

CAMBRIDGE QUIMSA CRUZ 2006

29th June – 25th July 2006

EXPEDITION REPORT



Looking north across the range from Ronan and Moira's second peak, towards their first peak (foreground right) and Cerro Yappuri (centre). The 6439m bulk of Illimani looms in the background.

CAMBRIDGE QUIMSA CRUZ 2006 EXPEDITION REPORT

Contents

1. Summary	3
2. Introduction and Background	3
3. The Team	4
4. Patrons	7
5. Pre-Expedition Planning	
5.1. Location and Previous Expeditions	7
5.2. Logistics	
5.2.1. UK to La Paz	8
5.2.2. Accommodation in La Paz	8
5.2.3. La Paz to Viloco	9
5.3. Paperwork	
5.3.1. Permits/restrictions	9
5.3.2. Insurance	9
5.4. Consumables	
5.4.1. Fuel	9
5.4.2. Food	9
5.5. Equipment	
5.5.1. Tents and other equipment	11
5.5.3. Communications	11
5.6. Medical	11
5.7. Grants and Sponsorship	11
5.8. Skills and Training	
5.8.1. First Aid	12
5.8.2. General training	12
5.9. Environmental/Cultural Considerations	13
6. The Expedition	
6.1. Getting to Quimsa Cruz	13
6.2. Climbing Following Establishment of Base Camp	14
6.3. Return to La Paz	24
7. Post-Expedition	
7.1. Further Travel and Returning Home	24
7.2. Final Comments	28
8. References	28
Appendices	
Appendix 1 – Equipment	29
Appendix 2 – Medical Supplies	30
Appendix 3 – Risk Assessment and Emergency Plan	31

1. SUMMARY

A small team comprising current and former members of Cambridge University Mountaineering Club undertook an expedition to the Quimsa Cruz range of Bolivia. The four-man and one-woman team established a base camp in the western part of range following seven days ferrying kit over a 5200m pass after failing to find any pack animals to hire. Despite initial and unexpected bad weather, extraordinary amounts of choss and a diet containing far too many lentils they succeeded, over the following two weeks, in climbing six peaks of between 5112m and 5550m in height. These involved climbing both rocky ridges, most of which were very loose, and dry glaciers, although the latter appear to be undergoing very rapid retreat in the area and hence were not in great abundance.

Most of the routes and peaks are thought to have been first ascents, or at least first British/Irish, although the lack of readily available data on previous climbing in the area hampered efforts at pre-expedition research. The routes were all graded at Alpine PD/PD-.

2. INTRODUCTION AND BACKGROUND

Alan Dickinson, expedition leader:

"I first visited the Quimsa Cruz in 2003. The scenery and the isolation of the area made an immediate impression and, though only equipped for trekking at that time, it had been in my mind ever since to return to climb. This idea was kindled by the suggestion that most of the cordillera's peaks 'remain unclimbed' [Harper et al, 2002]. I was half of a small expedition to Mongolia in 2005 and returned eager to explore other remote mountains.

Finding volunteers for a team proved easy. Too easy, in fact. I sent an email round Cambridge University Mountaineering Club's (CUMC) list and received upwards of fifteen enthusiastic pitches from climbers who liked the sound of the trip and wanted to join me. I had had it in mind to take a team of four, and narrowing it down was something of a headache. Even after eliminating a few who were obviously unsuitable there remained difficult decisions to be taken. Finally I decided to take a team of people who all knew each other and would be likely to get on with each other well, even after an extended period of time. The group ended up being five to make the choices easier – a number that sounds awkward for mountaineering, but ended up being fortunate, as will become apparent. One very strong applicant with high altitude experience in the Andes ended up not being selected because, despite his skills, he was unknown to me or anyone else who would be on the trip. Whether I should have placed so much emphasis on social cohesion within the team at the expense of climbing ability is impossible to say, and I am sure that others would have done things differently. When all is said and done, you have to live with each other, and no-one else, for a month.

I was happy with the team. Between us we had experience in the Alps, Andes, Himalaya, Mongolia, Greenland, Iceland, Norway and Scotland. We all knew each other from CUMC, were aware of each other's abilities and had confidence that we could go to Bolivia and have a great time climbing new peaks. The excitement and enthusiasm was infectious".

3. THE TEAM



The team from left: Tom Stedall, Ronan Kavanagh, Alan Dickinson, Moira Herring (front) and Sam Hawkins

The team consisted of five members, one female and four male, aged between 23 and 26. Four members of the team were British and one Irish. A brief summary of the team members' skills and experience is given below.

Alan Dickinson (age 24, British)

Alan has been climbing for around five years. He cut his teeth on Wye Valley limestone but has since done more climbing in the Peak District than any other region. His experience on British rock is very wide ranging, and his favourite regions are Snowdonia, Cornwall, Lundy and Southern Sandstone. He was the president of the Cambridge University Mountaineering Club in its centenary year, and went on to serve on the club's committee as librarian.

Supporting his technical climbing, Alan has considerable trekking experience. He visited the Quimsa Cruz in 2003, that trek being the inspiration for this expedition. He has also completed long-distance walks in the Chilean Andes and the Indian Himalaya and has traversed the Cuillin Ridge solo.

Alan's expedition of 2005 to Mongolia gave him valuable experience of planning and participating in exploratory mountaineering in remote regions. The team of two survived

bad weather, worse roads and a national diet that consists solely of boiled mutton to climb Alpine-style routes in Mongolia's two highest regions.

Alan has now re-located from the flattest part of the country to one of the hilliest ones - Keswick, Cumbria – where he can climb to his heart's content (when it isn't raining), and teach maths in his spare time.

Tom Stedall (age 23, British)

Tom has been climbing for around five years. Although originally a grit climber in the peak district he has since spent most of his time on limestone in the Wye Valley. He has climbed all over in Britain and in the Alps, in particular in Cornwall, Devon, Dorset, The Wye Valley, Avon Gorge, The Peak District, North Wales, Lochaber, The Cairngorms, Skye, The Outer Hebrides and Chamonix.

He is also a keen Scottish Winter Climber, and this year will be his 5th season. Further afield, he has climbed waterfalls in Kandersteg, Switzerland, to WI3, and is a keen skier, with experience of skiing and ski touring in Kandersteg, Chamonix and Slovakia.

In 2005, Tom took part in an expedition, supported by the BMC, to an unexplored region of Greenland's coastal ranges to attempt new routes. He was closely involved in the complex planning of this expedition. The whole experience made him decide expeditions were what he really wanted to do, and Bolivia was next.

When not climbing, Tom did a degree in Physics. Since then he has worked as a maths and physics tutor, a climbing instructor and a rope access technician, but he is now doing a PhD in physics at Bristol.

