

86/48

UK-NZ
ANDES EXPEDITION
1986

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1986 UK - NEW ZEALAND ANDES EXPEDITION

Team members

Julie-Ann Clyma	Invercargil	New Zealand
David Hood	Sunderland	England
Martin Hair	Peterlee	England
Roger Payne	London	England

Acknowledgements

There can be no doubt that we would have been less successful, or perhaps the expedition simply would not have taken place, had it not been for the wide range of support and help we have received from sponsors and others. The team members are indebted to those listed below for their help. We sincerely hope we have provided a fair return to our sponsors, by way of product reports, photographs, etc. but we remain indebted for we cannot return the trust that was put in us to complete these sometimes minor but none the less important tasks.

The members of the expedition gratefully acknowledge the support and help from the following:

British Mountaineering Council
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Batchelors Foods Ltd
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Introduction

In the autumn of 1985 the Alpine Club held another of its successful series of mountaineering symposia, with its theme this time, South America. Two of the team members had visited the Peruvian Cordilleras in 1985; their enthusiasm to return, combined with the information about possible objectives which the symposium provided, proved to be the catalyst which brought the eventual team together. At the outset there were no fixed ideas about team size, climbing groups, etc. We eventually numbered four climbers with widely different previous experience, but who could easily combine together to form complimentary balanced pairs. Our aims were always clear however: to attempt new climbs (or ones previously unclimbed by British or New Zealand climbers) along with making other ascents to maximise our high altitude climbing experience. We eventually decided upon three main objectives i) to attempt a new route, or first British ascent of a route, on the South Face of Taulliraju (5830m) Cordillera Blanca, Peru; ii) to attempt a new route, or first British ascent of a route, on the South Face of Rasac (6040m) Cordillera Huayhuash, Peru; iii) To attempt the first ascent of the South Butress of Ancohuma (6427m) Cordillera Real, Bolivia.

Unfortunately, while we were able to realise our first two objectives, we were unable to make our planned visit to the Cordillera Real. The last minute pulling out of a cash sponsor, combined with a reduced air fare arrangement not materialising, meant we could no longer afford the internal flight between Peru and Bolivia. The alternative, a lengthy journey by bus and train, simply took up too much of our available time which we all felt was better spent in the high mountains. Hence, we made the decision to make all our mountain excursions in the Peruvian Cordilleras.

EXPEDITION TIME-CHART

May	10	expedition departs Heathrow	
	11	arrive Lima	
	12	arrive Huaraz	
	13	Huaraz - rest	
	14	Huaraz - buy provisions, make travel arrangements, etc.	
	15	Huaraz - Cashampampa (collectivo)	
	16	Cashampampa- Laguna Jatunqocha)	walk-
	17	L. Jatunqocha - Taulliraju BC)	in
	18	BC - Punta Union acclimatisation walk	
	19	BC - bivi site (glacier edge beneath Taulliraju-Rinrijirka col)	
	20	JC/DH attempt E Ridge Rinrijirka	RP/MH climb S Face/couloir Rinrijirka
	21	base camp	base camp
	22	base camp	base camp
	23	JC/DH back to previous bivi	RP/MH base camp
	24	JC/DH Taulliraju-Rinrijirka col, recce N Face Taulliraju, high point previous attempt E Ridge Rinrijirka.	RP/MH bivi site (E edge Taulliraju glacier)
	25	JC/DH second attempt E Ridge, return to base camp,	RP/MH begin ascent American route, S Face Taulliraju.
	26	JC/DH base camp	RP/MH continue ascent S Face, Bad weather and conditions. Descend to base camp.
	27	JC/DH to Quebrada Arequocha	RP/MH base camp
	28	JC/DH to Alpamayo-Kitiraju col	RP/MH bivi site; edge of glacier Q. Arequocha.
	29	JC/DH climb SW Face Alpamayo	RP/MH to Alpamayo-Kitiraju col. RP climbs SW Face Alpamayo.
	30	JC/DH descend to Q. Arequocha	RP climbs N Face Kitiraju, MH climbs SW Face Alpamayo, Descend to Q. Arequocha
June	31	base camp	
	01	base camp - Laguna Ichicocha)	walk-out and
	02	L. Ichicocha-Cashapampa-Huaraz)	collectivo
	03	Huaraz - rest and swimming	
	04	Huaraz - local rock-climbing, make travel arrangements	
	05	Huaraz - buy provisions, pack, etc.	
	06	Huaraz - Chiquian (taxi)	
	07	Chiquian - Llamac)	walk-
	08	Llamac - Laguna Jahuacocha BC)	in
	09	base camp	
	10	JC/DH bivi site beneath E Face Rasac	RP/MH bivi site beneath S Face Rasac
	11	DH altitude sick, JC/DH return to base camp	RP/MH begin ascent S Face Rasac
	12	JC/DH base camp	RP/MH second day on S Face Rasac
	13	JC/DH base camp	RP/MH third day on S Face Rasac
	14	JC/DH bivi on approach to E Face Rasac	RP/MH reach summit, descend E Face, return to base camp.
	15	JC/DH second bivi on approach	RP/MH base camp
	16	JC/DH bivi beneath E Face Rasac	RP/MH base camp
	17	JC/DH attempt E Face Rasac, return to base camp	RP/MH base camp
	18	base camp	
	19	base camp - Llamac)	walk-out
	20	Llamac - Chiquian)	and
	21	Chiquian - Huaraz)	collectivo
	22	Huaraz - rest and swimming	
July	23	JC/RP to Musho (bus/collectivo)	DH/MH Huaraz - buy provisions, pack, etc.
	24	JC/RP bivi - edge of Huascaran glacier	DH/MH to Musho
	25	JC/RP climb Huascaran	DH/MH bivi - edge of Huascaran glacier
	26	JC/RP descend to Musho	DH/MH attempt Huascaran, return to bivi site
	27	JC/RP Musho - Huaraz	DH/MH bivi - Musho - Huaraz
	28	Huaraz - rest and swimming	
	29	Huaraz - local rock-climbing	
	30	Huaraz	
	01	Huaraz - Lima	
	02	depart Lima	
	03	arrive Heathrow, London	

QUEBRADA SANTA CRUZ

The expedition's first excursion into the mountains was a 19 day trip into the Santa Cruz valley of the Cordillera Blanca. This was a relatively long period of time compared to other trips during the expedition, as it had to include time to acclimatise.

In addition to our main objective, the South Face of Taulliraju, we had identified several other possible objectives including the E Ridge and S Face of Rinrijirka, the N Face of Taulliraju, the SW Face of Alpamayo and the N Face of Kitiraju. The latter two objectives are most easily reached from a base camp in the Quebrada Arequocha, which is a side valley of the main Santa Cruz valley; while the others are best attempted from a base at the head of the Santa Cruz itself. We were therefore confronted with a choice as to where to place our base camp. We eventually decided (while on the actual walk-in) to base ourselves at the head of the Santa Cruz, beneath Laguna Taullicocha. In fact, all of our objectives would have been possible from either base, but we felt that our choice would give us the best chance of achieving our main objective.

To reach the mountains we hired a colectivo to take us from Huaraz to Cashapampa - a small village at the mouth of the Santa Cruz valley. We arrived at Cashapampa on the afternoon of the 15 May and spent the rest of the day there while our arriero hired the 6 burros necessary to carry our food and equipment to our base camp.

The 16th was spent walking from Cashapampa (2090m) to Laguna Jatunqocha (3900m) where the night was spent. The following day another 4 hours walking took us to an ideal camp site on the true left bank of the Santa Cruz. This is situated beside some large boulders at the bottom of the moraine ridge running down from the right hand side of Laguna Taullicocha at a height of about 4250m. (A point worth noting about the Santa Cruz walk-in is its relative ease ie. two short days, which makes it ideal as a first trip and an aid to acclimatisation).

On the 18th all four members of the expedition walked up to a high col, the Punta Union (4750m), to help acclimatisation. No-one suffered any ill effects so it was decided to go up to a bivouac to attempt a climb the next day. On the afternoon of the 19th all four members walked up to a bivouac site (4860m), on the edge of the glacier beneath the Taulliraju-Rinrijirka col (about 3 hours walk).

The following day, leaving bivi gear at the bivi site, Roger and Martin set off to attempt a new route on the S Face of Rinrijirka. They decided on a line following an obvious couloir ending at a prominent col (c.5650m) on the E Ridge. This appeared to be relatively straight-forward but in fact turned out to be very time consuming due to the appalling nature of the snow. After 750m of climbing the pair reached the col at 5pm having been on the route for 8 hours. They descended the N side of the ridge with two absiels and traversed the N flank of the ridge to the Taulliraju-Rinrijirka col. From there they descended to the site of their previous bivouac where they spent the night, returning to base camp the next morning. The route was thought to be of alpine 'Difficile' grade.

The two other team members, Dave and Julie-Ann left the bivouac at the same time as Martin and Roger, with the intention of attempting the unclimbed E Ridge of Rinrijirka. Unfortunately the attempt was stopped by a large crevasse at c.5200m and the pair returned to base camp the same day.

The 21st and 22nd were rest days for both teams. On the 23rd Dave and Julie-Ann returned to the bivi site of the previous trip for an attempt on the N Face of Taulliraju. Setting off at 6.30am on the morning of the 24th they climbed to the Taulliraju-Rinrijirka col and walked across the plateau to beneath the N Face. After observing the route for a short time and noting the evidence of stone-fall, poor snow conditions on the upper part of the face, and the greater technical difficulty than expected, the pair decided the route was not feasible and decided on another attempt on the E ridge of Rinrijirka. They climbed to a bivouac spot below their previous high point and spent the night there. The next morning the pair started climbing at 6.30am and in the better snow conditions, by a traverse left onto the

cornice, by-passed the crevasse that had stopped the previous attempt. However, the condition of the snow higher on the ridge was so poor that it was decided to abandon the climb and the pair returned to base camp the same day.

