we believe to be unclimbed.

### Sefstroms Glacier

Above the junction with the Grantabrae on the ridge running south east and parallel with the Sefstroms are some attractive cone shaped rock peaks, to the north east of Coltart (see 1998 SMC report re attempt on one of them).

There is also a peak, on the same ridge near the head of the Sefstroms and just beyond Seanearbheinn.

On the opposite side of the glacier, near the junction with the Cantabrae, there is a smaller peak, which is an outlier to Sussex. Whilst the northeasterly flanks of Sydney, Emmanuel, and especially Tupilaqu offer ice and mixed climbing.

### Essemceebrae

Above the east side of the glacier basin, are two large peaks circa 2700m (see 1998 SMC report re attempt on one of them).

### Cantabrae Glacier

There appear to be unnamed peaks, along the ridge on the north side, between Kastenbergl, Helmspitze and Trinity and all the named peaks have unclimbed lines.

At the head of this glacier, on the ridge which connects to Newham col and south of the col, above the bend in the glacier, there are two unnamed, fairly sizable peaks.

### Little Cumbrae

The ridge between this and the Cantabrae glacier, has some small unnamed summits. One of which is the square rock peak mentioned in the above climbing report.

At the head of the glacier is at least one fine looking rock pinnacle.

On the east side there is a fine looking satellite peak, part of the large mass of Hecla.

### Great Cumbrae

Sussex offers lots of potential rock climbing, on its northwest, west and south faces.

Sydney awaits completion of the Ravey/Warmsley line (see above report).

Emmanuel has the west ridge, started upon by Jones and Fairey (see above report) and other possibilities.

Tupilaq has fine looking rock climbing on its southern flanks and an incredible knife edged rock fin, which is the southeast ridge.

Between Tupilaq and Keswicktinde is a lesser top.

The peak on which there is the Jones / Fairey spur (see above report), has another similar but less amenable spur to the north. There are lines up this mountain via it's northwest ridge and probably via the Fairey couloir to the southeast (used in part as the descent, from the Jones / Fairey spur).

Hecla has a possible line up snow slopes on its southeast flanks, then via a ridge (possible gendarmes).

Good hunting!

### Route descriptions.

**Keswicktinde**, North west ridge. Graded AD. First ascent, 26<sup>th</sup> July 2001. J Fairey, C Jones, C Ravey, C Read, B Shackleton, N Walmsley

Start up wide couloir 64 degrees magnetic bearing from basecamp to West of Peak.

1 Ascend wide couloir alpine style to right branch. 200m

2/4. Pitched up steepening ice in 2 to 3 pitches to large breche. 100m

5/15 .Ascend ridge directly, mainly snow with very infrequent rock belays. Ice screws, stakes, bollards and deadman. Ten pitches up ridge to summit block.

16 Thrutch up narrow chimney/step to summit boss. 15m

Fine view down Sefstroms glacier. Descent via same route.

**Sussex**, 2330m Southeast face. Circa 700m Graded D. First ascent, 28<sup>th</sup> July 2001. C Read, B Shackleton.

Start up couloir between Sussex and Sydney, from Great Cumbrae glacier.

1 Ascend wide couloir alpine style to toe of rocks at first fork, continue up left

(north) branch, keeping close to the rocks on the right, until close to the second fork.

- 2/5. Traverse across to the toe of the rognon and ascend steep ice on its left side (grade 2). Near the top ascend leftwards and pass through a trough between cornices, to reach a col, overlooking the northern flanks and the Sefstroms glacier.
- 6/7. Walk right (north) and climb the steep ice field above, to reach the first rocks under the pyramid of the southeast face.
- 8 Ascend rightwards over ice (grade 2) then up over snow over laying rock, Before traversing back left to ledges, roughly under the center of the face.
- 9 Ascend leftwards over snow to a black water stained fault, with a steep slab under an overlap. Climb onto the slab and pull left onto the face, ascend it Leftwards (IV), to a ledge beneath a diagonal, left trending crack.
- 10 Follow the crack to a large overhang, move down to its left end and make a difficult pull into the crack above (-V) continue to a ledge.
- 11 Climb slabby shattered rock towards a left trending fault line and a belay in a chimney / slot.
- 12 Continue up the fault and continuation ramp above, to reach a notch, in the final section of the ridge above the south face.
- 13 Pull up a steep step (IV) and continue easily along the ridge, to the summit.

Descent, abseil down the face, to regain the ice field. Down climb the line of ascent.

### **Jones/Fairey spur – 2570m**

First ascent, 28/29<sup>th</sup> July 2001. J Fairey, C Jones. 555 metres. ED, A1, 25 pitches. 2015 metres at base, 2570 metres on summit.