Sam Hawkins (age 25, British)

Sam is a keen climber, with experience of high-altitude trekking and mountaineering. With the Lake District his back yard, Sam began his climbing career on polished wet routes in Borrowdale. He soon found his real love was long mountain routes, and began seeking them out in the Lakes and across Scotland, with his favourite day in Scotland being a traverse of the Cuillin Ridge.

Introduced to Scottish winter mountaineering by fellow CUMC members, Sam has climbed regularly over the last three seasons; with last season being a particularly good one, including trips up Comb Gulley, Green Gulley, Crowberry Gully, Quartzvein Scoop and Taxus. He also enjoys summers in the Alps, and last winter spent some time skiing and icefall climbing at Kandersteg.

Sam fell in love with the Himalayas in 2000, while trekking in Nepal. Since then he has returned to trek a number of times, and last year climbed Stok Kangri (6200m) and Kang Yatse (6400m) in icy conditions in October.

Sam lives in Edinburgh where he works for an environmental consultancy.

Moira Herring (age 26, British)

Moira's first experiences of rock consisted of driving up the M1 every Sunday to the

Peak District. Here she became well acquainted with the delights of Peak District gritstone; however she soon discovered that there was more to life than grit and embarked upon exploring other regions both in Britain and abroad. Several years living near to the Lake District have turned her into a firm fan of the area and a particular love of climbing on remote mountain crags with long walk-ins and an exploratory feel, such as Esk Butress. This sense of adventure also instigated her winter climbing career and she has spent time each winter since 2000 climbing in Scotland and, on one very lucky occasion, in Wales.

Moira's zeal for the mountains has taken her round Europe, to climb in the Dolomites, the Pyrenees and the Alps, and further afield, including a trekking trip to the Annapurna region of Nepal, and a mountaineering trip to central Chile in December 2003. Here she converted to carnivory after 17 years of vegetarianism and, more importantly, spent 7 days climbing Cerro Marmolejo (6,100 m), which fuelled a desire to further explore the high peaks of South America.

Prior to discovering climbing Moira was a keen walker and explorer, and undertook extensive independent travel as well as taking part in a three-month botanical expedition to southern Tanzania. This gave her considerable experience of expedition planning and of life in remote and challenging environments. She enjoys conservation work and spent 6 months in total during 2003 and 2004 building footpaths in remote areas of Iceland, with some long-distance trekking in her time off from this work.

Moira now lives in Lancaster and works as an ecological consultant.

Ronan Kavanagh (age 26, Irish)

Ronan fell for the mountains five years ago when trekking in the Huaraz valley in Peru where he discovered his love for high altitude and stunning mountains in remote areas. He continued to explore this ambition by trekking in the mountains and jungle of Peru and continued along this theme in Ecuador, the Blue Mountains in Australia and eventually the Himalayas.

He was introduced to rock climbing in Glendalough when an undergraduate in University College Dublin seven years ago but has become more ambitious since arriving in Cambridge in 2004, climbing extensively in the Peak District, Wales and Cheddar in Britain and also in Fontainebleau and Chamonix in France. Although stuck in the grit habit, he has a soft spot for limestone venues such as Wintours Leap in Wales.

One season in the Alps in 2005 and some time spent in Scotland diverted his attention to mountaineering and this led inevitably to this expedition to Bolivia.

Ronan's other interests include skiing, with two seasons in the French Alps and cross country skiing in Australia, fell running (particularly in the Dublin and Wicklow mountains), mountain-biking and cross country running. He is currently studying for a PhD in Engineering.

4. PATRONS

The expedition was honoured to be supported by the patronage of two eminent members of the British climbing community: Colonel Henry Day and Sir Chris Bonington.

Colonel Henry Day

Henry Day is a retired officer in the Royal Engineers. As well as serving in that regiment, he also spent a spell as Commanding Officer of the Cambridge University Officers' Training Corps. Col Day is an assistant honorary secretary of the Alpine Club, and president of the REMEC, the mountaineering club of the Royal Engineers. He is president of the Cambridge Alpine Club.

Expeditions overland to Iran and Pakistan whilst in the CUMC led on to Tirich Mir, Annapurna, Everest and several regions of China. On Annapurna, Colonel Day led an army team up a new route that beat a rival team, led by Chris Bonington, to the summit. His interest in mountaineering continues, and he has recently returned from an expedition in South America.

Sir Chris Bonington

Sir Chris' climbing career can be said to have begun in the Alps in the late 1950s during his commission in the Royal Tank Regiment, when he made the first British ascent of the South West Pillar of the Drus in 1958 and, in 1961, the first ascent of the Central Pillar of the Freney on Mont Blanc, one of the most difficult climbs of its day and still considered a classic of the region. In 1961, after a brief flirt with a 'conventional career', he famously 'chose to climb'. The following year he made the first British ascent of the North Wall of the Eiger.

Since these less-than-humble beginnings Sir Chris' career has included expeditions in most of the world's major ranges, including Patagonia, Antarctica, central Asia and the Himalayas. He would describe his 1968 descent of the Blue Nile as one of the most hair-raising of all his experiences, one which steered him back towards a focus on mountains. His expeditions have led to personal and team successes on many pioneering new routes including, amongst many others, the South Face of Annapurna, the South West Face of Everest, The Ogre, The West Ridge of K2, and the Central Tower of Paine in Patagonia.

Outside of expeditions Chris finds time to enjoy his local Lake District hills, as well as to perform his duties as current Chairman of Berghaus, Chairman of the Mountain Heritage Trust, Chancellor of Lancaster University and honorary fellow of several British universities.

5. PRE-EXPEDITION PLANNING

Location and Previous Expeditions

The location of the expedition, the Quimsa Cruz range in Bolivia, was inspired by Alan's earlier trekking trip through the area as previously described. The range is the smallest and lowest of Bolivia's cordilleras and has around 80 peaks of between 4,900 and 5,800

metres in height. For these reasons the cordillera has seen relatively few expeditions and it is thus widely held to offer the greatest opportunity for new routes [Brain, 1999].

Alan's idea was to investigate the peaks accessible only from the trekking route through the area, rather than the track bordering the range to its south, because many of the documented ascents appeared to have utilised the latter. The trekking route ran from Viloco, to the west of the range, to Mina Caracoles to the east; buses run to both but we used the former as it was nearest to our planned climbing area.

Alan Dickinson: *"We did what research we could, but it quickly transpired that little had been written before about the Quimsa Cruz in the mountaineering journals. Perhaps Harper et al had been right. Equally likely, nobody had bothered to write about their achievements. I appreciate the efforts of people who meticulously record their achievements for posterity, but have every sympathy for those who would rather spend their time otherwise. Going climbing, perhaps?"*

Yossi Brain's [1999] book is the most helpful source of route descriptions for Bolivian mountains. The other main source is Jill Neate's [1994] book, which aims to list every climbed peak in the Andes, giving exceptionally brief notes on the directions the summit was approached from, where known. This we found difficult to interpret, since routes had clearly been described as closely as possible from sketch maps which did not always match closely with the Bolivian Government's IGM [1976] version. It seemed that there were almost certainly new mountains to climb but that we would not know for certain which ones. Get out there and climb a few then, we reckoned".