Meanwhile after a further rest day at base camp, on the 23rd Martin and Roger walked up to a bivouac site on the edge of the Taulliraju glacier (c.4800m), above and to the right of Laguna Taullicocha (about 3 hours walk). After studying the mountain over several days it appeared that the best chance of climbing the S Face would be by the 1983 American route, which follows the prominent couloir and ridge on the left hand side of the face. Other unclimbed lines were apparent to the right of this, but closer observation revealed them to be smooth rock slabs with a layer of thin, poorly consolidated snow.

On the morning of the 24th the pair left the bivouac at 3am and crossed the Taulliraju glacier, reaching the base of the couloir (c.5000m) at approximately 5am. The rest of the day was spent climbing the couloir which gave approx. 400m of superb ice climbing. Several pitches were Scottish grade V and the climbing was characterised by steep ice and good rock belays. At about midday there was a heavy hail shower which, combined with a rapid rise in temperature, caused one of the large snow mushrooms on the left edge of the couloir to become detached. This produced a large avalanche down the couloir which the pair had just climbed; demonstrating the unpredictable and dangerous nature of these typical Peruvian snow structures.

At the end of the day the pair had not located any suitable bivouac site and were forced to chop a small ledge from the ice near the top of the couloir. Above the bivouac the couloir split into two branches. A hard mixed pitch took the climbers into the left hand branch. The pitch above this led to the foot of the ridge, but the snow at the end of the pitch was so poor that it was impossible to exit from the couloir.

This, combined with the prospect of further poor snow and the fact that it was now snowing heavily, persuaded the pair to descend. The descent of the couloir was greatly facilitated by the insitu pegs every 50m and the pair soon reached the glacier and continued down to base camp, reaching it at about 4pm.

The same day, the 26th, had been a rest day at base camp for Dave and Julie-Ann and on the following day they walked to a camp in the Quebrada Arequocha, taking 5 hours with heavy sacks. On the 25th the pair spent 9 hours climbing to the Alpamayo-Kitiraju col (c.5300m) where they spent the night, with the intention of climbing the SW Face of Alpamayo the next day.

The 27th was a rest day at base camp for Martin and Roger. On the 28th they spent 5 hours walking to a bivouac at the edge of the Arequococha glacier (c.4800m), also with the intention of climbing Alpamayo and the N Face of Kitiraju; having decided that a further attempt on Taulliraju was unwise due to the unsettled weather and the poor nature of the snow. After a 3am start Martin and Roger took 3 hours to reach the col. Their much shorter overall time from base camp to the col compared to Dave and Julie-Ann (8 hours compared to 14 hours) can be accounted for in two ways. Firstly, they had lighter sacks (no tent) and secondly they took a shorter route, countouring from the Q. Santa Cruz into the Q. Arequocha and then following the obvious moraine up the true right bank of the valley. From the top of this moraine they followed cairns diagonally rightwards to a good bivouac site at the edge of the glacier. This route, rather than the usual valley floor approach used by Julie-Ann and Dave, was much more preferable and thus would be strongly recommended to other parties.

About 3 hours before Roger and Martin reached the col, Dave and Julie-Ann had set out to climb the SW Face of Alpamayo. When the former pair reached the camp at the col they could see the other two on the route and Roger decided to join them on their attempt. Martin was feeling very tired, perhaps due to altitude and decided to spend the rest of the day at the col.

Roger caught up with Dave and Julie-Ann above the bergschrund (c.5650m) and soloed along side them to the top. The route was 7 rope-lengths long and took 5 hours to climb. It was thought to be of alpine AD/D grade. The descent took approximately 6 hours, with Dave and Julie-Ann joining forces with another team of

3 on the mountain to set up absiels, with Roger removing the belays and down climbing the route. It had taken the climbers an hour to reach the bergschrund from the col and the same length of time for the return.

The following day, from the effects of exertion and altitude, Dave was feeling ill. He had also experienced symptoms of snowblindness during the previous night and so he and Julie-Ann decided to descend, setting off at midday. Martin and Roger left the col at 6am; Martin to attempt Alpamayo and Roger the N Face of Kitiraju. Martin climbed Alpamayo in 1½ hours and descended in a further 2½ hours. Roger took 1 hour to reach the foot of Kitiraju and 3 hours to climb the route. He descended in 2 hours and was back at the col just after midday. Martin and Roger also decided to descend and all bivouaced that night at a site on the true right hand bank of the Q. Arequocha (c.4250m) - the descent to this point taking about 3½ hours.

The following day we walked to base camp and were met by our arriero later in the afternoon. On the 1 June camp was struck and a 5 hour walk brought us to L. Ichicocha where we spent the night. The following morning a 3 hour walk brought us back to Cashapampa and from there we caught a colectivo to Caraz and then bus to Huaraz. This is the alternative to taking a colectivo all the way and is much cheaper - but there is the possibility of losing a day if one cannot make the connection.

CORDILLERA HUAYHUASH

The venue for the expeditions second excursion was a 15 day trip into the Cordillera Huayhuash. The Huayhuash is situated 50km to the SE of the C. Blanca and although smaller than the Blanca, boasts many impressive faces with scope remaining for difficult new routes. Our main objective in this area was to attempt a new route on the steep S Face of Rasac (6040m). Other faces easily accessible from the same base camp and which were of possible interest to us were the W Faces of Rondoy, Jirishanka and Yerupaja and the E Face of Rasac.

Due to the irregularity of transport from Huaraz to the C. Huayhuash, it was necessary to hire a taxi to take us from Huaraz to the village of Chiquian. There we met our arriero and the 6 burros necessary to transport our equipment and food. Our approach to our base camp at L. Jahuacocha was via the village of Llamac. We rejected the alternative approach via Pacllion due to rumoured bandit and terrorist activity in this area, and would advise anyone travelling in this region to do likewise.

We left Huaraz on the 6 June and spent that day travelling to Chiquian. The 7th was spent walking in to the village of Llamac (stopping overnight) and the 8th saw us arriving at base camp on the E shores of L. Jahuacocha (c.4200m).

The lake is abundant with fresh trout and the local inhabitants were only too pleased to sell or exchange these and other food items (cheese, eggs, etc). Although alternative base camp sites exist at the other end of the lake, this site seemed ideal for the mountains we wanted to climb.

The 9 June was designated a rest day and allowed the two climbing pairs time to decide on routes to be attempted over the following days and to sort out relevant food and equipment.

Given the time available, Martin and Roger decided to go straight to the S Face of Rasac and so set off on the morning of the 10th. The two approaches to the S Face are first, via the trail leading from the lake to Huayllopa and then up into the Q. Segya (2 days); or second, the chosen route, via the valley beneath the W Face of Rasac and over a col at the head of this valley (1 day). Despite this second approach beginning with a steep, grassy slope above the lake, the ground soon levels off in the hanging valley to give an easy 5-6 hour walk to the col.

Although the crossing of the col was easy terrain, at one point a small step of honeycombed ice gave way causing Roger to trip and resulting in a blow to the mouth with his ice hammer. The resulting injuries: an 'L' shaped laceration to the cheek; a knocked out tooth; and broken sunglasses, were patched up and although very painful were not serious. Hence they were able to carry on with the ascent. After

crossing the col a descending traverse in less than 2 hours led to a good bivouac site around 300m below the face.

Because of the discomfort to Roger's mouth there was some delay in leaving in the morning. However, after 300m of soft-snow trailbreaking, eventually the pair were established under the face. After inspecting the face they decided to attempt a new direct line starting with a shallow couloir. The climbing was obviously going to be very steep and a lot would depend on the condition of the ice. The main obstacle appeared to be two bands of icicles which crossed the face. The first, and larger, being at around 2/3 height on the route. A couple of reasonable pitches soon led to the type of pitches which constituted the bulk of the route: sustained steep climbing on good ice of varying thickness (rarely was it possible to stand in balance even after cutting a step). Roger's performance was impaired due to continuing mouth problems - however Martin's enthusiasm and combined grim determination won through. Darkness came before it was possible to finish seconding one of the hardest pitches of the day (a crust of near vertical collapsing snow with marginal aid moves on featureless rock), which left the climbers looking for a bivouac on some of the easiest angle ice of the day: 60 to 65 degrees.

After an uncomfortable night the main problem of the second day was the icicle barrier. After one blind alley, some devious and far from certain route finding led through vertical and overhanging ice to reasonable terrain. The problems of the barrier were obviously time consuming and again darkness fell with no reasonable bivouac spot in sight. After two short pitches of night climbing the pair resigned themselves to chopping out another ledge from a 60 to 65 degree slope.

Technical difficulties continued on the third day of climbing but now a way through the terrain ahead seemed certain. After a blind alley in the compulsory flutings they arrived at a flat patch below a huge (but easily avoidable) cornice. Although it was only mid afternoon it was decided to take advantage of this flat ground and bivouac early.

In the cool of the morning the summit was soon easily reached. Looking for the normal east face route the pair mistakenly descended in the wrong direction, heading towards what had looked like old tracks. Nonetheless the pair were able to make a safe descent of the unappealing and dangerous ice fall descending NE from the summit and in so doing completed a traverse of the mountain by two previously unclimbed routes.

From the three days climbing on the S Face of Rasac, apart from moving together, 22 pitches were climbed (mostly 50m). Out of these at least 5 were equivalent to sustained Scottish V and 3 were harder ie. V/VI. The most difficult pitches on the route were comparable to the hardest pitches on Minus One gully, Ben Nevis.

Meanwhile Julie-Ann and Dave had also decided to attempt a route on Rasac, the E Face, and also left base camp on the morning of the 10 June.