Start at foot of buttress to left of the lowest rocks. Latitude & longitude of base of spur - N 71<sup>o</sup> 56.390 minutes, W 25<sup>o</sup> 04.490 minutes

1. Follow right trending crack, then continue up trending slightly right. 40m.
2. Continue up directly until step left to good ledge. 30m
3. Continue directly up face. 40m.
4. Move up and slightly left of overhang into crack system just below fine grained granite band. 20m.
5. Follow awkward crack through granite band to belay below overlaps. 20m.
6. Up and slightly left to left side of buttress. Left over snow covered horizontal ledge to layback corner and up to good ledge (Lunchtime ledge!) 40m.
7. Continue directly up to easier ground. 35m.

8. On easier ground move to right side of crest. 35m.
9. Move up wildly exposed right arete to foot of overhung crack. 30m.
10. Move up well-protected crack to belay near it's top, just to left of overhang (2 points of aid) 20m.
11. From top of crack move sharp right to belay on steep wall. (point of aid) 10m.
12. Up for 2 metres then move boldly left to traverse above overhang. Straight up to slab on left of buttress. 30m.
13. Up slab directly and turn overhang on left. Then up wall to good ledges. 40m.
14. Over easier ground to large ledge on crest. 30m.
15. "Dreep" down 2m from right end of ledge. Move right across deep snow filled chimney then up wall. 10m
16. Continue up wall trending left into top of chimney, then onto right edge of large slab on left of buttress. 40m.
17. Up to top of slab to block belay. 30m.
18. Move across top of chimney, across slabby ramp (poor rock) to belay at it's top. 30m.
19. Up broken ground above to right of steep wall into bay. Go up wall on left of bay to ledge and belay. 25m
20. Move up crack above onto broken ground to foot of fine grained granite slabs. Up slabs directly on superb rock. 30m.
21. From belay on fine granite slabs, traverse right 5m then up cracks to snowy ledge (point of aid) 30m.
22. Continue up awkward step at side of wall via shallow chimney, over large blocks to large spike/flake. At left side go up awkward crack to ledge and belay. 40m.
23. Move right and up broken ground to summit ridge. 40m.
24. Traverse left over broken ground, then up slab to summit block. 20m.
25. Climb east side of summit block to ecstatically wave at basecamp. 5m.

Summit of J/F spur at 11.00am. Descend by 8 abseils to east of summit into Jim's gully. Jim avalanched down descent gully + into bergschrund. Crevasse rescue

**West ridge of Emmanuel.** 6<sup>th</sup> August J Fairey and C Jones attempted the west ridge of Emmanuel. After 12 pitches, with technical climbing up to ED and A2, the route was abandoned.

1. Start at lowest point on left side of ridge. Go directly up steep wall to small ledge. 30m.

2. Continue up easier rock. 40m.
3. Follow crack and block line trending left. 25m.
4. Continue trending left follow steepening ramp at left of face. 35m.
5. Go down and traverse right into and up scoop on the main face. Delicate. 30m.
6. Go directly up awkward and worrying block filled chimney to slab and cross to belay beneath large corner. 20m.
7. Go directly up corner using right wall at half height. At overhang move left to climb it and belay on steep slab above it. 30m A2.
8. Go directly up slab, turning overhang on left to easier ground. 35m
9. Continue up over easier ground. 40m
10. Continue directly up ridge with a short wall to belay at the top of a rounded outcrop. 35m. This was the high point reached.
11. From belay go down awkward slab and short wall to belay on short slab 10m.
12. Move left onto snow breche and gain main ridge. Move left onto face and belay.

Continue contouring left across snow below face until possible to abseil down into gully. Pitch gully in descent.

**Mears Fjeld 2100m** Southwest ridge. Graded PD. First ascent August 10<sup>th</sup> 2001. C Ravey, N Warmsley, B Shackleton and C Read.

Start from the Little Cumbrae glacier. About one third of the way along the ridge, between it and the Cantabrae. At the foot of couloirs, beneath an obvious square shaped rock peak.

1. Take the righthand (east) couloir which slants under the square peak. Ascend it alpine style, follow the left hand fork towards a small rock rognon.
2. Climb on steep ice leftwards (grade 2), to reach the col behind the square peak.
3. Follow the ridge northeast on snow, then over shattered rock via notch, to the summit. (cairn)

Descend via the ridge, until the upper part of the right hand (east) branch of the couloir can be entered. Down climb this to the glacier.

**Pap of Cumbrae - 1885m.**

First ascent South west ridge of Pap of Cumbrae. 200m from bergschrund 1695m, AD. J Fairey, C Jones.

Get to foot of south face over bergschrund etc.

1 - 3, Climb left at foot of crag, over snow in three pitches to foot of south west ridge.

