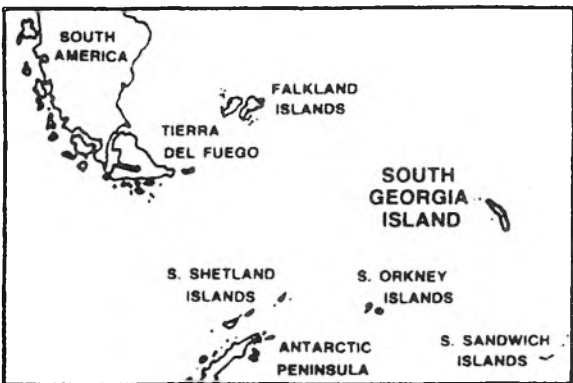


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## N.Z. South Georgia Expedition

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### EXPEDITION REPORT

#### Introduction.

The New Zealand South Georgia Expedition was conceived in 1979, as a privately organised and funded scientific and mountaineering team with an objective of working and climbing in South Georgia. As the original group of six had virtually no resources, an approach was made to the British Antarctic Survey for assistance with transport to the island. Various problems with logistics and finance were more or less resolved when the Argentinian invasion took place, and alternative transport had to be found.

Various approaches to the British Government and Falkland Islands Government resulted in the expedition being given the go-ahead in late 1983. However, last-minute efforts could not solve further financial problems and the expedition was postponed until 1984. It finally came off in November and December of that year.

#### Expedition Objectives.

The original objectives, of getting to the island and climbing as many peaks as possible while undertaking geological work, became modified with each postponement. We finally set out to visit and explore the Hindle and Twitcher glacier areas south of Royal Bay, still intending to geologise and climb, accompanied by a two-person film crew. The climbing - scientific team was reduced to four.

Subordinate aims were to collect insects, and intertidal flora and fauna, for New Zealand scientists, and to try out snow caves as an alternative to tents. The film crew were aiming to use the various activities of the expedition as a thread to join themes of wildlife, historical background, and exploitation of South Georgia.

#### Finance and Sponsorship.

The total cost of the expedition in its final form was around \$80,000 NZ (£30,000). This covered transport from New Zealand to the UK and down the Atlantic and all the way back, equipment for the party and for individuals in addition to that already owned, food and fuel, freight charges, hire of radio and avalanche transceiver equipment, insurance, and administration costs. It did not include the cost of film and processing costs, or of any filming equipment. Transport made up nearly two-thirds of the cost.

Finance was raised from numerous sources (see Appendix 1), with the bulk of it coming from a New Zealand film production company. Reduced prices were negotiated with some equipment suppliers; some items were donated (the whisky supply being among them).

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### Logistics and Timetable.

All the expedition members were assembled in England at the end of October (the first time they had all been together in one place), having flown direct from New Zealand at various times.

November 2, members plus equipment, and film stocks plus 400 Mars Bars, leave RAF Brize Norton by VC10 for Ascension Island.

Nov 3 Ascension to Port Stanley by RAF Hercules airbridge. Board RFA "Sir Lancelot"; collect fuel from Falkland Islands Government, and load food supply obtained from Falkland Islands Company.

Nov 4 Sail for South Georgia.

Nov 7 Arrive at Grytviken South Georgia.

Nov 10 Put ashore in Little Moltke Harbour, Royal Bay, by Trojan landing craft.

Nov 11 to Expedition in the field, in the Royal Bay, Ross  
Dec 2 Glacier and St Andrews Bay areas.

Dec 24 Collected from Royal Bay by helicopter, back to RFA "Sir Percivale" at Grytviken.

Dec 27 Sail for Port Stanley.

Dec 29 Return to Port Stanley.

Jan 6 Stanley to Ascension by Airbridge.

Jan 7 Ascension Island, in transit.

January 8, Return to UK.

From the UK, members will disperse to New Zealand at various times.

### Equipment and Food.

Equipment for individual members was typical of any expedition into the Antarctic or alpine areas. Most were using a combination of woolen and synthetic (polypropylene) clothing, the latter proving very successful. Outer clothing was either plastic - based (PVC) or Goretex; the Goretex was not very successful as it failed to keep out a lot of the driving sleet encountered. Light nylon wind-proofs were favoured in anything other than heavy rain.

Five members had double plastic climbing boots, the sixth using single leather boots. Problems with cold or wet feet were rare. On lower ground and anywhere off ice and snow, gumboots were used almost always and proved perfectly adequate. Skis were used a great deal on the glaciers, and were all ordinary downhill types with touring bindings (FT 88 or Tyrolia) except for the leather boot expert who used XC skis with cable bindings to effect. Skins were used for all uphill work.