We also worked closely with the Sarah Griffin who led the University of London expedition in 2004. She described the routes attempted from the west side of the Quimsa Cruz from the valley of Laguna Laram Khota. Since we aimed to approach from the east there was not much we could learn from this expedition other than some logistical details.

Logistics

UK to La Paz

The team all flew out separately due to differing time constraints although we all aimed to reach La Paz by the 28th June where we would spend the first 5 days acclimatising. Other than timing this side of the logistics was straightforward as the flights were all booked with local travel agents.

Accommodation in La Paz

We booked a room in Hospedaje Milenio for the group to ease the settling in process and planned to stay there for the first 4-5 days during acclimatisation. Our experience of this hostel was very positive and would recommend it highly to anyone seeking an exceptionally friendly, small and relatively uncommercial budget hostel within walking distance of the city centre.

Hospedaje Milenio:
Tel.: +591 71463854; Fax: +591 4 6440889
E-mail: milenio@boliviahostels.com

La Paz to Viloco

There are two ways to reach Viloco: bus or hiring a jeep. We decided to take the bus for no reasons other than cost. We knew the jeep could cost us \$200 compared to a \$1 each for the bus. The buses leave from El Alto (15 minutes by taxi from La Paz centre) on alternate days and take approximately 10 hours.

From Viloco we planned to hire mules or llamas to transport our gear to base-camp. This plan had to be altered somewhat on arrival in Viloco owing to lack of availability of pack animals, as detailed later in this report.

Paperwork

Permits/restrictions

At the time of travel there were no visa or other restrictions on travel to Bolivia. No permits were required for climbing in Quimsa Cruz.

Insurance

All team members took out BMC insurance to cover both the duration of the expedition and any planned subsequent travel.

Consumables

Fuel

We purchased 20 litres of unleaded petrol in La Paz, which we carried in Jerry cans from La Paz to Viloco and then to base camp, for use in our MSR and Primus Omnifuel stoves. Whilst buying Jerry cans we also bought other essential non-food supplies including soap, scourers, lighters, twine, and toilet rolls.

Food

All food was purchased in La Paz and we did not rely on any de-hydrated meals or army rations. We tried to have a mix of rice, pasta, pulses, vegetables, nuts and dried fruit as well as the all important bottles of whisky for emergency situation. A small amount of the food we had purchased we gave away in Viloco because the length of time spent carrying equipment to base camp meant we would need less food once established in camp. When staying in Viloco we were fed by the lady who runs the village's only guest house, who makes very fine dinners (with the exception of one dud night when tongue was on the menu).

We bought a pressure cooker in La Paz to facilitate cooking at altitude. This paid off for the rice and lentils but we did not succeed in perfecting pressure-cooked pasta, which invariably ended up as a half-dissolved goo of wheat starch mixed with nuggets of uncooked pasta. The quinoa is a story in itself.

Supplies purchased were as follows:

Carbohydrates

Pasta	10kg (5kg given away in Viloco)
Rice	10kg
Quinoa	10kg*
Flour	5kg (3kg given away in Viloco)
Sugar	3kg
Oats	10kg (5kg given away in Viloco, which in hindsight was ill-advised)
Dried fruit	10kg
Biscuits	10kg

Protein

Dried beans	5kg (couldn't use as took too much fuel to cook)
Lentils	5kg
Tuna	18 tins
Sardines	6 tins
Beef	9 tins
Nuts	10kg

Vegetables

Carrots	3kg
Onions	3kg
Beetroot	1kg
Potatoes	3kg
Garlic	10 bulbs

Misc

Hot chocolate	3kg
Tea	100 bags
Mate de coca	Several packets
Instant coffee	200g
Dried milk	3.6kg
Jam	4.5kg
Cooking oil	0.5L
Dried soup	20 packets
Stock cubes	24
Cumin, chilli, oregano, cinnamon	
Whisky	2L

The supplies were typically prepared and consumed as follows:

- *Bivi and route food*: Tinned meat; packet soups; pasta; fruit and nuts; biscuits.
- *Camp breakfasts*: Hot milky sweet tea/coffee; porridge with jam/chocolate; rice pudding with jam/chocolate (when porridge ran out).
- *Camp dinners*: Slimy pasta with tuna; lentil dal with/without vegetables, and rice, or quinoa or pasta when the rice ran out (not popular), supplemented with sardines or canned beef on special occasions.
- *Treats*: Chapatis and jam; fried potatoes; hot chocolate; whisky.

* *Quinoa is a South American grain which resembles frogspawn when cooked. Although it is hailed by the western health-food establishment as a wonder food, because unlike*

any other grain it is a complete protein, the team were not convinced by its health-giving properties, finding it both indigestible (particularly in its half-cooked pressure-cooked state) and utterly foul tasting. The latter problem was exacerbated by the generous amounts of soil and grit mixed in with the quinoa in an approximate 1:3 ratio. The majority of the 10kg of quinoa remained untouched at the end of the expedition and was disposed of in a dedicated sacrificial ceremony.

Equipment

Tents and other equipment

We were easily able to collect the equipment required for the expedition. Most of what was required we already owned. In addition to basic mountaineering kit, we took two all-purpose racks and two sets of half-ropes. We took two tents; two team members already owned two-man Quasars and another purchased a Marmot Thor. Having three tents made it much more comfortable and meant that food could be kept 'indoors', away from the llamas and wild cats. We used British Army issue bivvy bags for all routes.

We took three stoves: an old MSR, an MSR Dragonfly and a Primus Omnifuel. We also carried repair kits for both makes. The only kit purchased in Bolivia was tat, which cost the same there as here. Our kit list, used for guidance when packing, is detailed in Appendix 1.

Communications

We decided to carry a Satellite phone – although rescue from our area was unlikely to be possible, it can be used to get medical advice and from previous experience it is of great psychological value to have someone to talk to in an emergency. As it was, we enjoyed being able to speak to loved ones (who we considered worth the princely sum of £3 per minute). We hired the satellite phone, a Motorola SS9505 on the Iridium network, and charger from adamsphones.com at a cost of £4 per day. We also purchased a Sunlinq 12W solar panel to recharge it; at £140 this was a large purchase but a good investment for future expeditions.

Medical

All team members had at least some previous first aid training, but in order to get up to speed as a team we all went on a three-day expedition first aid course run by Guy Risdon of Adventure First Aid (www.adventurefirstaid.co.uk), as detailed in Section 5.8.1.