- 4 Access ridge via block filled gully, initially over shattered rock. 35m.
- 5 Continue directly up ridge to better rock on the ridge. 50m.
- 6 At start of third pitch move left into bay and traverse onto left wall before going directly up 30m.
- 7 From stance move left up short slab then easier ground to just below summit. Move right up pedestal to exit onto summit area. Easy ground to top where stoneman constructed.

### **Tandlaegetinde (Dentist's or tooth doctors peak)**

First ascent of South face of Tandlaegetinde (tooth doctors peak), 2350m – 13/14<sup>th</sup> August 2001. J Fairey, C Jones. The route took 24 hours to climb, was 500m long & graded TD. Summit GPS reading; 71N 57' 08.6" 25W 04' 37.8" Descent was by multiple abseil back down the excellent granite face.

Ascend snow and cross bergschrund from Great Cumbrae Glacier to highest rocks.

- 1 & 2 & 3. Start up easy but awkward broken rocks in three pitches to below broken chimney left of centre of face. 100m.
4. Directly up chimney to excellent ledge. Traverse to R end and climb blocky corner to good belay. 35m.
5. Traverse sharp left onto main face and ascend crack system trending left. 30m.
6. Continue up crack system to good belay at foot of steep wall/slab. 30m.
7. Move right up slab and over large detached flake to easier angled slab. 30m, A1.
8. Go straight up then left on fine-grained rock to belay on good ledges. 35m.
9. Move up and left to below overhang and turn it by moving further left to foot of blocky chimney. 30m.
10. Up chimney to easier ground. 45m.
11. Continue across boulder strewn scree up to snow. 25m.
12. Up snow trending right to belay at left of foot of snowy gully. 35m.
13. Straight up gully then desert snow on the left over large blocks climbed direct. 25m
14. Continue up left below wall to come out behind fore summit. 25m.
15. Traverse hard right to below summit block ignoring snow arête. Straight up snow and good belay below summit block. 30m.
16. Short traverse up ridge to summit. 10m.

Descent by multiple abseil directly down face and with Abolakov anchors in final ice.

The food taken and diet followed was based on experience gained by several members on previous expeditions. The area and its associated climate when visited in the summer months does not require a special type of 'polar' diet, a general diet typical of a mountaineering expedition is adequate. All food needs to be freighted into the area and Greenland in general, unless one is to approach via a regularly inhabited township that offers facilities for shopping. Food and diet needs to be considered in advance, purchases made and pre-packed and shipped. When considering food the following criteria should be adopted:

- A day's menu should be of high calorific value and nutritious – on average a days calorific intake should be between 3500 and 4000 calories. This may vary between climbing and rest days but a sufficiently high intake must be maintained in order for performance not to suffer.
- The food should be varied, tasty and interesting – boredom from eating similar, invariably dried food can lead to under eating.
- The food should be simple and quick to prepare – fuel is a major weight penalty and after a long strenuous day lengthy preparation and cooking is not wanted.
- The food should be light and have a long shelf life – the food will need to be freighted (expensive) and may be sent 2 to 3 months in advance.
- Food should be pre-packed into day rations and robustly contained – to aid quick access, minimise the risk of running out and provide variety, pre-packing removes the need to spend time worrying whilst on the expedition. Freight to Greenland requires several changes of aircraft, storage in hangars/on airfields and indifferent handling techniques; robust packing ensures all food arrives in a palatable state!
- The expedition also had a self imposed limitation of ensuring all packaging was either burnt on the glacier (ashes collected and taken out) or brought back to habitation for disposal ensuring no pollution of this wilderness – the minimisation of tins and glass is to be recommended.

The six expedition members were arranged as climbing pairs of two and would be sharing a tent together so a similar approach was adopted in planning diets. Each pair arranged their food as it suited them and arranged for its purchase and packaging. As the criteria above were followed some similarity was inevitable although a certain amount of culinary prowess and imagination became evident between the various couples!

Some statutory limitations to the exportation of foodstuffs do exist, exacerbated at the time of the expedition by the Foot and Mouth Disease epidemic. The Home Office had banned the export of all red meat and dairy products including dried milk powder and cheese. This ban was observed and a brief foray in between flights in Iceland allowed powdered milk, cheese, bacon and smoked sausages to be bought.

Breakfast consisted of porridge or a variety of cereals followed by oatcakes, biscuits or pitta bread topped with margarine, jam, syrup or honey. Tea, coffee, hot chocolate or fruit teas were drunk.

Lunch was generally taken on the run and therefore consisted of snacking on chocolate bars, muesli bars, dried fruit, nuts, marzipan and biscuits. When the opportunity presented itself a stop might be made to enjoy cheese, pate or jam on oatcakes, pitta bread or biscuits. Members generally took about 2 litres of water with them whilst out climbing which had been flavoured with lemon juice or laced with high-energy soluble mixes such as Isotar. Taking a pocket full of boiled sweets proved popular as one always had something to hand.