Gear was transported on the Ross and Hindle glaciers in a fibreglass sledge made by Rustaduen Pulkfabrik, Lillehammer, Norway. This was a great success in that it was very light, tracked well on steep traverses, pulled easily in all snow conditions and was very roomy.

We used two two-man double-walled "Altimate" tunnel tents made by Arthur Ellis of Dunedin, New Zealand. These were very roomy and easy to pitch, but were not a match for the winds experienced during one blizzard. A snow cave was used instead - see below. We carried two steel snow-caving shovels and one normal "icecream spoon" aluminium shovel. The former are essential for caving in the local

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conditions. Cooking was on kerosene stoves, not only because of the safety aspect but also because this was the only fuel available to us on the Falklands.

Avalanche transceivers ("Pieps" brand) were carried, but for most of the time and in most areas the avalanche danger was negligible. We also had two rather ancient AM radios hired from a New Zealand Mountain Radio Service. These operated on fixed frequencies (3336 and 3261 MHz), and have a normal range of 2 - 300 miles. They worked well over a distance of around 15 miles at Royal Bay, but we were never able to contact the military garrison at Grytviken. This was apparently due to a combination of bad atmospherics, confusion over schedule times and possible mix-ups over frequencies. SSB sets using different frequencies would have been much more effective.

All our food, with the exception of the Mars Bars, was purchased from the West Store of the Falkland Islands Company in Port Stanley. Although it was ordered by Telex only a few days beforehand (because of a missing letter), the entire order was delivered direct to the ship at a very competitive price. It was all repacked into ammunition boxes to combat rats which were rumoured to be swarming in Royal Bay, but only one was ever seen.

### Expedition Activities.

A summary of our activity is given below, followed by detailed discussion of our scientific results and climbing achievements.

Nov 7 - 10	At Grytviken. Four team members traversed Petrel Peaks and Mt Hodges; film crew working around old whaling station and King Edward Point.
10	Put ashore at Moltke Harbour, established base camp around 4 bunk British Antarctic Survey hut.
11 - 15	Shifting gear and supplies from base round to Ross Glacier, filming, climbing local peaks.
16 - 24	Four team members cross Ross and Hindle glaciers, explore Hindle Glacier and Weddell Glacier areas from tent camp on east side of lower Hindle. Film crew remains at base, covering wildlife.
25 - 29	At base; more filming, local scientific work, more local climbs.
30 to Dec 8	Four members on Ross Glacier; stuck in snow cave in blizzard for most of time.
9 - 12	Scientific work on south side of Ross Glacier, working out of base camp.
13 - 18	Whole team moved to St Andrews Bay; more filming, scientific work, climbing; visit Hound Bay, Ocean Harbour and Cumberland Bay.
19 - 23	Recovering gear from Ross Glacier, more filming and local climbing.
Dec 24	Lifted from Moltke Harbour back to Grytviken.

### (1) Climbing Activity.

Individually or collectively, the four team members climbed all the named peaks in the vicinity of Moltke Harbour. Most were scrambles up loose rock and patchy snow, but some had more interesting pitches. All had been climbed before; summits ranged from

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2000 to 3000 ft. Two named peaks northeast of St Andrews Bay were also climbed (a list of ascents is given in Appendix 2).

Probable first ascents of two 3000 ft + peaks on the ridge between the Heaney Glacier and the west branch of the Cook Glacier in St Andrews Bay were made by three members of the team. These too were mainly scrambles over loose rock, but were very enjoyable with tremendous views.

In the Hindle Glacier area, two members made the first ascent of an eastern outlying peak north of Smoky Wall in the Salvesen Range. It involved a ski crossing of the Hindle Glacier and several pitches of delicate climbing up a narrow snow arete. Two also made the first ascent of a prominent sharp peak on the Hindle - Weddell divide at the head of the eastern-most branch of the Hindle. This climb was made in very cold, windy conditions up a jagged loose rock ridge north of the peak and a traverse of a steep snowfield on the northwest face. A low peak north of this sharp peak was also traversed. Two members also climbed a rotten rock and snow summit at the head of a valley running south from the coast from Will Point. A col between the Hindle and Weddell glaciers southeast of the sharp peak was reached also, involving two rope-lengths up steep frozen scree. All four skied across the upper Weddell Glacier to a low col above the Bertrab.