We all purchased basic first aid supplies from Guy. Every team member therefore carried a well-stocked personal first aid kit. In addition we compiled a group first aid kit as detailed in Appendix 2. The equipment and drugs in this were borrowed from a kit compiled for an expedition to Greenland the year before, which one team member had been involved in, saving us much effort. The final kit was very compact and light, fitting into a small dry bag. For reference we also carried a compact first aid manual.

All team members completed a pre-expedition medical questionnaire containing personal, next of kin and GP details, immunisation history and any relevant personal

medical information. We carried copies of these and copies were also archived online, such that a chosen UK contact had access to them.

A full risk assessment and a crisis management plan were produced, as detailed in Appendix 3. This included arranging two contacts in the UK willing to be contacted at any time during the expedition in emergencies.

Grants and Sponsorship

We were delighted to be supported by both the MEF and the British Mountaineering Council, who both donated £500. Without their financial support the expedition would have been very difficult for most of the team to justify.

Alan: *“I went to the interview desperately hoping that I would be able to convince the screening committee that there was enough new routing to be done in the Quimsa Cruz to make their support worthwhile. They had backed an expedition the previous year to the south side of the cordillera, but we planned to approach from the north. I was a little nervous as I tried to explain that we thought there was plenty of new ground to explore. The chairman, Lindsay Griffin, looked up at me: “But what makes you think that anyone has approached from that side before?” Excellent”.*

Although a considerable effort was made prior the expedition to raise additional funds through sponsorship, this was unsuccessful.

Skills and Training

Other than the expedition first aid training the team did not participate in any other formal training. The group did develop their own skills through their own activities both in winter and summer conditions.

5.8.1 Expedition First Aid

The whole team attended a three-day residential expedition-specific first aid course run by Adventure First Aid (www.adventurefirstaid.co.uk) in Devon. This was an extremely well organised, informative course, with a sound grounding in putting techniques into practice. It focused not only on skills and training appropriate for remote medical emergency situations, but also more specific medical aspects of our expedition such as cold injuries and AMS.

5.8.2 General Training

The team were extremely active for the year before the expedition. Highlights included a week in the Alps which was marred by illness and some minor doses of AMS. This was an important week for the team members for two reasons. Firstly, it reinforced some of the lessons learnt on the first aid course about AMS – this was dealt with seriously and immediately, with the affected team members evacuated from a high altitude area as soon as the symptoms were evident. Although there was also a stomach bug hampering some of the team members' health we took no risks and assumed that symptoms were AMS. Secondly, the trip taught us how to deal with many setbacks, and not to be too ambitious with our routing plans.

We also had an active winter in Scotland and spent a lot of weekends rock-climbing in the Peak District, Lake District and Bristol. We tried to climb together as often as possible during these trips.

Environmental/Cultural Considerations

Consideration was given during the expedition planning to the minimisation of the expedition's in-country impact on the environment. Our waste management strategy was to bury all human waste at least 30m from any running water (with burning of paper), and to carry all other waste back to La Paz. This was modified on arrival at base camp when we realised that carrying all food waste out would be impractical. Non-biodegradable waste was still carried out but biodegradable waste (including the quinoa) was buried in a pit near to base camp at the end of the expedition.

In order to support the national/local economy we bought all food supplies in La Paz and supplemented these with some extra supplies purchased in Viloco. In Viloco we stayed at the village's one 'guest house', where we also took meals. In La Paz we spread our custom between a variety of small, local shops and stalls and tended to eat at 'local' rather than tourist places – not least for their huge platefuls of delicious cheap food!

6. THE EXPEDITION

Getting to Quimsa Cruz (29th June – 13th July)

Alan: *“La Paz, the world's highest capital city, is built in a steep sided valley, and is an exhausting place to walk around, particularly when arriving from sea level. Following our arrival we stayed a few days to acclimatise and organise the food, fuel and equipment. Certain members of the expedition found this an ideal opportunity to also catch up with the events of the World Cup.*



View of La Paz from El Alto, looking east

While part of the team went off to buy 140kg of food, I went to the Instituto Geographico Militar to buy an extra copy of the Quimsa Cruz map. The man there explained that they only had one original colour copy of the sheet left, and that I would have to buy photocopies. He took two, and paid for them at the official cash desk. As I was about to leave, the official quietly asked if I wanted an original. I was surprised, and didn't understand what he meant at first. He put the map in a bundle of other papers and walked out with me to the gate. There the map was exchanged for 40 Bolivianos (£3). No receipt: just a happy Bolivian wandering off with some unearned money and me wondering whether I had just taken his government's last map of the Quimsa Cruz. Later I also visited the British Embassy to notify them of our plans.

We travelled by bus to Viloco, a day's uncomfortable journey away. On a clear, cold evening we looked up at the mountains, excited to be heading into them the next day. Or so we thought.

The ten days that followed were frustrating and exhausting. It began with a fruitless search for pack animals to carry our loads for us. We had relied on using llamas or donkeys for this, but rural Bolivians are some of the least business-minded of people, and no-one was interested. "No hay animales en Viloco" was a frequent response: "There aren't any animals in Viloco". The irony of herds of llama strolling freely through the streets was noted bitterly. Unlike Nepal and India, portering is not common, and the local miners did not seem interested in getting paid to carry any loads into the mountains.



We were faced with no other option than to carry everything in on our backs, 1000m up to a pass at 5200m and then almost as far back down into the valley beyond. Our food and climbing kit suddenly looked a lot heavier, and we could see this was going to require a lot of trips over the pass. We lost count of how many trips it took and tried to look on the bright side, telling each other how wonderfully fit and well acclimatised we'd be after it. But in truth it was a long, hard slog: physically and psychologically. Every day spent load-carrying was a day less climbing, and we knew that all of the kit, minus the food, would have to be carried back out again. One member of the team was struggling to acclimatise, and it took a few day trips up and down before he felt comfortable going over the pass. Despite being an experienced climber, he had never been to this kind of altitude before and never properly acclimatised".



View towards our climbing area from the pass

Climbing Following Establishment of Base Camp

Please note that all grid references quoted related to the grid system on Bolivian IGM maps, based on the Provisional South America 1976 datum. Heights given are from GPS or map as stated (the latter was found to be somewhat inaccurate on several occasions). The relevant map sheet is 6143 III (Mina Caracoles).