The evening meal was the main meal of the day and consisted of three courses – soup, main course and pudding. Soup was of the powdered, packet variety a wide choice of flavours being available in supermarkets. Main course was of fish, sausage, bacon, Soya or tofu with accompanying sauce on pasta, rice or instant potato. Dessert was a variety of cakes (fruit, malt loaf or ginger); jelly or Angel Delight sometimes served with custard. It was possible to produce a trifle but proved time consuming and only worthwhile for a special occasion. A variety of hot drinks would be consumed throughout the evening including tea, coffee, cappuccinos, Horlicks, Bovril and hot chocolate at the end of the night.

A previous SMC expedition in 1998 has taken a proportion of prepared and cooked vacuum packed meals prepared by Wayfayrer Foods which although relatively heavy at 300g per person could be eaten hot or cold, could be boiled up in 8 minutes and proved a moral booster. The company kindly agreed to sell the expedition these meals at trade price plus VAT and all members took a proportion of main courses (chicken casserole, chicken curry, vegetable curry) and puddings (chocolate, dumplings in butterscotch and bread and butter) which were especially appreciated after a long day.

Greenland lying outside the EU allowed duty free alcohol to be bought at Glasgow airport and a mixture of rum, brandy and whisky were purchased in plastic bottles to be consumed as a warming toddy in the evenings over the inevitable card school.

Each two-man team took an MSR stove for cooking on with one whole spare stove between the group. This proved useful as two of the three teams experienced problems with their stoves constantly burning dirty despite cleaning. This may have been due to flame spreader and jet compatibility and was only solved by a complete refit of all replaceable parts. The spare stove was not used.

The stoves ran on A1 jet aviation fuel bought in Greenland at Mestersvig. 50 litres were purchased (5 litre containers had been freighted out for this purpose) with approximately 12 litres remaining after 23 days on the glacier. This equates to an average consumption of 0.3 litres per person per day.

Cooking and eating was mainly performed outside in purpose built kitchen areas, another area for competition and engineering prowess. Some cooking was carried out in tent porches, mainly in the morning so that one could remain warm inside the sleeping bag. With enough forethought snow for melting would be prepared within reach on the previous evening. Thermos flasks proved useful for storing hot water for use either during cooking or to aid the quicker melting of snow in the mornings or upon returning to camp. The general temperature in the Staunings is cool enough to keep perishables such as cheese and bacon fresh for over a week although it should be kept out of the sun, boxes or tents. To this end a 'fridge' was constructed in a wall of snow.

As snow needs to be melted to produce all water, cooking becomes a quite time consuming operation. To produce an evening meal of three courses and drinks required on average two hours and breakfast one hour.

Culinary hints and tips together with delicious recipes do not readily emanate from expedition kitchens but the following may be considered of interest:

- Packets of dried powder requiring re-hydration with milk (e.g. Angel Delight) usually specify full fat – as dried milk is of the skimmed variety the addition of a little margarine will improve results.
- Those who tire easily of oatcakes for breakfast, lunch and supper may wish to take pitta bread, which lasts well.



- Dried fruit and honey soaked in water, when boiled make a fine desert especially when topped with custard.
- Black tea, rum and sugar do a fine toddy make
- Those wanting to impress their fellow campers with baking skills can make chocolate/muesli flapjacks on site.
- Those wanting to really impress their fellow campers can prepare them a Wayfayrer meal.
- A piece of plywood at best or cardboard at worst to place ones stove on is to be recommended, otherwise on returning to that roaring stove it, and the dinner you were cooking may have melted into the glacier.
- Never let your mug out of sight as that treasured whisky may be mistaken for dregs of tea and emptied down a hole.

The following table was used by one team in planning their expedition food and gives an idea of the diet followed.

	Qty	Wt each grammes	Total grammes	Brand
<b>Menu 1 - 6 off</b>				
Muesli / powdered milk	2	40	80	Alpen
Oatcakes	2	26	52	Walkers
Margarine	6	10	60	Flora
Honey	4	20	80	Hartleys
Tea bags	8	2.5	20	Ty-phoo
Powdered milk	1	57	57	Kerry Foods
Cheese	2	40	80	pre-packed
Shortbread	2	40	80	Walkers
Fruit grain bars	4	50	200	Shepherdboy
Wholenut chocolate	2	85	170	Cadbury
Flapjack / Cake	2	50	100	home
Dried fruit	2	42	84	health store
Isotonic drink	2	53	106	home made
Soup with croutons	1	29	29	Knorr
Chicken Caserole	2	300	600	Wayfayrer
Instant pasta	1	100	100	Raven
Oatcakes	1	150	150	Patersons
Instant pud hot crunch	2	75	150	Birds
Cake	2	50	100	homemade
Coffee / Cappuccino	1	25	25	Nescafe
Hot chocolate	2	25	50	Cadbury
vitamins	2			
<b>Menu 2 - 6 off</b>				
Porridge	1	80	80	Quaker
Oatcakes	2	26	52	Walkers
Margarine	6	10	60	Flora
Jam	4	20	80	Hartleys
Tea bags	8	2.5	20	Ty-phoo
Powdered milk	1	57	57	Kerry Foods
Peperami sausage	2	25	50	Van denberg
Shortbread	2	40	80	Walkers