The approach to the E Face is via a track at the head of the valley which trends S to lead onto the glacier running between the W Face of Yerupaja and the E Face of Rasac. The track starts at an easy angle on the true left of the valley, skirting high above L. Saltencocha, and as it turns south follows the steep moraine ridge beside the glacier. After approx. 4½ hours an access point to the glacier is reached. A number of good bivouac sites exist along the track although none of them were used on this first approach.

At the access point the glacier is easy angled and uncomplicated and the pair reached a bivouac site (c.5400m) beneath the E Face after a further 1½ hours. The two planned to attempt the route the following day, but Dave fell ill during the night with a recurring problem of altitude sickness, and so the following morning the pair were forced to descend back to base camp.

The 11 June was a rest day and Julie-Ann and Dave decided to start moving up again on the 12th; this time taking bivouacs on the approach. However, due to a security problem they were reluctant to leave base camp unguarded and decided to wait another day hoping for the return of the others.

Finally on the 14th June the pair left base camp again. This time they were considering attempts on either the W Face of Yerupaja or the E Face of Rasac.

During their first bivouac on the approach the two noted a number of avalanches on the W Face on Yerupaja, and with the reports from a group of Argentinian climbers about the difficulties of crossing the large bergschrund at the bottom of the face, decided to opt for another attempt on Rasac. Conditions this year in the Huayhuash and Blanca seemed drier than in 1985. More rock was exposed on the faces, glaciers were more broken and there was a lot of 'activity' on the W Faces of the Huayhuash peaks, with several avalanches sighted.

The two climbers continued moving up slowly to make sure of Dave's acclimatisation, having one more bivouac on the ridge before the final bivouac on the glacier.

On the morning of the 17th the pair made the 20min walk from the bivouac site to the foot of the route. The route is approx 600m long and is mixed. Although the E Face route is of a moderate angle, progress was halted by a large bergschrund which blocked most of the narrow gully which gives access to the upper part of the face. Attempts were made to cross this at various points, but due to the collapsing snow the pair decided to abandon the attempt. They returned to base camp that afternoon.

Two days later on the 19th, with the arrival of the burros, the four members of the team walked out to Llamac, and the following day the 20th, to Chiquian. The 21st was spent travelling from Chiquian back to Huaraz. There was some confusion over the bus 'timetable' and everyone was perturbed to discover that the usual bus scheduled for the day at 11am did not appear. All had forgotten that it was Saturday - and therefore no bus service! However, with the help of a very friendly local family, a 'taxi' (the hospital landrover) was procured and the return journey to Huaraz was fast and uneventful.

HUASCARAN

After discussion about various alternatives it was decided to attempt Huascaran as the next trip. Huascaran is the highest mountain both in Peru and in the world's tropical zone and although it normally takes 4-5 days to climb, we had thought it might be possible to make the ascent from the glacier edge to the summit and back within 24 hours. This seemed an attractive approach as it meant travelling with the minimum of equipment ie. no base camp equipment, no extra or spare gear etc. It would also mean arriving back in Huaraz in good time for our return flight and it left the possibility of another short trip. There was also the possibility of attempting a new variation on the 'Shield', but as it turned out, for a new route a lot of prior knowledge, or a camp beneath it (ie. at the site of the normal Camp 1) would have been necessary. In any event, the very broken state of the glacier made the approach to Gargantua Col problematical enough, although the left hand side of the Shield seemed to offer a steeper but more straightforward and direct way to the summit snow field.

Julie-Ann and Roger decided to leave Huaraz on the 23 June, optimistically hoping to return with enough time for another short trip after Huascaran. Dave and Martin set off the following day, preferring an extra day of rest and recreation. Both pairs followed the usual route via Mancos and to the road head, spending a night at Musho. Contact with the locals was less satisfying in these parts: presumably because of the large number of big and well equipped 'expeditons' which pass through, the novelty of foreign visitors had worn thin and been replaced with an attitude somewhere between resentment and exploitation. From Musho, on their respective days, both pairs walked to above the usual advance base camp in an easy day. Julie-Ann and Roger using two porters to carry to advance base camp; Martin and Dave a burro to base camp. There are many comfortable rocky ledges near the glacier edge, so a good bivouac was easy to find, with many places to conceal equipment.

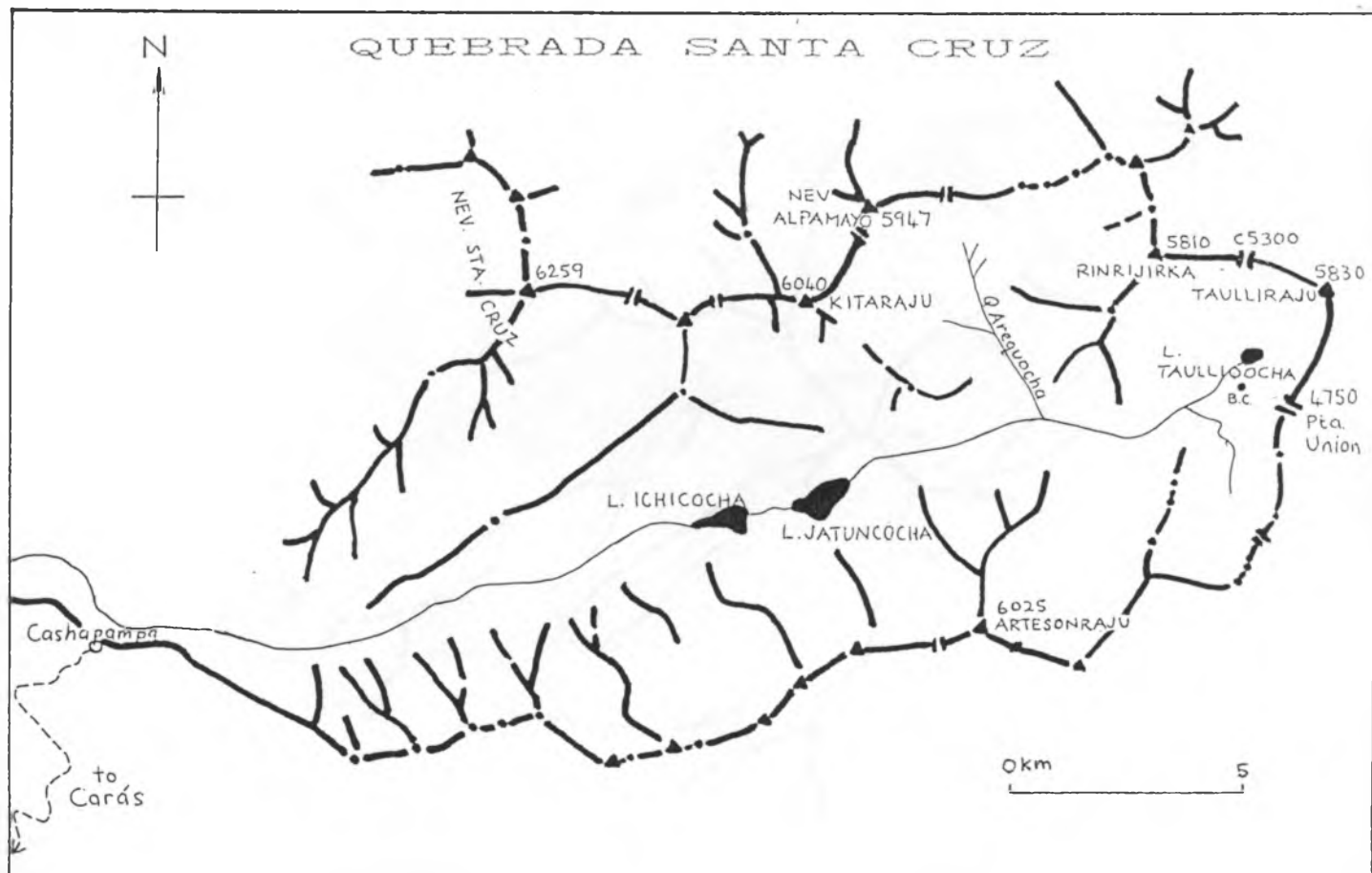
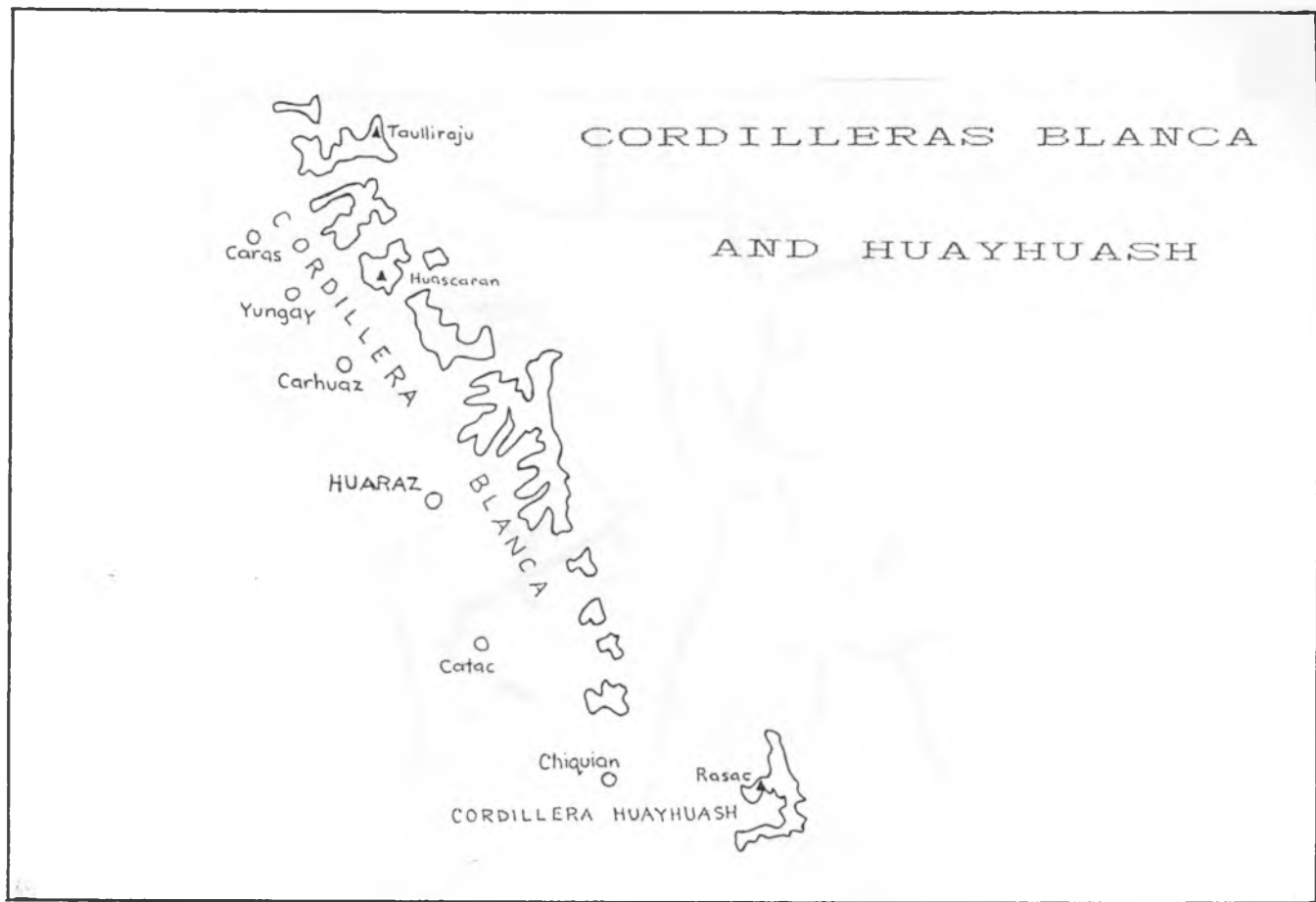
At about 1am on the 25th Roger and Julie-Ann left their bivouac at c.4800m. Progress to the usual camp 1 (c.5500m) was straightforward but slow because Roger was suffering from stomach problems (caused by eggs eaten in Musho) which