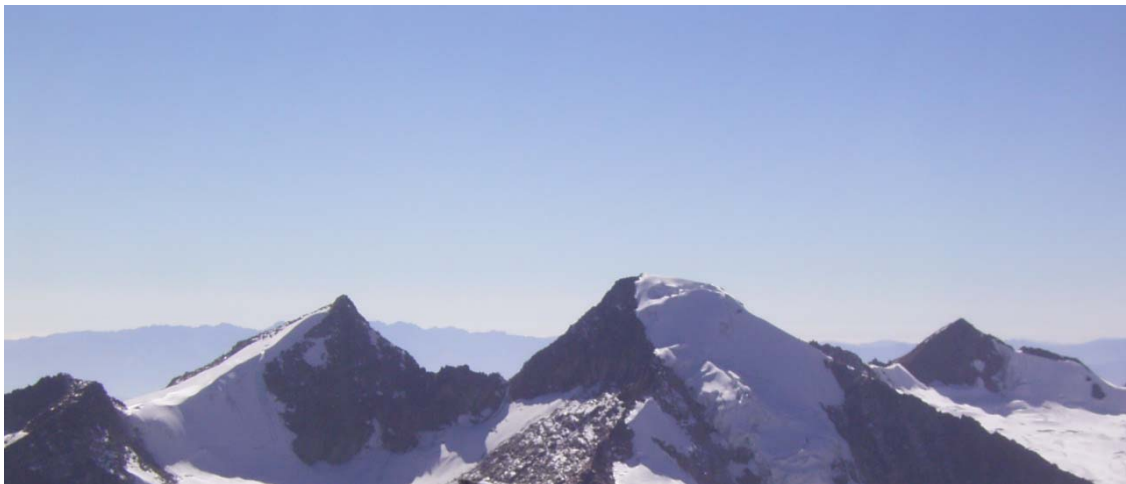


Base camp, looking north-east

Alan Dickinson: *“Eventually we were all together at base camp [grid ref 6690 81326], with all of our gear and food. The camp was picture perfect, flat ground next to a clear stream, just below a dazzling blue lake, with the peaks of Nevado San Lorenzo, Cerro Yaypuri, and other unnamed peaks dominating the surrounding skyline. The climbing, however, looked less than perfect. Lured by descriptions of granodiorite spires “likened to the Chamonix aiguilles by a number of climbers” [Brain, 1999], we had envisaged clean faces and buttresses, with numerous undiscovered classic routes. But now with a closer view*

much of the rock was shattered and loose. Also alarming was the obvious retreat of the glaciers. Although we had never expected them to conform to the huge blue regions marked on our 1976 map, they are now fragmented and confined to the very tops of the mountains or deep shaded valleys. A little post-expedition reading confirmed the rapid retreat glaciers in the region [Francou et al, 2003].

Despite this initial outlook, there were a number of routes which appeared immediately inviting: an impressive ridge line leading to a striking pyramidal shaped peak – unnamed, and as far as our research had ascertained, unclimbed; and a steep looking glacier which appeared to provide a route through an otherwise impenetrable head-wall to the south of the valley in which base camp was established, giving access to number of high peaks”.



Pyramidal Peak (left) and Cerro San Lorenzo (right)

Ronan Kavanagh: *“Sam and Moira took the opportunity of our first rest day after seven days of hauling gear to go on an afternoon reconnaissance of our first routes. Moira climbed to the base of a promising-looking glacier which spilled down in a north-easterly direction from the western side of the range, while Sam surveyed a route up to a peak to*

the east. Both returned with good news that both routes looked achievable, although both appeared to present some degree of potential objective danger. The glacier ascent had several objective dangers including seracs and rockfall, while the ascent of the “Pyramidal” peak seemed to involve a potentially loose ridge ascent. Once the risks were discussed and assessed it was decided Moira and I would attempt the glacier ascent while Sam, Tom and Alan would attempt the “Pyramidal” peak”.

Alan: “After eating a big breakfast, we packed and got ready to head off to bivvy beneath the routes, excited to be finally ready for climbing. However, over the course of the morning, unfamiliar clouds gathered further down the valley, and gradually edged their way towards us. As the sky had been otherwise crystal clear since arriving, and being unfamiliar with the local weather patterns, we decided to wait a couple of hours to see what panned out. This decision turned out to be sound, as by mid afternoon we had been transported from the dazzling South American cordillera, back to Rannoch Moor in late November – cold, dark, and snowing.

The next day the weather patterned repeated, cold and snowing in the afternoon. Spirits were low, and we were frustrated that after all the effort, we still couldn’t begin to climb. If the weather stayed bad for much longer, all of our plans might be scuppered. I’m sure that most expeditions have a moment like this, when everything seems harder than planned, when things seem to conspire against you, when you wonder whether it was worth all of the effort and expense. But partly this is what makes an expedition: if it were simple, straightforward, easy, then the high points would not be half as rich or rewarding”.

Ronan: “On the third day the weather was similar but slightly less unpleasant in the morning, so we decided to at least make way towards our intended bivvy spot for our routes and keep a close eye on the weather as the day progressed. The day cleared rapidly and both parties were soon nearing their bivvy sites”.

‘Pyramidal Peak’ (16th-17th July)



**Pyramidal Peak: 5508m
(GPS), grid ref 6726 81322.**

**Climbers: Alan, Tom and
Sam**

Grade: PD-

Sam Hawkins: “After a night’s bivvy around 4800m, we started before dawn, heading up a through a boulder field and increasingly steep slabs to gain the ridge crest.

Technically, the climbing was reasonably easy scrambling, although the looseness of the rocks required extra care. Tom was finding going tough due to the altitude, but we still made reasonable progress, and were rewarded with stunning views of sunrise as we gained the ridge crest. The ridge itself was composed of enormous loose blocks, and it sometimes felt as if the whole ridge was in danger of collapsing. A short descent followed onto the glacier leading to the summit. This glacier gave a short plod to the top, made slightly awkward by the foot-high penitentes.

Tom was finding the altitude increasingly difficult on the last stretch, and we decided not to hang around on top. His symptoms worsened as we started to descend, suffering headache and feeling exhausted. However, we knew the route down was relatively easy, and were able to descent quickly back to the bivvy”.

‘The Glacier’ and adjacent peaks (16th-17th July)



***‘The Glacier’ and adjacent peaks:
5460m (map), grid ref 6686 81304
(peak to right)
5550m (map), grid ref 6688 81303
(peak to left)***

Climbers: Ronan and Moira

Grade: PD-

Ronan: “The approach followed a steep llama path up to the hanging glacial valley, Cumbre Ventisquero, and onto the moraine. After 1-2 hours of picking our way up the moraine, we found ourselves at the foot of the glacier and a very murky-looking melt-water stream. During the ascent we stopped frequently to assess the potential risks of the seracs which lay approximately two-thirds of the way up the glacier where the gradient appeared to reach 40 degrees. We bivouaced just below the glacier beside a stream where we listened to the ominous sound of rockfall throughout the night.