Fruit grain bars	4	50	200	Shepherdboy
Bounty bars	2	85	170	Nestle
Flapjack / Cake	2	50	100	home
Dried fruit	2	42	84	health store
Isotonic drink	1	53	53	home made
Soup	1	29	29	Batchelors
Oatcakes	4	75	300	Walkers
Pre fried bacon	4	50	200	
Instant potato	1	100	100	Premier
Beans n Toast	1	70	70	Raven
Oatcakes	1	100	100	Walkers
Chocolate pud + sauce	2	200	400	Wayfayrer
Cake	2	50	100	home
Coffee	1	2.5	2.5	Nescafe
Hot Chocolate	2	25	50	Cadbury
vitamins	2			
<b>Menu 3 - 6 off</b>				
Bubble & Squeek	2	70	140	Raven
Oatcakes	2	26	52	Walkers
Margarine	6	10	60	Flora
Marmalade	4	20	80	Hartley
Tea bags	8	2.5	20	Ty-phoo
Powdered milk	1	57	57	Kerry Foods
Fish in oil (ring pull)	1	125	125	John West
Pita Bread	2	80	160	
Fruit grain bars	4	50	200	Kelloggs
Snickers bars	2	85	170	Mars
Flapjack / Cake	2	50	100	home
Dried fruit	2	42	84	health store
Isotonic drink	1	53	53	home made
Soup with noodles	1	29	29	Knorr
Beanfeast	1	100	100	Batchelors
Instant rice	1	120	120	Raven
Pita Bread	3	80	240	
Fruit dumpling-b/scotch	2	200	400	Wayfayrer
Cake	2	50	100	home
Coffee	2	2.5	5	Nescafe
Ovaltine & Complan	2	41	82	Heinz
vitamins	2			
<b>Menu 4 - 6 off</b>				
Porridge/powdered milk	1	80	80	Quaker
Oatcakes	2	75	150	Walkers
Margarine	6	10	60	Flora
Honey	4	20	80	Hartleys
Tea bags	8	2.5	20	Ty-phoo
Powdered milk	1	57	57	Kerry Foods
Pate	1	45	45	Vessen
Sauce sachet	2	20	40	Hartleys
Oatcakes	1	75	75	Walkers

Fruit grain bars	4	50	200	Jordans
Fruit & nut chocolate	2	85	170	Cadbury
Flapjack / Cake	2	50	100	home
Dried fruit	2	42	84	health store
Isotonic drink	1	53	53	home made
Soup with ?	1	29	29	Knorr
Beanfeast some Vesta	1	100	100	Batchelors
Dried onions etc	1	33	33	Danisco
Super Noodles	1	100	100	Batchelors
Oatcakes	1	75	75	Walkers
Custard + other	1	75	75	Birds
Cake	2	50	100	home
Coffee	1	2.5	2.5	Nescafe
Horlics	2	32	64	Cadbury
vitamins	2			

PLUS

Jiff lemon

Boiled sweets

Herbs spices

Toilet paper

Plastic bags

Cool bag

## Chapter 9 Natural History

Nick Walmsley

Greenland like other parts of the polar region is a fascinating place, as are the processes that have created it and those creatures that manage to survive in its inhospitable terrain. The fascination is 'elemental', feeling as one does that those 'green, rolling hills' of home once were subject to the same conditions and in this unfamiliar terrain one is returning to a previous, far distant time.

This fascination can become addictive as is testified by the numerous scientists who return year on year to continue their research; Greenland's natural history is therefore well documented. This chapter does not attempt to summarise such research but merely give a brief overview of what members encountered. The Danish Polar Centre website offers the facility to search for more detailed references.

### Geology and Landform

Greenland is considered to be part of the North American landmass geologically and much of it is composed of older eroded rocks. These rocks are in north-east Greenland flanked by younger, folded rocks, which form mountain ranges. The Stauning Alps are one of these ranges and was formed during the mid to late Caledonian period by uplifting and the intrusion of igneous material in several stages. This has led to a range of granites and metamorphosed 'granitised' sediments.

Within the area visited by the expedition the granite was of an altered variety being of fairly coarse crystalline structure. Whilst climbing, most notably on the JF Spur finer grained migmatic intrusions were encountered. Within these intrusions the joints were tighter leading to a lack of gear placements, and general features such as ledges to aid upward progress.