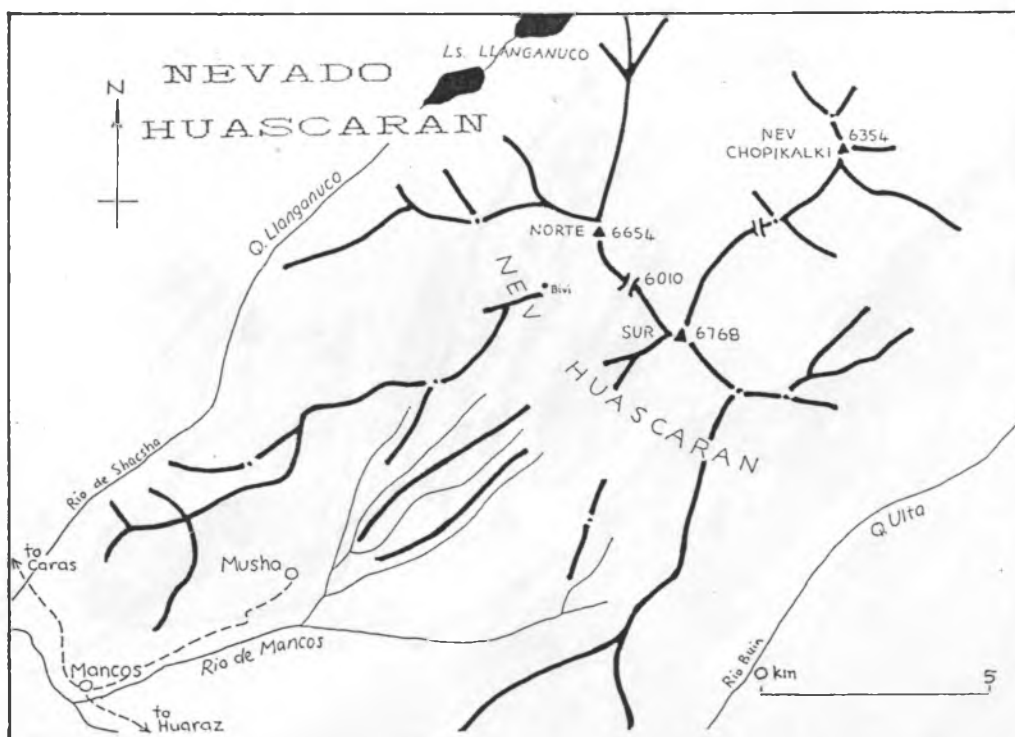
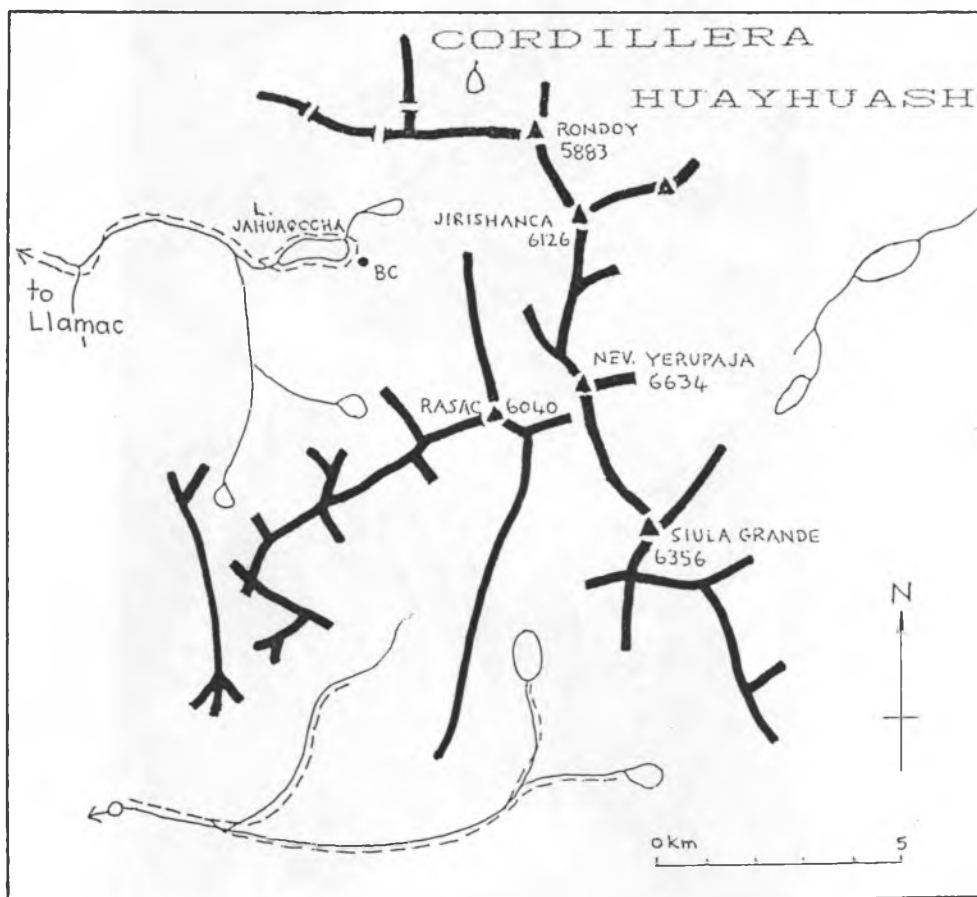
necessitated several lengthy lavatory stops. The pair eventually arrived at camp 2 (c.5950m) at around 8.30am having found a good way through the ice fall and seracs below. It was decided to take a rest here and to eat and make a hot drink. However, Roger's continuing stomach problems meant nothing beyond a boiled sweet could be eaten, and both climbers could only manage a few sips of hot jelly.

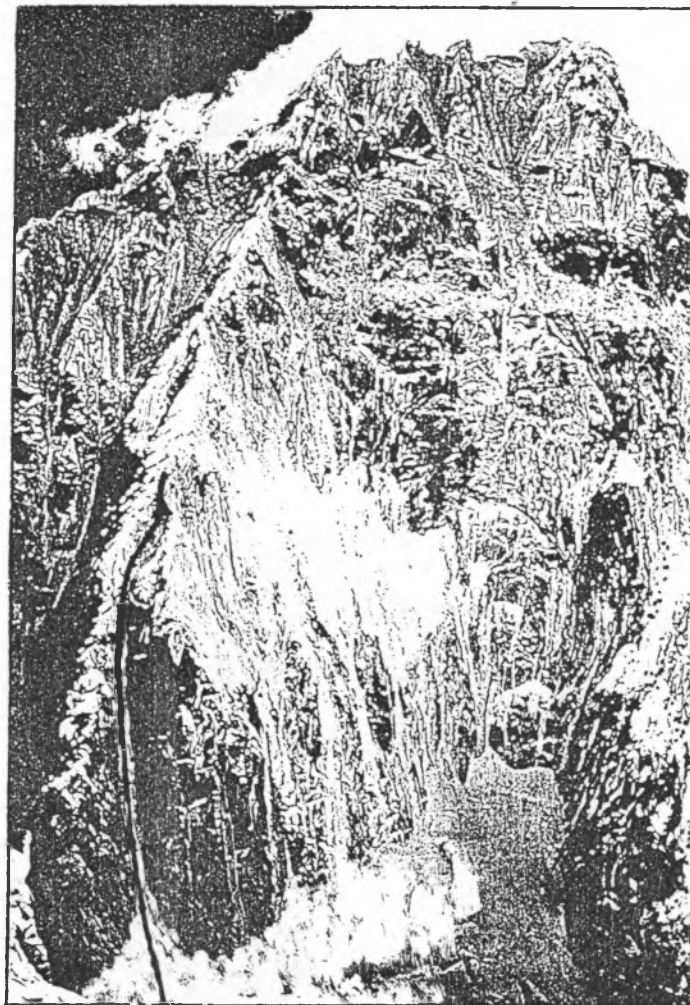
The pair were joined by a Spanish climber at this point. His companions had set off from camp 2 for the summit at 6.00am, leaving him behind as he had been unwell earlier in the morning. Hence, at around 10.00am the three left camp 2, hoping to make the summit in a further 5 hours. Having left all surplus equipment at camp 2, and after the benefit of a rest, good progress was made initially. However, after crossing the Gargantua Col (c.6000m) and starting through the serac barrier, the trio were out of the wind and subject to the debilitating effect of the hot sun. Progress was further hampered by Roger's persistent stomach problems. Excess clothing was tied into a ball and left at a conspicuous spot to be collected on descent. Crevasse problems were easily overcome but it was almost 3.00pm by the time the final snow field was gained. Although easy angled, the snow was in poor condition and the summit still depressingly distant. Progress was slow but determined and the summit was reached as the last rays of the sun left the sky at around 7.00pm. The headtorches were 800m lower at camp 2 and although Roger felt he could find the descent route in darkness, the Spanish climber insisted on waiting until moon-rise. 4½ hours were spent huddled just below the summit without any extra bivouac gear or warm clothing. With the aid of moonlight the three eventually returned to camp 2 at around 3.00am and had a few hours rest before setting off down.