A late start (6.30am) the next morning put some pressure on to ascend the glacier as quickly as possible before the sun hit the upper portion of the glacier where the seracs lay. We roped up immediately despite the shallow gradient and made our way up the boulder and rock strewn glacier. The silence was broken by the crunch of our crampons on near-solid ice and punctuated by creaking of the glacier underfoot and shattering penitentes as the temperature rose. The sounds, sights and unfamiliar territory made both of us uncomfortable but we persisted in the knowledge that we were perhaps the first party to ascend the glacier. We soon found ourselves on the steep section, where our discomfort was gradually replaced by excitement and awe at the beauty around us. The seracs looked less and less threatening as we approached and we were soon level with them and near the top of the glacier.

The top of glacier (~5400m) brought us to the top of the western ridge of the Quimsa Cruz and a view of some of the peaks along it. After a brief rest we made our way towards the first of two summits. This bore an uncanny resemblance to the Aiguille de Midi near Mont Blanc. The ascent was a little arduous at such a high altitude, and carrying full bivvy kit, but we soon found ourselves perching on some precarious boulders on the peak (5460m). From here we had a spectacular view of the Quimsa Cruz and the eastern side of the range, including Nevado San Lorenzo. We briefly watched the other team on their descent of the glacier near the top of 'Pyramidal Peak', before they disappeared from view behind the rocky ridge at its base. After a well-deserved break we made our way to the second summit, a dome-shaped 5550m peak further east. Although technically very straightforward this was a particularly exhausting climb due to the dinner plate-sized penitentes, resembling porcupine spines rising from the surface of the ice, which shattered each time we stood on them. From the summit we surveyed the descent which would take us down a valley further south.



Bivouac site below the glacier (penitentes visible on the glacier surface)

The difficulty with using a map from 1976 is the contours can change dramatically due to glacier retreat. Unfortunately we fell into this trap, planning the descent from the map rather than ground reality. What we thought would be a relatively easy walk down a glacier turned into a hazardous abseil down a steep and loose cliff which would have once been under ice. The cliff was followed by a very loose scramble onto the glacier. We made our way as quickly as possible down the glacier between precarious boulders which found themselves perched on 5 foot-high ice columns as the ice around melted. By the late afternoon we were scrambling down the moraine and to the valley below. By this stage I was starting to suffer from mild dehydration which made the final leg of the walk-out quite exhausting. But we were back by 7pm where we met the other half of our team who had their own tales to tell".



Ronan amongst perched boulders on the descent

'Miner's Peak' (19th July)

'Miner's Peak': 5112m (map), grid ref 6682 81326, grade II scramble

Moira Herring: *"The following day I enjoyed my first all-over body wash and spent some time recovering the feeling in my extremities. Ronan and I had decided to have a rest day but Alan and Sam were raring to go again and were preparing to set off for The Glacier, intending to use this to access the peak immediately to its right. We were all struggling a bit to get inspired by the piles of choss all around us. Tom was feeling pretty wiped out after his AMS on the 'Pyramidal' peak and didn't want to go up high again with Alan and Sam immediately, so the three of us decided to spent a day exploring the low peak nearest to camp and doing some further reconnaissance at the same time.*

After a hearty breakfast of rice pudding and pints of sweet coffee we worked our way around the base of the mountain, to a small lake which was beautifully blue and still in a hidden dip half way up the mountain. From here we



Tom on the final ridge scramble

could see the whole of the western ridge of the range, between Cerro Yaypuri and Cerro Bengala, which was a bit disappointing as it reinforced our suspicions about the impenetrable headwall forming the eastern flank of the ridge. Continuing up our peak we arrived at a col below the final ridge, which was a pile of perched boulders, as ever, but seemed a little more solid than others we had encountered. Scrambling up the ridge we encountered a series of small mines, which was fairly astonishing given the altitude and remoteness of the area. The ridge provided an entertaining scramble of several hundred metres, leading to a rocky platform at the summit, where there was an extremely well-constructed cairn. Although assured by this, and by the mines, that many had trodden this ground before, we remained convinced that ours was likely to be the first British-Irish ascent!

From the top we further scoped the ridge near Cerro Yaypuri, Ronan and I desperately seeking a way up to this peak. All the possibilities visible to us looked horrendous – very unpleasant if not completely suicidal - and we were fairly put off even attempting any of them.

We arrived back just as Sam and Alan returned from their route and, on discussion with the others, Ronan and I decided to set off the following day for an attempt on San Lorenzo via 'Pyramidal Peak'".

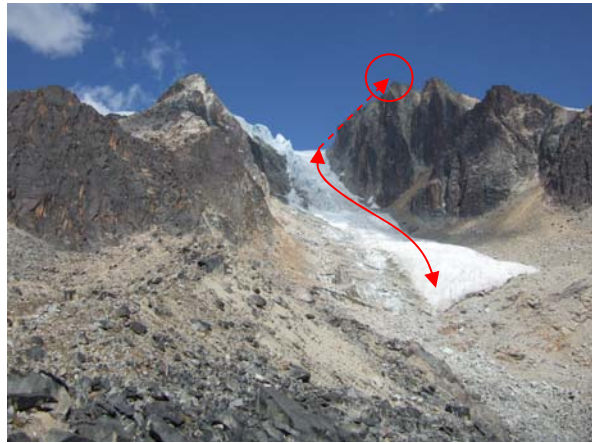
'The Glacier' mk. II (18th-19th July)

**Peak to right of glacier: 5560m
(GPS), grid ref 6697 81297**

Climbers: Alan and Sam

Grade: PD

The approach route was up the glacier, as described for Ronan and Moira's peaks, which provided access to a range of peaks on the left and right. Sam and Alan's peak is immediately right of the glacier.



Sam: "We bivvied below the glacier - away from the nose which was strewn with debris, and we didn't fancy being awoken by any boulders. The glacier looked quite imposing and quite steep, though we knew from experience it was probably less steep than it looked. Moira and Ronan had climbed it days before, and reported no difficulties, other than awkward penitentes. Laying down in our bivvi bags, for a while we thought clouds were gathering in the night sky, although this turned out to be only the milky way - brighter and thicker than I have ever seen it, a truly exhilarating sight.



Alan on the final rocky section

We set off before dawn, after drinking hot chocolate laced with glacial silt. The glacier provided to present easy but steadily inclined ground, which at 5000m is a lung busting slog. As we gained height, the sun rose. Towards the top of the glacier, a large serac band loomed ominously, but despite its bulk, it looked very stable.