The geometry of the mountains is influenced largely by the dominant jointing pattern produced by uplift and folding rather than glacial action. This was very noticeable on the Tupilaq range where all SW sides were characterised by high angled smooth faces at 80 to 85 degrees. This feature became very apparent on the SW face of Sussex, which had an extreme lack of natural features resulting in what we had imagined to be 'VS' terrain becoming something much more difficult. The presence of open jointing patterns is evident however at other aspects and even when not seen on smooth faces, by the presence of major seepage lines emanating from 'blank' rock.

Localised changes in mineral composition and different grades of alteration due to metamorphism lead to changes in the quality of the rock. This was noticeable in the difference between the Tupilaq and Mearsfjell ridges, the former being generally solid and sound the latter quite broken and loose.

In summary the differences in jointing determine the difficulty of climbing which correlates with aspect. As with all mountains localised changes in geology determine the soundness of the rock.

### Fauna and Flora

The altitude, predominance of bare rock and ice determine that few creatures or plants find it capable to establish an existence in the interior of the Stauning Alps. This deprivation is made plainly obvious that on returning to the austere environment of Mestersvig, it appears after four weeks to be a Garden of Eden. The flora and fauna of the arctic region is unique but best appreciated by natural historians on the lowland coastal margins; in the mountains of the Staunings the expedition made no sightings of birds or mammals.

In spite of this rather austere introduction a few plants and insects were spotted and hence caused much excitement and wonder. The slow weathering of rock, melting snow and continuous light of the high arctic summer has allowed some flowers to become established in sunny crevices, a type of poppy was observed, together with a moth and a few beetles. The lower life forms of mosses and lichen were quite abundant in certain areas, particularly in areas of seepage on rock.

Greenland's largest mammal, the polar bear, can present a formidable hazard and a requirement of visiting north-east Greenland is to take a rifle capable of defending oneself if attacked. This was dutifully flown in with us to our base camp after which it was consigned to a tent for the duration. The location of the climbing area, the lack of any available food source (apart from mountaineers) and the need to cross high passes and crevasses mean the polar bear will not venture inland to areas such as the Stauning Alps – but then there is the exception to every rule!

As previously mentioned, the environs of Mestersvig are much richer in wildlife and this includes unfortunately the mosquito. Although one may only be spending a few hours in the area insect repellent is to be recommended, as these creatures are quite determined, have a superb homing instinct and leave a fair size welt.

### Human Impact

Early explorers to northeast Greenland came across evidence of human habitation along the coast and archaeological remains have been found and studied. Certainly by the start of the twentieth century any native inhabitants had moved or died out. Since this time all human habitation has been by military personnel, explorers, hunters, miners or scientists. Some amazing feats of human endurance have been recorded in books such as Ejnar Mikkelsen's 'Two Against the Ice' and Tony Howarth's 'The Sledge Patrol'.

To a smaller or larger extent all the recent inhabitants have had to rely on all materials required for sustaining life to be imported. This inevitably leads to the question of waste and examples of the dumping of cans, plastic, glass etc had been seen by members on previous expeditions. The expedition made a point of burning all rubbish, collecting the ashes and together with non-burnable items flying all evidence of our occupation out to Mestersvig. Given the fact that one of the main attractions of visiting an area such as the Staunings Alps is an environment lacking the presence of man it is hoped that it will remain so into the future through the respect shown by visiting persons.