Julie-Ann and Roger left camp 2 at around 8.00am and soon met Martin and Dave on their way up. The pair were making excellent time to this point and were moving together well. All four had a brief rest together and Julie-Ann and Roger continued their descent, eventually reaching Musho at 7.00pm. Martin and Dave continued, and moving quickly as they were, passed through camp 2 without a rest. On their way towards the serac barrier above Gargantua Col however, Martin found that his upward energy reserves had been expended. Afterwards both felt that they had previously put too much energy into climbing the first sections of the route and once on the final part of the ascent, found it no longer possible to sustain the same high level of output. Hence, the pair descended and were soon back at their bivouac spot at the edge of the glacier. At different times both teams returned to Huaraz on the 27 June.

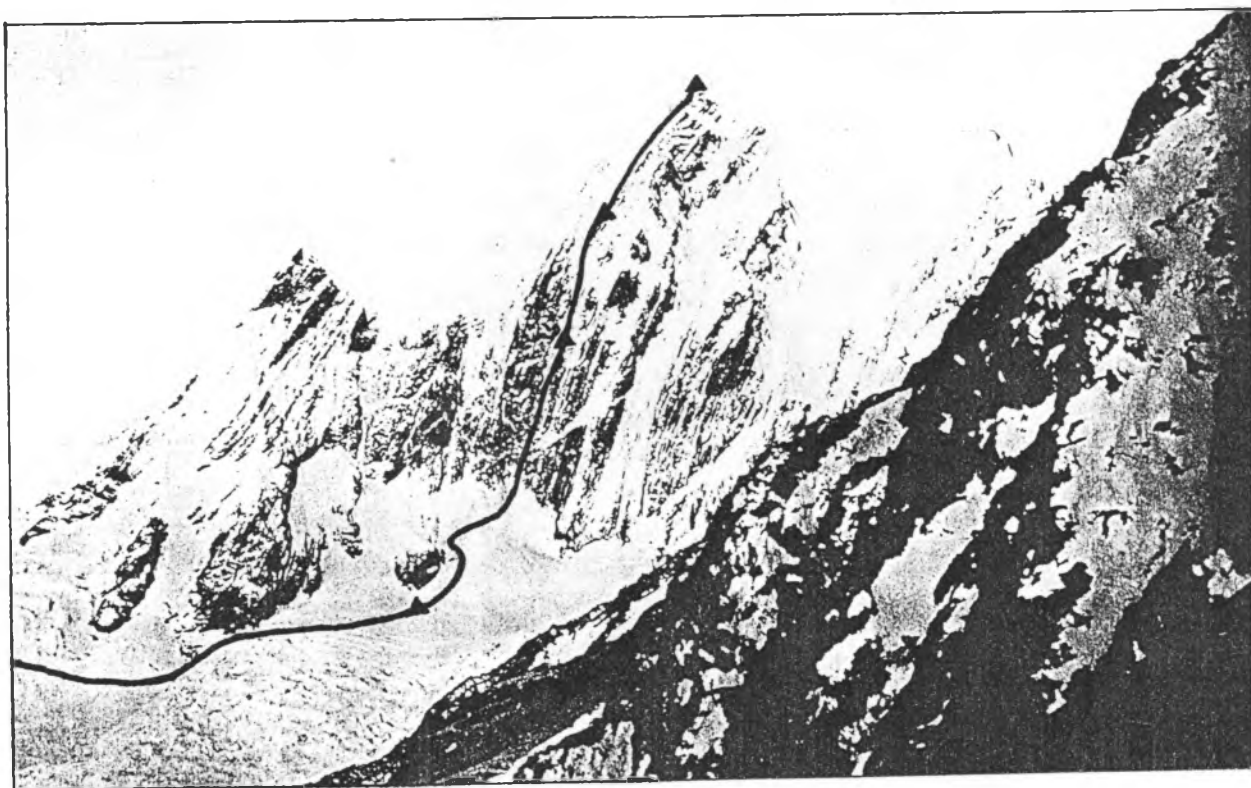
Although a technically easy route, valuable points were drawn from our experience on Huascaran: the physical effort required at such altitude can more easily reach painful levels and there is little room to accommodate unexpected difficulties, poor weather or conditions, equipment failure, or illness.







TAULLIRAJU SOUTH FACE: showing bivouac and high point reached on the American route (1983).



RASAC SOUTH FACE: showing route taken.

APPENDIX I
EXPEDITION ACCOUNTS

Income

MEF Grant	£ 300.00
BMC Grant	150.00
Surplus Peru Account	52.50
Personal contributions	2697.00

Total Income £3199.50

Expenditure

flights	£2000.00
insurance	193.50
peruvian account	800.00
group equipment	54.65
medicines, etc.	28.40
administration	122.95

Total Expenditure £3199.50

Balance £0000.00 £0000.00

INCOME AND EXPENDITURE DETAILS

Income

Personal contributions breakdown

towards flight	3 x £375.00	
peru account	3 x 200.00	
insurance	3 x 52.50	
share of all other costs	3 x 50.87½	
subtotal	3 x 678.37½	£2035.12½

towards flight	1 x £375.00	
peru account	1 x 200.00	
insurance	1 x 36.00	
share of all other costs	1 x 50.87½	
subtotal	1 x 661.87½	£ 661.87½

Total £2697.00

Expenditure breakdown

flights	4 x £500.00	£2000.00
insurance	3 x 52.50	157.50
	1 x 36.00	36.00
peruvian account (see separate details)	4 x 200.00	800.00

group equipment		
tape	£18.75	
pitons	21.00	
snowstakes	24.90	
Subtotal	54.65	54.65

medicines, etc.		
drugs	£15.40	
water tabs	13.00	
Subtotal	28.40	28.40

administration		
postage	£21.90	
rolls of film (4)	16.92	
photographic prints	9.24	
bank charges	14.89	
report	60.00	
Subtotal	122.95	122.95

Total £3199.50

PERUVIAN ACCOUNT

Income		
12 May	4 x personal contributions	
	4 x \$US300	\$US1200
30 June	sale of miscellaneous items in Huaraz	\$US 33
Total Income		\$US1233

Expenditure (summary)	
transport	\$US 212,30
food & accomodation	202,90
provisions & eqpt.	367,90
hire of labour	164,90
other	205,20
Total Expenditure	\$US1154,20

Balance \$US 78,70

Transfer of dollars to UK account \$US78,70 @ \$US1,50/£1,00 = £52,50

FINAL BALANCE \$US000.00

EXPENDITURE DETAILS

These are given in some detail in order to help future expeditions. All costs are given in \$US equivalent which should remain inflation proof.

Date	Item	I/- intes	exchange rate	\$US dollars	paid by
<u>Transport</u>					
11/5	taxi Lima			20,00	MH
	bus Lima-Huaraz	340	17,00	20,00	JC
15/5	collectivo Huaraz-Cashapampa	501	17,08	29,30	MH
02/6	collectivo Cashapampa-Caraz	175	17,08	10,20	MH
	bus Caraz-Huaraz	95	17,08	5,60	MH
05/6	taxi to Chiquian	800	16,50	48,50	MH
21/6	landrover Chiquian-Huaraz	650	16,50	39,40	MH
01/7	transport Landauro-bus station	10	16,30	0,60	RP
	bus to Lima	280	16,30	17,20	RP
02/7	taxi to airport	200	16,30	12,30	RP
	taxi for air tickets	150	16,30	9,20	RP
	TOTAL			212,30	
<u>Food and Accomodation</u>					
11/5	food during bus journey	360	17,00	21,20	JC
13/5	individual food allowance Huaraz				
	3 days @ I/-30 per person per day	360	17,00	21,2	JC
15/5	hotel costs Huaraz				
	3 nights @ I/-20 per person per night	240	17,00	14,1	JC
16/5	accomodation Cashapampa				
	1 night @ I/-15 per person	60	17,08	3,50	MH
03/6	individual food allowance Huaraz				
	4 days @ I/-50 per person per day	800	16,92	47,30	JC
	hotel costs Huaraz				
	4 nights @ I/-25 per person per night	400	16,92	23,60	JC
05/6	accomodation and food Chiquian				
	1 day, 1 night	210	16,92	12,40	JC
21/6	accomodation and food Chiquian				
	1 night	400	16,50	24,30	MH
22/6	individual food allowance Huaraz				
	2 days @ I/-50 per person per day	400	17,00	23,50	JC
	hotel costs Huaraz				
	2 nights @ I/-25 per person per night	200	17,00	11,80	JC
	TOTAL			202,90	
<u>Provisions and Equipment</u>					
14/5	cooking utensils for base camp	187	17,25	10,80	MH
	food for Santa Cruz (14 days at BC, 4 walking days)				
	supermarket	1477	17,15	86,10	DH
	fresh food, fuel etc.	1360	17,15	79,30	DH
04/6	food Huayhuash (10 days BC, 4 walking days)				
	supermarket	2172	17,17	126,50	DH
	fresh food, fuel etc.	1119	17,17	65,20	DH

contd.,...