The Ross Glacier was crossed numerous times during geological work. Ross Pass was crossed once and a low peak above the Spencely Glacier climbed, but the foul weather experienced on the Ross Glacier trip precluded any attempts on higher summits.

Although no major summits were reached, the climbing was great fun. No problems were encountered in crossing any of the glaciers, although skis made glacier travel much easier early in the trip. By late December most of the lower Ross was blue ice.

The Salvesen Range remains as an area abounding in virgin peaks, ranging from very steep ice to good or rotten rock, and the west side in the Spencely Glacier area contains limitless opportunities for ski-mountaineering. The peaks of the main Allardyce Range to the northwest must include some of the last remaining great climbs at this latitude anywhere in the world.

### (2) Geological Work.

The two geologists on the expedition have successfully mapped and described the previously unknown area of the Hindle and upper Weddell glaciers, and also the south side of the Ross Glacier. Several major folds were discovered, as well as numerous new fossil localities. These are particularly valuable in that some contained better-preserved species than had been found before and a much better indication of the age of the South Georgia rocks should be obtained.

The area between the Cook and Heaney glaciers was also mapped for the first time. Volcanic rocks, marble and chert beds were discovered, the first time that chert and marble have been described from this area. Structural observations around the Moltke Harbour area will help in solving some problems found in New Zealand geology, as the rock types in the two regions are very similar. A major fault, postulated to run up the Ross Glacier, has been confirmed from observations beneath Mt Brooker on the northwest side of the glacier.

Once microscope study of the samples collected has been finished and the fossils identified, the results of the geological work will be

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published in a relevant journal, probably the British Antarctic Survey Bulletin. Mapping data will be incorporated in a forth-coming B A S 1:250 000 geological map of South Georgia.

### (3) Other Scientific Work.

A representative collection of the insect population of Moltke Harbour was made by one member of the team, using pit traps sited in and outside several fenced-off enclosures. These were constructed by B A S scientists studying the reindeer population, and provide a great contrast in vegetation type. This contrast was reflected in the insect populations. Insects were also collected from the Mt Brooker area and the Hindle Glacier region. They are to be studied by New Zealand entomologists.

Intertidal flora and fauna was also collected by another member. Samples collected included a species of seaweed not previously reported from this area of coastline. The material will be worked on by scientists of the New Zealand Oceanographic Institute.

A skeleton of a rail-like bird, possibly a Purple Gallinule, was discovered in Whale Valley. Rails have only been reported once or twice on South Georgia previously. The skeleton has been passed to the BBC Natural History Unit for identification.

### (4) Snow Caves and Snow Conditions.

In New Zealand, snow caves are used as a matter of course in high alpine areas, as a better alternative to tents. Many tents have been destroyed by South Georgia weather, and we were interested to see if snow caving would be applicable. Our tents were adequate in camps in the Hindle area, but only because they were protected by stone walls up to 5 ft high. These tents are the best available in New Zealand and have been used successfully in many areas of the world - or tents of similar design.

On the Ross Glacier, our tents were damaged in a blow, and a four-man snowcave was dug in a steep windscoop as an alternative. We had to occupy the cave for the next week, and were perfectly comfortable. The upper three feet of snow were very soft and slushy, but the snow below this was firm to icy and very stable. The entrance drifted up every hour with no ill effects.

We would strongly recommend future parties to this area to use snow caves at all times in preference to tents, where possible. Steel shovels are necessary, as the snow is generally too hard for ordinary aluminium shovels. A large garden shovel with a cut-down handle and the sharp tip removed is ideal and well worth the extra weight.

Snow conditions varied considerably during the time we are on the island. Snow on all slope aspects was generally soft and wet; hard frosts were rare at low altitudes. Some drifted powder and wind-slab was encountered but was easily recognisable. The only avalanches seen were either soft surface slides or collapsing ice cliffs.

### (5) Filming.

The theme of the film to be produced from the expedition is based on the local wildlife and the historical and exploitation aspects of man's presence on South Georgia. The expedition activities were used as a common thread to bring these ideas together. Footage of the

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Grytviken and Leith whaling stations, and of King Edward Point, the relics from the Argentinian invasion, of Shackleton's grave, and of the old German scientific station at Moltke Harbour was shot for the historical aspects. Old campsites from the 1960's Joint Services Expedition to Royal Bay were also filmed.