#### Chapter 11 – SMC East Greenland Expedition 2001 financial summary

Date	Transaction	Receipts	Payments	Balance
Mar 22nd 2001	Deposits from C Read, N Walmsley.	£1,000.00		£1,000.00
Mar 30th 2001	Gun licence		£50.00	£950.00
Mar 30th 2001	Interest	£1.16		£951.16
April 4th 2001	Deposit from Brian Shackleton.	£500.00		£1,451.16
April 19th 2001	Deposit from James Fairey.	£500.00		£1,951.16
April 19th 2001	SPI Scot Polar Institute grant	£800.00		£2,751.16
April 30th 2001	Deposit from Chris Ravey	£500.00		£3,251.16
May 11th 2001	MEF grant	£590.00		£3,841.16
May 11th 2001	Deposit from Colwyn Jones,	£500.00		£4,341.16
May 16th 2001	BMC / MCofS grant	£1,000.00		£5,341.16
May 18th 2001	Interest	£2.11		£5,343.27
June 2nd 2001	Priming paste		£45.10	£5,296.06
June 6nd 2001	Charges for cheques		£15.00	£5,281.06
June 16nd 2001	Payment from Chris Ravey	£1,840.00		£7,121.06
July 4th 2001	Payment from Colin Read	£1,840.00		£8,961.06
July 5th 2001	Payment from James Fairey	£1,840.00		£10,801.06
July 5th 2001	Freight charges. Arbuckle, Smith & co		£765.98	£10,035.08
July 5th 2001	Insurance via Brian Shackleton		£792.00	£9,243.08
July 7th 2001	Payment from Colwyn Jones	£1,840.00		£11,083.08
July 7th 2001	Radio licence via Colwyn Jones		£50.00	£11,033.08
July 7th 2001	Payment from Brian Shackleton	£1,840.00		£12,873.08
July 15th 2001	Payment from Nick Walmsley	£1,840.00		£14,713.08
July 15th 2001	Icelandic currency via C Read		£201.19	£14,511.89
June 19th 2001	Interest	£2.82		£14,514.71
Aug 19th 2001	Interest	£27.76		£14,542.47
Aug 27th 2001	Excess baggage - Icelandair		£339.00	£14,175.71
Aug 27th 2001	Taxi - Akureyri - Hotel to Airport		£7.60	£14,168.11
Sept 3rd 2001	Icelandic currency via C Read returned	£171.00		£14,339.11
Sept 3rd 2001	Icelandic Currency loss on exchange		£22.59	£14,316.52
Sept 3rd 2001	Whisky for pilot & Hague		£6.00	£14,310.52
Sept 3rd 2001	Telephone calls to Denmark & Iceland		£19.35	£14,291.17
Sept 11th 2001	Gun ammo via Colwyn Jones		£23.25	£14,267.92
Oct 6th 2001	Taxi Reykjavik via Brian Shackleton		£8.94	£14,258.98
Oct 6th 2001	Taxi Reykjavik via Colin Read		£8.94	£14,250.04
Oct 14th 2001	Arbuckle Smith airport taxes		£65.00	£14,185.04
Oct 19th 2001	Interest	£23.73		£14,208.77
Nov 19th 2001	Arbuckle Smith return freight charges		£289.12	£13,919.65
Nov 19th 2001	Interest	£19.37		£13,939.02
Dec 18th 2001	Danish Polar Centre		£14,012.16	£73.14
Dec 18th 2001	Electronic transfer fee		£35.00	£108.14
Dec 19th 2001	Interest	£15.86		£92.28
Jan 7th 2002	Adjustment of interest from bank	£99.05		£6.77
Feb 11th 2002	<b>Balance</b>	<b>£16,792.86</b>		<b>£6.77</b>

The expedition wishes to acknowledge the financial support of The Mountaineering Council of Scotland, The Mount Everest Foundation and the Scott Polar Institute.

With personal thanks to

Needlesports of Keswick for advice and technical support.

Wayfayrer Foods Limited.

Terra Nova, Cassin, North Cape

Dr J Bissett of Highland Health Board.

Mrs M A MacDonald of the Scottish Mountaineering Club.

Mr N MacLeod of Northern Constabulary.

Mr T Pettifer of Magnetic North.

Mrs S Pflieger of Highland Health Board.

Mrs B Read of Keswick Shopfittings.

Mr S J H Reid, proprietor of Needlesports.

Dr C R Stark of Highland Health Board.

Mrs C Stirling of Highland Health Board.

Mrs N Wallace of Highland Health Board.

## Appendix 1

### MOUNT EVEREST FOUNDATION

*Patron:* H.R.H. The Duke of Edinburgh, K.G., K.T.

### SUMMARY REPORT

#### FROM AN MEF - SUPPORTED EXPEDITION

MEF support for an expedition is offered on condition that you submit detailed reports to the Foundation. To assist in fulfilling the initial part of this commitment, it is requested that you fill in this form and return (with three photocopies, which we will forward to the AC, the RGS and the BMC) to the MEF Hon Secretary within six weeks of return from the expedition.

1 - Name of Expedition: **Scottish Mountaineering Club East Greenland Expedition 2001**

2 - MEF Expedition Reference: **01/14**

3 - Country/Region: **NorthEast Greenland National Park**

4 - Names of all expedition members, indicating leader, climbing and support members:

**Leader: Colwyn M Jones (Leader and Medical Officer),  
Jim Fairey,  
Chris Ravey,  
Colin Read,  
Brian Shackleton,  
Nick Walmsley**

**All were climbing members.**

5 - Leader's name: **Colwyn M Jones**

Address: **Broombank,  
Farr,  
Inverness  
IV2 6XJ**

Home Tel: **01808 521 233** Work Tel: **01463 704817** Fax: **01463 717666**

E-mail Address: **colwyn.jones@hnb.scot.nhs.uk**

6 - Objective(s) of expedition – mountaineering / scientific / medical, include location of objective (or study area) with indication of special points of interest (e.g. first ascent of NW Ridge) and heights of peaks:

1. **First Ascent of South Face of Sussex**
2. **First Ascent of South Ridge of Dansketinde**
3. **First Ascents of peaks in neighbourhood**