Hire of Labour

17/5	arriero and burros Cashapampa - Taullicocho BC				
	2 day walk-in;				
	1 arriero 4 days, 6 burros 3 days	506	17.08	29.60	MH
	1 arriero ½ day	35	17.08	2.10	MH
	fares etc. for arrieros return to Huaraz	75	17.08	4.40	MH
30/5	arriero and burros Taullicocho BC - Cashapampa				
	2 day walk-out				
	1 arriero 3 days, 4 burros 2 days	434	17.08	25.40	MH
06/6	arriero to Laguna Jahuacocha (return trip				
	from and to Huaraz) 5 days			20.00	MH
	burros Chiquian - Jahuacocha, 2 day walk-in				
	6 burros 4 days	630	16.50	38.20	MH
07/6	feed for burros Llamac	24	16.50	1.50	MH
20/6	arriero Jahuacocha - Chiquian (4 days plus				
	bonus, and feed for burros)	300	16.50	18.20	MH
	burros Jahuacocha - Chiquian				
	4 burros 4 days	420	16.50	25.50	MH
	TOTAL			162.90	
<u>Other</u>					
21/6	money transfers, exchange differences, etc.			3.50	MH
23/6	individual allowance for remainder of trip				
	for all costs in Huaraz and attempt on Huascan				
	\$US40 per person for 10 days			160.00	JC
02/7	airport tax	697	16.30	42.70	RP
	TOTAL			206.20	

APPENDIX II

MISCELLANEOUS INFORMATION

Airfares

Viasa Venezuelan Airlines, booked through Journey Latin America. Each person, London - Lima return, £500.

Airport tax

Payable on departure from Lima - \$US10. Can be paid in \$US, local currency, travellers cheques, or any combination of the three.

Taxis (Lima)

Airport to bus station and vice versa. For 4 people and 8 packs, \$US12-15 one way.

Bus

From Lima to Huaraz or vice versa. Each person, one way, \$US5. There is often an extra charge for excess baggage.

Collectivos, Buses and Taxis (Huaraz)

A colectivo is an open-back truck. These are a convenient and relatively cheap means of transporting food and equipment from Huaraz to the road head before starting a walk-in. The price obviously varies, but as an example, for four of us with food and equipment for an 18 day trip, travelling from Huaraz to Cashapampa (approx 80 km) the cost was \$US30.

The local buses are an extremely cheap way to travel between villages. They run often and at regular intervals during the day and are a good alternative to the colectivos if one is not too laden down or pushed for time. A number of different companies operate on different circuits, so the local surrounds are well serviced. On our return from the Santa Cruz we caught a bus from Caraz to Huaraz. The cost for four of us was only \$US5.

Taxis are the most expensive of the transport options from Huaraz, but also the most convenient for shorter, lightweight trips, or for getting to less accessible areas like Laguna Paron, Pitec etc. Transporting ourselves plus food and equipment for 16 days, from Huaraz to Chiquian, cost us \$US50.

Arrieros and burros

Although official rates have now been set; arrieros \$US4 per day, burros \$US1.50 per day; the prices for hire of labour can vary between individual arrieros and from village to village. The highest labour costs seem to be those for the approach to Huascan; where the people of the village of Musho have a monopoly on operations, and the large number of foreign travellers passing through have inflated costs. Another service peculiar to the Huascan trail is the ability to hire porters. Their services cost \$US8 per porter per day.

It is possible to organise all ones travel and hire of labour from Huaraz. Although this is more expensive than doing so at the road head, it is the most reliable, as labour is difficult and sometimes impossible to hire in the more remote areas. For a trip of 18 days we used 6 burros on the walk-in and 4 burros on the walk-out. One arriero per four burros is the norm, but this can vary depending on how easy or difficult the trail is. It is part of the normal contract with an arriero that you provide his food and transport and accomodation, both for the time he is with you and for any days he may have to go on ahead of you to arrange burros etc, and for any return journeys. On the walk-in/out be prepared to share your tent, or to lend a karrimat and bivi bag.

Park fees

The Parque Nacional Huascaran contains nearly all of the Cordillera Blanca. Fees are \$US1.00 per day, payable in blocks of three days. Although this regulation is applicable to the whole of the Blanca, it seems only to be enforced in certain areas most heavily visited by tourists eg. Q. Yanganuco and the approach to Huascaran,

Guides

Another regulation erratically enforced is the need to hire a local guide when visiting certain areas of the C. Blanca. There is also more insistence now that parties sign in and out with the office of Commerce and Tourism, when leaving and returning from a trip.

On the plus side, efforts are being made at the tourist information office to co-ordinate climbing information and news on conditions. We are able to instigate a system similar to that operating at the 'Office de Haute Montagne' in Chamonix. But how long this will last is questionable. However, future parties are encouraged to try and make such systems work.

Lima

As we had previous experience of Lima we were able to avoid spending a night there when travelling to and from Huaraz. One must take great care of personal belongings and baggage in the capital, as well as all the usual precautions when travelling in a developing country eg. negotiating prices and fares beforehand, etc. Obviously there are areas of the city where one should take extra care and for teams who may need to spend time in Lima on arrival, or wish to spend some time there at the end of a trip, we recommend the following:

- eating and shopping in the area of Lima called Miraflores.

- if looking for a place to stay, try the Youth Hostel in Miraflores, or the Pension Union hotel (3rd floor). Both are cheap, but comfortable.

- a visit to the Alpine Club where maps and information are available, and Snr. Morales Arnao can be contacted. Snr. Morales is responsible for Andean climbing in Peru and is himself an accomplished climber. It is a courtesy to inform him beforehand of your intentions, and to send him a report of your trip afterwards. His address -

Jefe de la Seccion Alpinismo
Instituto Nacional de Deportiva Andinismo
Estadio Nacional
Piso 3, Lima 1, Peru

Huaraz

Huaraz is an ideal base for the Western climber; good food, accommodation, drink, sunshine, discos, friendly people and all inexpensive.

The necessary provisions for a mountaineering trip are available in Huaraz, and although quite expensive, mountaineering equipment as well.

It is an ideal place for rest and recreation. After a short bus ride or walk a good swimming pool and bouldering outcrop can be reached, and for those with a cultural interest, a longer bus ride takes you to Chavin (ruins).

The people are extremely friendly and in our experience are totally trustworthy. Some of the locals are mountaineers in their own right; do not underestimate their ability.

Hotels are normally quite simple, but are comfortable with (usually) hot showers.

Restaurants offer a good selection of food and any amount of wine, beer and spirits. We would particularly recommend the Hostel Landauro and Cafe Amadeus (good breakfasts) in the Plaza de Armas. Both are owned and run by "Lola" who speaks some French (for those who have difficulty communicating in Spanish). However, each individual will enjoy finding their own particular 'best food', 'cheapest beer', 'most comfortable rooms' etc.

The Discos are open to the small hours and friends are easily made!

Money changing facilities are good although on some days patience may be necessary to get the best rates.

Chiquian

Chiquian is altogether less well set up for the foreign visitor and is appealing in its own way for this. However, money changing facilities are virtually non-existent and only at a poor exchange rate. Choice of tinned foods, etc. in the shops is limited compared to Huaraz and no specialist items are available. There are only one or two hotels and nothing resembling a restaurant. However, various locals will provide good food and accommodation on a paying guest basis. This system proved very enjoyable and we would especially recommend the family we stayed with, the Family Minaya, whose home is above the hardware shop in the corner of the main square.

APPENDIX III

EQUIPMENT

Personal

helmet	karrimat	pile/fleece top
harness	bivi bag	other shirts/jumpers
ice axe	headtorch	socks
ice hammer	glacier glasses	gloves
crampons	waterproof jacket	mittens
boots	waterproof overtrousers	inner gloves
gaitors	thermal underwear	scarf(s)
sleeping bag	salopettes/breeches	hat(s)
optional: insulated jacket, rock boots.		

(cont.)

Technical

rope	prusick loops	rock pegs
selection of tapes	ice screws	nuts and karabiners
absiel tape	snowstakes	figure 8/belay plate

optional: etriers, jumars, altimeter, compass.

Travel

money belt	travel clothes	first aid kit
insurance	trainers/walk-in boots	repair items
passport	shorts/t-shirt	swiss army knife
T,cheques/dollars	wash-kit and small towel	water bottle
air ticket	sheet sleeping bag	books/paper etc.
camera amd film	sunscreen and aftersun	

Communal

tents	spare ice tools	maps
stoves (petrol/gas)	spare crampons	guide books
fuel bottles	spare glacier glasses	photocopies etc.
high altitude pots	repair kit	phrase book
snow shovel	binoculars	first aid kit
spring balance		plastic bags

As this was a very low budget trip, equipment and clothing were an assortment of personal belongings rather than specially purchased. However, all our gear performed well and met the requirements of the Andean environment we encountered.

Clothing

It was generally felt by all members of the expedition that clothing requirements for the Andes were no more than those necessary for winter climbing in Scotland. A typical example of the clothing worn on the hill: i) a layer of thermal underwear (long-johns and top) ii) a thin woollen jumper iii) a pile or fleece jacket iv) salopettes or breeches v) goretex jacket and overtrousers vi) miscellaneous good quality hats, gloves, scarves etc.