Local wildlife covered includes King and Gentoo penguins, from nest-building to chick hatching stages; Sheathbills, Giant Petrels and Skuas and their behaviour; Elephant seals and rarer Fur seals, from the mating to pup stages; Sooty Albatross and Teal; and the reindeer. The deer are extremely numerous and are doing a great deal of damage to the local vegetation. They are also very tame and some excellent shots of the animals in close proximity to tents and huts were obtained.

The film has already been processed. If editing and production goes according to plan, the film should be seen by TV viewers late in 1985, or possibly in early 1986.

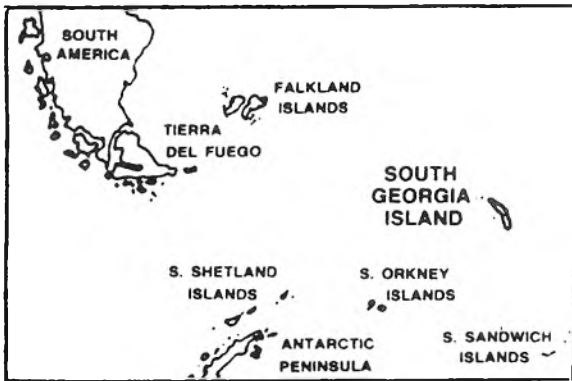
### Summary.

The New Zealand South Georgia Expedition ( D Crow, P Johnstone, A Knowles, I Turnbull, plus film crew B & R Brown) spent a highly successful and enjoyable two months on South Georgia based at Royal Bay. Objectives of climbing, skiing, snow-caving, geological work and filming were all met. Some significant geological finds were made, and several first ascents of un-named peaks achieved. A film of the expedition should be produced late in 1985.

*Ian Turnbull*

I M Turnbull  
(Expedition Leader)

18 January 1985



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### Appendix 1

#### ACKNOWLEDGEMENTS

The expedition would like to acknowledge the assistance and support received from a large number of people and organisations, without which the trip would never have taken place or have been so successful and enjoyable.

For financial assistance:

Remarkable Films Ltd, our major sponsor; New Zealand Alpine Club; Mt Everest Foundation; N Z University Grants Committee; Trans-Antarctic Association; British Airways; Golden Kiwi Lottery Profits Distribution Committee and the Hon. D Hight; N Z Oceanographic Institute.

For donations and discounts:

Seagrams (NZ) Ltd, for the Wilsons Whisky; Arthur Ellis Ltd for gear and the loan of their three Altimate tents; Wilderness Shop for reduced prices; Canterbury Mountain Radio Service for discounted radio hire; Puma Knives for donations of cutlery; DSIR for paid leave for the leader; Fuji Films for discounted film.

For their support and efforts on our behalf:

Sir Edmund Hillary for his patronage and interest; Mr D MacLean, NZ Secretary of Defence; Air Commodore P Neville, Defence Attache, N Z High Commission; staff of the Falkland Islands Department of the Foreign and Commonwealth Office; staff of the Falkland Islands Government in Port Stanley; the Falkland Islands Company; all those M C D personell involved with getting us and our gear to and from the island, and the officers and crew of the RFA ships; B A S staff for their interest and advice; Dr J Heap; and many other individuals in New Zealand, Britain, on the Falklands and on South Georgia whose help and friendliness is deeply appreciated.



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Appendix 2

### LIST OF ASCENTS BY EXPEDITION MEMBERS

#### Royal Bay area.

Coffin Top: Craw, Knowles, Johnstone, Turnbull  
 Mt Fagan: same four  
 Mt Burley: same four  
 Mt Back: Craw, Johnstone, Turnbull; Knowles  
 Neighbour Pk: Johnstone, Knowles  
 Pirner Pk: Craw, Johnstone  
 Krokisius: Craw; Johnstone; Knowles  
 Binary Pk: Craw; Johnstone

#### Hindle Glacier area.

Un-named outlier of Smoky Wall (1st ascent): Knowles, Johnstone  
 Un-named peak on Hindle - Weddell divide (1st ascent): Craw, Knowles  
 Un-named low peak on same divide (1st ascent): Craw, Knowles,  
 Johnstone, Turnbull  
 Un-named peak at head of valley from Will Point (1st ascent):  
 Johnstone, Turnbull

#### St Andrews Bay area.

Mt Skittle: Knowles  
 Szeiasko Ice Cap summit: Johnstone, Craw  
 Un-named peaks (2) on Heaney - Cook ridge (1st ascents): Craw,  
 Johnstone, Turnbull

#### Grytviken area.

Mt Hodges: all four plus M Rossiter and A N Other  
 Petrel Peaks: all four plus M Rossiter and A N Other