We climbed up through wonderful ice formations, and eventually out onto the plateau. It was warm, with hardly any wind, and we could comfortably stop and admire the view. We struck off right to finish the peak, and were treated to 100m of

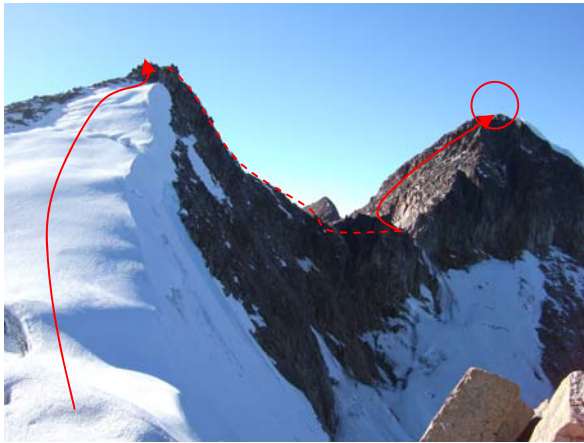
scrambling on what was - in this range - comparatively solid rock. We made the summit without too much difficulty, and surveyed the range across the valley, looking for routes for the coming days.

Descending the dry glacier was a breeze, dropping 1000m in an hour or so".

Attempt on San Lorenzo via 'Pyramidal Peak' (20th – 21st July)

During their ascent of the 'Pyramidal' peak Alan, Tom and Sam had identified a potential new route up San Lorenzo from the north-east instead of the more conventional and straightforward route from the south-west which Sam and Alan would later successfully

accomplish. Moira and Ronan decided this was worthy of some attention.



San Lorenzo (right) via 'Pyramidal Peak' (left): 5560m (GPS), grid ref 6727 81322

Climbers: Ronan and Moira

Ronan: "We set off in the late morning for the bivouac site where Alan, Tom and Sam had stayed. Unfortunately we made our way up the right hand side (southern side) of the hanging valley from the main valley floor up to the corrie and it took us a while to find the site which was on the opposite side of the corrie, perched on some reasonably sheltered flat boulders beside a small lake.

The next morning we were moving by 6am and picked our way back across the corrie which was quite difficult in the dark. We made our way up the scree slope to the loose ridge as dawn approached and followed it towards 'Pyramidal Peak' (or "I can't believe its not Tryfan" as Sam, Tom and Alan decided to name it) following in our friends' footsteps.



The loose ridge ascent towards 'Pyramidal Peak'

The ridge was a straightforward ascent without ropes, although at times we were forced to keep our distance from each other to avoid dropping rocks on each other. The upper section of the route after the ridge was a relatively easy ice slope which we roped up for and soon found ourselves on top of the boulders of 'Pyramidal Peak' by 10.30am. We immediately started assessing the next stage of the route which would take us down from the 'Pyramidal Peak' and back up San Lorenzo via a rather loose-looking scoop between the two peaks and up yet another very loose-looking ridge which didn't inspire us too much.

Despite our scepticism we started to descend a rather vertiginous scree slope. I led them way down dodging the rockfall from Moira's descent as I went. After about 15 minutes of hairy descent Moira and I looked at each other, concerned. "Does this seem like a good idea to you?", Moira asked me rather worriedly. I readily agreed that this was a slightly dangerous affair, and the thought of trying to reverse our descent did not exactly fill either of us with excitement. So we returned to the summit of 'Pyramidal Peak' very disappointed and disillusioned with the swathes of choss that seemed to hamper our exploits in the Quimsa Cruz.



View to San Lorenzo from 'Pyramidal Peak'. We intended to take a line across scree to the left of the peak and then climb the left-skyline ridge.

Perched back on top of the boulders we did our best to try and absorb the spectacular vista around us. Stretching to the north and south beside us lay the scar of the Quimsa Cruz. The prevalence of extremely sheer faces shattered by freeze-thaw, accumulations of scree, and the absence of route choice amongst this terrain was quite apparent. To



Vista looking east from 'Pyramidal Peak' towards the lowlands, shrouded in mist.

the east the low misty clouds covered the lowlands (these were later explained by a local as caused by burning in the yungas region) and to the north Mount Illimani towered above the clouds like a giant Christmas cake, sowing the seed of inspiration for what would be our final mountainous endeavour in Bolivia.

At midday we descended from what would be our final route of our expedition in the Quimsa Cruz, unless you count the final haul of our gear back to Viloco!"

San Lorenzo (21st – 22nd July)

San Lorenzo: 5560m (GPS), grid ref 6727 81322

Climbers: Sam and Alan

Grade: PD-

Approach was via the wide glacier in the background on the right.



The final route climbed by Alan and Sam was San Lorenzo, although they had set off from camp with the aim of further climbing in the vicinity of Moira and Ronan's first descent. This proved impossible due to loose rock.

Sam: "After Moira and Ronan had discovered one of the summit ridges was innapproachable, it was thought the best route was probably to walk over into the next valley, and approach up the wide glacier to gain one of the ridges behind the skyline shown above. With an early start, we trekked over the pass, and caught our first glimpse of the beautiful blue lake of Laguna Chatamarca. The glacier beneath the main face of San Lorenzo was strewn with debris and looked dangerous to traverse, so we opted to descend all the way to the lake, and approach alongside the lateral moraine on the far side.

The climbing was, as ever, loose, and care was needed. After following the moraine for some time, we drew level with the wide ice field, which looked to provide a good route up the mountain. The steep – often overhanging – nose of the glacier looked as though it could prove to be an obstacle, but eventually we were able to find a way up. Once established, it gave a consistent slog to the top, and the luxury of walking on a dry glacier with little objective danger meant we were able to enjoy the stunning views while we slogged up.

There was little wind on the summit, and in the Bolivian sunshine it was pleasantly warm. Also, being fully acclimatised, we were able to sit for almost an hour on the top, enjoying the view, with the looming bulk of Illimani in the distance.

The descent was a dream, descending the length of the glacier in under an hour, before dropping back along the moraine to base camp. Luckily we had descended quickly, as back at base camp, we discovered the stove from the morning's brew had ignited the soil – mixed with dry grass and llama droppings – which had smouldered in a slow outward spreading circle, and almost reached our sleeping bags".

Return to Viloco and La Paz (23rd – 24th July)

Moira: *“When Sam and Alan returned to camp after San Lorenzo we rapidly reached a consensus that we’d more or less exhausted the climbing potential of the area within immediate reach of base camp, not to mention the group’s inspiration. Tom was also still feeling less than 100% with the altitude and did not feel he was capable of further climbing. We spent the following day slogging up to the pass with part of our gear, leaving loads at the top of the pass and returning to camp to repeat the slog the following day. That evening we feasted on the remaining lentils and tinned beef.*

We had intended to spend three days carrying the gear out from the mountains. However, on arriving at the top of the pass with the final loads, we began to think we might be able to manage it all in one go, thus saving us another slog up the pass. And indeed we did manage, just, arriving back in Viloco in time for a magnificent dinner of chip soup and spaghetti Bolognese. The bus for La Paz left at 4am so we had time for a little bit of sleep beforehand in theory, although unfortunately were sharing the room with a human tractor and so didn’t get much in practice. The bus journey passed uneventfully and Alan managed to keep the ladies sat next to him continuously entertained for 10 hours with his talk of pizza”.