7 - Overall dates of expedition (e.g. March-June 1999) and if possible, details of dates spent on access, on the mountain and on return:

**22nd July to 17<sup>th</sup> August 2001.**

**Access – 22<sup>nd</sup> July. Flights Glasgow / Keflavik, Reykjavik / Akureyri,  
23<sup>rd</sup> July Akureyri / Mestersvig.  
24<sup>th</sup> July Helicopter Mestersvig / Great Cumbrae glacier**

**Return – 16<sup>th</sup> August. Helicopter Great Cumbrae / Mestersvig & flight  
Mestersvig / Reykjavik.  
17<sup>th</sup> August Keflavik / Glasgow .**

8 - Brief comments about expedition, with technical details of route and maximum height reached:

**First ascent of Keswicktinde 2430m. Northwest ridge. Graded AD. 26<sup>th</sup> July 2001 -  
Jim Fairey, C Jones, Chris Ravey, Colin Read, Brian Shackleton, Nick Walmsley**

**Second ascent of Sussex 2390m via new route on Southeast face, approached via  
couloir from Great Cumbrae. 650m, D, 28<sup>th</sup> July 2001 – C Read, B Shackleton,**

**First ascent of Jones/Fairey Spur (initially called The Wanker Spur) - 28/29<sup>th</sup> July  
2001. J Fairey, C Jones. This is the South West Spur of the Western outlier of  
Sefstromsgipfel rising from the Greater Cumbrae glacier to Point Jones/Fairey.  
2570m. Route details; 555 metres. ED, A1, 25 pitches. GPS Latitude & longitude of  
base of spur - N 71degrees 56.390 minutes, W 25 degrees 04.490 minutes. Full  
description to be posted in Mountain Info.**

**First ascent of Pap of Cumbrae - Southwest ridge. 200m from bergschrund 1695m ,  
AD. J Fairey, C Jones. Shapely minor peak at junction of Little Cumbrae and  
Cantebrae.**

**First ascent of Mears Fjeld (provisional name). 2100m. Southwest ridge via couloir  
from Little Cumbrae PD. 10<sup>th</sup> August 2001. Chris Ravey, Colin Read, Brian  
Shackleton, Nick Walmsley**

**First ascent of South face of Tandlaegetinde (tooth doctors peak), 2350m – 13/14<sup>th</sup>  
August 2001. J Fairey, C Jones. 400m. TD.**

9 - Weather conditions, and if appropriate, reasons for retreat:

**Weather generally excellent and stable. Two days of light snow (less than a  
centimetre) four other cloudy days. The rest of the time was sunshine or light cloud.  
Minimum-recorded temperature was –8 centigrade.**

**A period of particularly mild conditions between 28<sup>th</sup> July and 8<sup>th</sup> August, made snow  
slopes and couloirs unreliable, which contributed to the avalanche incident.**

**Helicopter flight back to coast delayed for 24 hours due to cloud.**

**First Ascent of South Face of Sussex – Retreated owing to technical difficulty after 3  
pitches. Peak climbed by new route to assess descent route.**



**First Ascent of South Ridge of Dansketinde – unable to attempt first ascent as helicopter was not available to move camp from Cumbrae to Gully glacier.**

**First Ascents of peaks in neighbourhood – five new peaks successfully climbed.**

**Also attempted new route on the NE ridge of Sydney 2300m. Got to within 60m of summit, but reached impasse.**

**West Ridge of Emmanuel attempted. Climbing to TD, 12 pitches before reaching impasse less than half way up ridge. Abseil retreat into couloir.**

**Square rock peak 2100m attempted between Little Cumbrae and Cantabrae. Got to within 60m of summit, turned back by dangerously loose rock.**

**Made various exploratory ski tours to the heads of the Great and Little Cumbraes and Cantabrae to plot peaks and establish unmarked and unclimbed peaks, of which there are several.**

10 - Note of any accident to expedition members or to porters; also cases of serious illness, especially oedema - pulmonary or cerebral:

**Member avalanched 300m down a couloir and swept into a bergschrund. Crevasse rescue recovered individual unhurt. Checked for head injury for following 24 hours no (new) abnormalities detected.**

11 - Any other relevant comments (permit, LO etc):

**Permit required from Danish Polar Centre to enter Northeast Greenland National Park. Conditions require substantial S&R expedition insurance.**

**Radio licence from Greenlandic authorities. Firearms licence from Greenlandic authorities. (UK and Iceland transit permit required)**

12 - Brief financial details, with income and expenditure:

**Total costs (Provisional) £16,301. Travel costs £13,473.**

**Income, MEF £590, MCoFS £1000, Scott Polar institute £800, individual costs (six of) £2318**

13 Approx date when Final Report will be submitted; **31<sup>st</sup> March 2002**

MEF/Z