This kept us sufficiently warm even on very early starts and often late morning or afternoons extra jumpers etc were discarded. Some form of thermal underwear was worn by everybody and was useful as protection from the intense mid-day sun. The ability to put on or discard extra layers is important as the temperature range is marked and the changes very abrupt with the rising and setting of the sun.

Gloves used were "K2's" and "Burts" supplied by Faces. These were sufficiently warm most of the time, but on colder mornings we all experienced numb fingers. Dachstien mittens were ideal for rewarming cold hands. Everybody also had a pair of thermal gloves.

A hat or scarf for keeping off the sun is essential. We all underestimated the intensity of the sun on our first walk-in, and ended up with burnt scalps.

Boots

All members of the team used plastic boots - Koflachs (3) and Trezetas (1). These were worn in conjunction with Berghaus Yeti Supergaitors. Only Julie-Ann suffered from more than the usual cold feet - and this on only one occasion when it was necessary to stop and rewarm numb toes. This was probably due to an old frost-bite injury rather than a reflection on the performance of the boots/gaitors themselves.

Sleeping Bags

Those used were Mountain Equipment "Redline" in conjunction with Goretex or plain nylon bivi bags. Occasionally condensation formed inside the bivi bags but this did not prove detrimental as conditions were cold enough that vapour froze and sleeping bag and bivi bag could be shaken free of frost in the morning. Goretex seemed preferable, especially if several bivouacs are expected.

Tents

We took 2 two man tents, mainly for use at base camp. These were a modern dome type and a traditional ridge tent, and proved quite sufficient for our needs. At base camp the cotton ridge tent did not suffer from condensation which the nylon dome often did.

We took the dome tent above the snowline once. It functioned well, but due to the settled weather we felt tents were unnecessary up high and for the rest of the trip bivouaced.

Stoves

Our stoves were both petrol and gas varieties. An MSR and Coleman "Peak" for base camp cooking and EPIgas stoves with propane/butane mix catridges (supplied by EPIgas) for use above base camp. The petrol stoves were excellent for base camp. We did take the Coleman onto the glacier once, but the cold conditions made it very difficult to light. It may have performed better if pre-heating paste had been available.

The EPIgas stoves were excellent up high. The self-sealing gas cartridges are efficient and easy to remove (avoiding possible gas leakage). We found the stoves to be particularly efficient when used in conjunction with stacking pots and wind shield.

Climbing rack

Obviously the rack one takes is a personal matter determined by the routes which are intended. One item not used in the UK, but indispensable in the Andes is the snowstake. These are ideal for the varied snow conditions found on Andean mountains. Long stakes are obviously safest but those of 45cm were easy to carry and use and provided good belays most of the time. In poor snow using two stakes in a "T" or digging down to better snow gave an adequate belay. Pitons (small sizes) were invaluable on Taulliraju and Rasac.

Miscellaneous

Compass and Altimeter:- it was not necessary to use compasses but it would seem prudent to take one. An altimeter however was useful. Both for checking barometric changes and as a reference against altitudes given on maps (which were found to be unreliable).

Sunscreens:- were supplied by Smith and Nephew (Nivea) and L'Oreal (Ambre Solaire). A strong sunscreen was necessary even in Huaraz (c.10000m) ie, at least Factor 8 until a tan is developed. In the mountains FI2 and/or a total block was used. All the products used proved excellent and any burning was due to our own carelessness in not applying screens early or often enough. The aftersun creams etc. were used often, not just after an overdose of sun, but as a general moisturiser and were considered invaluable.

Glasses:- should be of high quality - with the ability to screen out 98-100% UV as well as being dark enough to protect eyes from glare. It is important that they fit well around the side of the face, or have flaps to exclude sun entering (although such flaps can cause sweating problems).

It would be advisable to take all the items on the equipment lists (previous pages) out from the UK. Many second-hand clothing/equipment shops exist in Huaraz, but the prices are often exorbitant and the proprietors usually prefer to hire equipment rather than sell it (one example - a Sigg fuel bottle on hire for \$US1.00 per day). There is always a demand for equipment in Huaraz and trading between expeditions is common. It is often possible to sell off excess equipment in this way at the end of a trip.

APPENDIX IV

FOOD AND PROVISIONS

Due to a generous weight allowance (40kg) on our flight to Lima, we were able to take out the bulk of our high altitude food. The remainder of our climbing rations - chocolate, biscuits, drinks, etc. we were able to buy in Huaraz.

Everybody suffered from some loss of appetite up high. The amount of food consumed was therefore small relative to our actual needs. Sufficient fluid intake is probably one of the biggest factors in staying fit and healthy at altitude. Each individual should try and consume at least 1-2 litres a day; if possible of drinks containing sugar etc. for energy. We took a variety of drinking chocolate, jellies, tea and Tang.

At base camp we ate extremely well - buying all our provisions locally (fruit, vegetables and staples in the market; other goods in the "supermarkets") and transporting it on burros to base camp. We always had plenty of fresh vegetables and fruit - even eggs. Although some of these items required thoughtful packing and carrying it was well worth the effort to have such a varied diet. The one item which was very expensive to buy and most often difficult to get at all, was processed cheese. We also bought all cooking and eating utensils and plastic containers in the market.

Fuel is available in a number of hardware shops. We bought white spirits (benzena), which burns more cleanly than petrol. It is advisable to filter all fuel before using it in stoves, as often it contains very fine sediment.

Large sacks are available in the market which are ideal for packaging food/equipment in, and to make up loads for burros. It is best to keep loads as balanced as possible - two loads of 20kgs per burro is ideal.

Food and Provisions List

The food lists below are based on a 20 day excursion for 4 people. Assuming four days spent on the walk-in/out, eight days at base camp and eight days above base camp.

Base Camp/Walk-in/Walk-out

porridge	6 x 450g packets	tinned fruit	4 x 500g tins
bread	100 x small rolls	semolina	1 kg
flour	1 x 1kg bag	custard (instant)	10 sachets
salt	1 x 500g bag	Tang	10 sachets
sugar	2 x 1kg bag	jelly	2 packets
milk powder	3 x 400g tins	tea bags	2 x large boxes
milk (evaporated)	4 x large tins	milo	1 tin
potato (instant)	4 x 368g tins	fruit	30 pieces
potatoes (whole)	20 kg	tomatoes	25
eggs	50	onions	25
maggi soups	15 sachets	hot peppers	5
pasta (fresh)	3 x 500g packets	corn-on-cob	4
tomatoe sauce	6 x 250g tins	carrots	15
frankfurter sausages	4 x 240g tins	cucumbers	2
sardines	4 x 425g tins	avocadoes	5
tomato ketchup	2 bottles	red peppers	2
oil	2 bottles	stock cubes	6
mayonnaise	2 jars	herbs (fresh)	
margarine	4 x 225g pottles	spring onions	
jam	1 x 1250g jar	garlic	

Above Base Camp

sweet biscuits	80 individual pkts	sardines	4 tins (small)
chocolate	200 pieces	pate	4 tins (small)
boiled sweets	1 large bag	cheese (processed)	4 packets
brazil nuts	500 g	crackers	40 individual pkts
raisins	500 g	potato (instant)	20 x 130g pkts
chocolate biscuits	250 g	soups (instant)	40 sachets
Tang	16 sachets	yoghurt (instant)	10 boxes
drinking chocolate	40 sachets	condensed milk	6 tins (small)

Miscellaneous Items

toilet rolls	5	spoons	6
soap powder	2	forks	4
potscrubs	3	frying pan	1
matches	6 packets	large pots	2
lighters (gas)	2	small pots	1
plastic bags		plastic mixing bowls 1 large/1 small	
bucket	1	fuel (gas)	12 tins
plastic plates	6	fuel (Benzena)	15 litres
plastic soup bowls	4	filter funnel	1

Specimen Menus

Walk-in/walk-out

Breakfast	porridge, tinned milk, tea
Lunch	bread, tomatoes, cucumber, avocado, biscuits, fruit, Tang
Dinner	instant potato, sardines/sausages, tea/milo
Desert	semolina or custard

Base Camp

Breakfast	porridge, egg rolls, tea
Lunch	soup, bread/crackers, salads, Tang, tea, pancakes
Dinners	eggs and chips
	pasta with tomato sauce
	sausage casserole, mashed potato, vegetables
Desert	custard or semolina, tinned fruit
	tea, milo

Climbing

Breakfast	instant yoghurt, sweet biscuits, tea
Climbing	chocolate, biscuits, pate or sardines or cheese, nuts & raisins, boiled sweets, Tang
Dinner	instant soup, crackers, instant potato, pate or sardines or cheese, chocolate drink, tea, jelly

APPENDIX V

MEDICAL

Precautions for staying healthy in Peru should begin well before leaving the UK. Below is a list of the vaccinations it would be wise to have (or have boosters for). These should be started at least a month before you are due to leave, as they cannot all be given together and some require second shots two-four weeks after the first.

tetanus
typhoid
polio
yellow fever
hepatitis

A course of anti malaria tablets should be started before departure. Have a dental check-up and be aware of any allergies or persistent medical problems that other team members may have which you should be prepared for.

Dental and medical facilities are available in Lima, but those in Huaraz are very limited.

Biting insects were a problem in 1986, especially early in the season. A good repellent and a soothing agent for bites should be considered essential.

Incidents of illness/accident to expedition members

Gastro-intestinal disorders

Nearly everybody suffered at some stage and to different degrees from stomach upsets (see simple precautions). These episodes could usually be traced to having eaten something questionable in the previous day(s). Alkaseltzer tablets helped relieve stomach discomfort, and Imodium was excellent in dealing with diarrhoea.

Snowblindness

Dave suffered from snowblindness on one occasion, after the ascent of Alpamayo. The onset of symptoms occurred during the night and included severe pain in both eyes, a gritty feeling and impaired vision. We did not have the eye drops with us and so Dave took a strong painkiller. The symptoms were all relieved by morning, and Dave was careful to keep his glasses on all that day during the descent.

The damage leading to the snowblindness was probably incurred while climbing the previous day. We had been climbing on the shadowed SW Face and Dave did not put his glasses on until about 1pm. Presumably, despite the shadow, the UV was still intense enough over the long period of exposure to cause damage.

On reflection it is questionable whether such a strong painkiller should have been taken. Although the effects should have worn off overnight, it was a concern that the painkiller might be masking the symptoms and that more damage could have inadvertently been done to the eyes.

Altitude sickness

Nearly everyone experiences the benign effects of altitude sickness - mild headache, loss of appetite, etc., and we were no exception.

On two occasions however Dave was unfortunate to suffer from more serious and unpleasant symptoms. Conditions both times were very similar. The first occasion was on the Alpamayo-Kitiraju Col (c.5300m). Tiredness and nausea were experienced in the morning (after the ascent of Alpamayo). The nausea worsened and vomiting began about mid-day. We then began a rapid descent to Quebrada Areqocha (c.4200m) and vomiting ceased by the glacier edge (c.5000m). The second occasion was on the glacier beneath the E Face of Rasac (c.5300m). Nausea and vomiting began during the night and had not ceased by daybreak. Another rapid descent ensued (to BC c.4100m) and vomiting again ceased at the glacier edge (c.5000m).

On both occasions the onset of these symptoms was preceded by long, hard climbing days and large altitude gains. The improvement in the condition of the affected person is usually quite marked on descent, and Dave recovered quickly after a good night's sleep at lower altitude.

Accidents

On the approach to the S Face of Rasac, Roger tripped on the glacier when some honeycombed snow collapsed into a small hole. This resulted in a blow to the face which lacerated the cheek and mouth and knocked out a tooth. Although uncomfortable this was not a serious injury. Eventually the tooth did become infected however, but a course of penicillin kept this under control until we returned to England.

Simple Precautions

Do not drink the water in Lima or Huaraz without treating it first. We used "Potable Aqua" tablets without any problems. This also means avoiding ice in drinks and any uncooked food which may have been washed first. We found it best to avoid salads etc. in restaurants and satisfied our cravings for fresh fruit and salads by buying produce in the market and preparing it ourselves. Avoid *any* food which has not been well cooked at high temperature.

It is probably wise to avoid items like icecream and fresh cheese and milk. Dairy herds are not treated for disease as in the UK, so eating unpasteurised dairy products can put one at risk. It is possible to buy milk powder and tinned milk in Huaraz and some restaurants do make milkshakes, icecream and yoghurt from these.

Acclimatise carefully and be familiar with altitude problems. Information from UIAA Mountain Medicine Data Centre is especially recommended (see appendix II).

Contents of BC First Aid Kit

amoxycillin) antibiotics	general infections
flucloxacillin)	boils, wound infection
pentazocane	painkiller (strong)
paracetamol	painkiller (mild)
imodium (loperamide)	diarrhoea
chloramphenicol	eye infections, snow blindness
bonjela	antiseptic, pain relieving gel for mouth (ulcers)
transvasin cream	relief of muscular pain, sprains and strains
throat lozenges	

Large crepe bandage, assorted sizes non-stick guaze pads, steristrips, tape, scissors, first aid manual for mountaineers.

Individual First Aid Kits

Euhypnos (temazepam)	sleeping tablets
imodium (loperamide)	diarrhoea
temgesic (buprenorphine)	painkiller (strong)
paracetamol	painkiller (mild)
metoclopramide	nausea

Assorted non-stick guaze pads, large field dressing, steristrips, elastoplast, tape.

We had no qualified doctor in the team, so we limited our supplies to a small range of antibiotics, painkillers, and the usual stomach pills etc. The only drugs that were used in any quantity were imodium and euhypnos.

APPENDIX VI

SOURCES OF INFORMATION

1. American Alpine Journal 1979, 1982, 1985,
2. "Acclimatisation, Acute Mountain Sickness and Travel to High Altitudes". UIAA Mountain Medicine Data Centre, St. Bartholomews Hospital, London,
3. Climber and Rambler Oct, 1985,
4. Mountain 90,
5. Mountain Sickness: Prevention, recognition and treatment. Peter H. Hackett MD. (1980) The American Alpine Club, Inc,
6. South American Handbook. Trade and travel publications,
7. Trails of the Cordilleras Blanca and Huayhuash of Peru, Jim Bartle, (1981) J. Bartle,
8. Yurag Janka - Cordilleras Blanca and Rosko - Peru, John F. Ricker, (1977) Banff, Alberta and New York,

Maps

1. Anden von Peru - Cordilleras Blanca and Huayhuash. 1:300,000 (1952) A German map, and the only one of any detail that we were able to obtain in London. Available from Stanfords, Covent Garden,
2. Le Ande. Mario Fantin (1979), Available from the AC library. Contains many maps, of the Cordilleras Blanca, Huayhuash, Real and others,
3. The Southern Cordillera Real. R. Pecher and W. Schmiemann (1928), Contains map of NW C. Real (Ancohuma/Illampu), Available from the RGS,

APPENDIX VII

INTERIM REPORT

Name of expedition:

UK-NZ Andes Expedition 1986

Expedition members:

Julie-Ann Clyma (Leader)
Martin Hair
Dave Hood
Roger Payne

Contact address:

24 Aylmer Road
London W12 9LQ
Tel: (01) 749 5544

Objectives:

Attempts on -

Taulliraju (5830m) S. Face - Cordillera Blanca, Peru
Rasac (6040m) S. Face - Cordillera Huayhuash, Peru
Ancohuma (6427m) Buttress route - Cordillera Real, Bolivia

All ascents would be first ascents or first British and/or New Zealand ascents. Unfortunately while we were able to realise our first two objectives we were unable to make our planned visit to the Cordillera Real. The last minute pulling out of a cash sponsor meant we could not afford the internal flight between Peru and Bolivia. The alternative, a lengthy journey by bus and train took up too much of our available time which we felt was better spent in the high mountains.

Dates of expedition:

May - July 1986

10 May	depart London for Lima
11 May	depart Lima for Huaraz
12 May	arrive Huaraz
13 - 14	rest
15 - 17	walk-in: Santa Cruz valley, Cordillera Blanca, Peru
18 - 31	acclimatisation and climbing (Punta Union, Rinrijirka, Taulliraju, Alpamayo and Kitiraju)
1 June	walk-out
3 - 5	rest
6 - 8	walk-in: Cordillera Huayhuash, Peru

cont...

9 - 18 climbing (Rasac)
 19 - 21 walk-out
 22 rest
 23 - 24 walk-in; Huascaran
 25 climbing (Huascaran)
 26 - 27 walk-out
 28 - 31 rest
 1 July depart Huaraz for Lima
 2 July depart Lima for London
 3 July arrive London

Weather encountered

From personal observations and discussions with locals and other mountaineers, it was generally considered that the weather this year was much improved on recent years. The rainy season had ceased earlier than normal (there had already been a long spell of fine weather when we arrived 12 May, whereas in 1985 it was still raining persistently up until 22 May).

Periods of good weather were longer than in 1985 - we experienced 3 weeks of sunny, clear days in one stretch. The bad weather at worst constituted the odd day or night of rain or hail or snow (which was confined to the early part of the trip). Later, a "bad" day meant heavy/low cloud cover.

During our first excursion we had only 6 out of 19 days when there were afternoon or overnight showers of rain/hail. The worst of these periods of bad weather occurred during the attempt on Taulliraju and led to the attempt being abandoned.

Accidents and illness

Dave Hood suffered from altitude sickness on two occasions. Symptoms included lassitude, nausea and vomiting - these were alleviated on descent to lower altitude.

Dave also suffered from snow-blindness on one occasion. Onset was during the night and impaired vision. Vision was restored to normal by the following morning.

Roger Payne tripped on the Rasac glacier when some snow collapsed into a small hole. This resulted in a blow to the face which lacerated the cheek and mouth and knocked out a tooth. Although uncomfortable this was not a serious injury and the planned ascent continued.

Description of climbs

New routes

Rinrijirka (5810m) SE Face/couloir (D)

R. Payne, M. Hair

750m length

1 day to climb route and descend to bivouac

Start of route c.5000m

Very poor snow conditions constituted the main difficulties.

Rasac (6040m) South Face Direct (ED+)

R. Payne, M. Hair

1120m length

3 days to climb route

Start of route c.5200m

All pitches on the route were steep and sustained. Out of 22 pitches (and moving together), 5 were sustained Scottish Grade V and 3 were harder than V, ie. V/VI. The most difficult pitches were comparable with the hardest pitches on Minus One Gully, Ben Nevis. There were no natural resting places on the route, hence very poor bivouacs (ice ledges), the first flat ground being just below the summit cornice.

Rasac (6040m) NE Ice Fall (AD)

R. Payne, M. Hair

c.750m length

4 hours to descend

Taken in error as a descent route. Objective danger from falling icicles and seracs; not recommended.

Other ascents

Alpamayo (5947m) SW Face

J. Clyma, M. Hair, D. Hood, R. Payne

Kitiraju (6040m) N Face

R. Payne

Huascaran(6768m) voie normal

J. Clyma, R. Payne

Other attempts

Rinrijirka (5810m) E Ridge

D. Hood, J. Clyma

Taulliraju (5830m) N Face

D. Hood, J. Clyma

Taulliraju (5830m) S Face

M. Hair, R. Payne

Rasac (6040m) voie normal

M. Hair, D. Hood

Total cost

Airfares £500

Insurance £ 53

Kitty £200

Contingency £ 50

SUBTOTAL £803

x 4 = £3212

Personal £100

TOTAL £903

x 4 = £3612