7. POST-EXPEDITION

Further Travel and Returning Home

On arrival back to La Paz on the 25th July the team celebrated with large amounts of pizza followed by further large and delicious meals over the following 24 hours, during which we also did some post-expedition organisation including sorting out the gear, completing expedition diaries and emailing the British Embassy to notify them of our return.

Alan then departed for Argentina, where he intended to eat steak for a week, before joining Tom and Tom’s girlfriend back in La Paz for some post-expedition travel. Meanwhile Sam went to visit the much-celebrated salt flats near Uyuni. Ronan and Moira, during a moment of pizza-induced madness, decided to cap off the trip with a post-expedition attempt on the well-established ‘normal’ route up Illimani.

Post expedition attempt on Illimani

Ronan: *“After a couple of days rest and a lot of eating and drinking Moira and I set off for Mt. Illimani. At 6439m this is the 2nd highest mountain in Bolivia after Mt Sajama and 11th highest in South America. We planned to take the non-technical ascent given the summit was 1000m above our highest peak in Quimsa Cruz and neither of us had technical experience at this altitude. This unfortunately meant we would have company most of the way up!*

On the first day we departed very early from La Paz to catch a 5am bus to the ‘Cruc’ (cross-roads) just beyond Quilihuaya. It took just 4.5 hours although felt like a lifetime as we bumped our way through the Cordillera Real. My platypus was a great source of amusement for some of the locals who mistook it for an oxygen tank for our ascent.



At base camp... taking a breather before the arduous task of putting up the tent.

We were fortunate enough to hitch a lift with some civil servants all the way to Pinaya knocking 1.5 hours of grim road walking from the 'Cruc'. From here it was 2 hours to Illimani base camp. When we arrived we were both completely exhausted. The relatively short two day rest since we left Quimsa Cruz, together with the previous night's beer and sleep deprivation, didn't mix too well on the walk up. It took about three hours of lazing and a few brews before we even managed to put up our tent. There were two other groups who had just descended and one guide and a French climber who planned to ascend with us the next day.

After a hearty breakfast of chocolate porridge we stashed some kit and headed for yet another scree slope up to the ridge which would lead us to high camp (Campo del Condor). We had a very good start to the day but once we got to the ridge I started to lag behind Moira, a combination of my tiredness and Moira being in top form on the day. High Camp was a welcome, but not very pretty, sight when we finally made it. Neither of us were used to this level of traffic and litter after the isolation of Quimsa Cruz where a tin can would be a source of amusement for us! This was made up for by the view of Mt Illimani and the glaciers tumbling from it and the other summits which make up this isolated group of peaks. There was no doubt that some of the technical routes up would be stunning, if a "little" hairy. Our route looked quite easy, although it would obviously be quite exhausting at over 6000m.



View towards the north peak from high camp – with many enticing lines



The summit (centre) from high camp

We had plenty of time to drink many brews and hydrate before night descended which brought with it a spectacular view of La Paz at night. We retired for an early night but it became apparent quite quickly that Moira was suffering from AMS. We waited it out for the night as there was no chance we could descend in the dark without killing ourselves. Neither of us slept all night and when we got up at dawn we made our way back down

as quickly as we could. We returned the way we came, and when we got down to Pinaya we found ourselves on a footpath which meandered between the beautiful rural settlements of the valley. We got to the 'Cruc' at 1.30pm and waited until 5.30pm for the 3pm bus back to La Paz".

Returning Home

The team members travelled home separately, Alan staying in Bolivia for a further few weeks whilst Ronan, Moira and Sam travelled back soon after the end of the expedition. Tom and his girlfriend spent seven more memorable weeks exploring Bolivia and Chile. On return home the team were all healthy, except for Alan who had some complications connected to post-expedition jungle travels:

Alan, writing in October: "One of the best parts of my travels was going to the pampas, the grasslands in lowland Bolivia that are flooded for much of the year. There you travel by boat and see amazing wildlife including dolphins, toucans, cayman, capybara, kingfishers and the like. We even saw a sloth and a boa. So far, so idyllic.

Unfortunately, it's also home to a plethora of insect species, all of which seem to bite or sting. There were flies and mosquitoes and bees and wasps and ticks. And that was just the ones I recognised. But never mind: this is what you expect when you go to lowland regions of the tropics.

Well, soon after the pampas I headed home, bringing with me my assorted collection of bites. Most stayed itchy for a few days at worst but eventually healed. Six, however, remained. These were hard red boils on my lower legs that gently oozed blood and refused to heal. From time to time, I also felt excruciating pain in them, very sharp and localised. I don't like to complain, but this was really some of the worst discomfort I've felt.

I went to the doctor in Cambridge the week after I got back. She smiled and said how funny it was that I was there at this time. Only a couple of days ago, she said, they'd had someone in who'd been travelling in Africa and had picked up nasty larvae from insects laying eggs in his skin. I asked if there was any chance that the same had happened to me, and she assured me that no she was quite certain that I just had ordinary bites that had become infected. She gave me a course of antibiotics. I took these and moved house to Keswick.

As that dreary song by the Verve said, the drugs didn't work. The bites weren't really healing, and in fact they all still continued to leak out blood every day. My sheets were covered in it because there didn't seem to be any point in washing them each day only to mess new ones up the next night. It was by now a month since I'd been to the GP.

Then, last Tuesday night, I gave one of them a bit of a squeeze. I did this from time to time because sometimes a bit of pus would come out and I always thought to myself that it was probably better to have that out if possible. This time, however, a bit of clear goo came out with what looked unnervingly like eggs in it. They were little black specks, probably about 2 or 3 dozen of them. I did what every responsible and independent grown man would do in my position: I phoned my mum for advice. She told me to go to me GP in Keswick, but a couple of minutes later I thought I'd give it another

squeeze and this time a maggot flopped out. It was about the size of a baked bean, but a little longer and thinner, and decidedly dead. I popped him in the freezer.

Next day I took the little beastly round to the doctors here. The GP openly admitted that she didn't have a clue what to do, but she took a look at my other wounds and saw movement. She got her colleague into have a look too, not because he knew any more about it but just because doctors love this sort of thing. Must liven up a GP's day I imagine, if not their year. She rang the school of tropical medicine in Liverpool who thought they knew what it was. They reckoned it was the larva of an insect that lays its eggs on your clothes. When they hatch they then crawl into your skin and start chewing. This was good news because it meant that there ought to be only one bug in each hole. Five to go then.

I could either go to Liverpool to get them out or I could try doing it myself. They gave me instructions to cover the holes with Vaseline and then wait for the larvae to crawl out to the surface for air. Apparently this would take less than an hour. Liverpool is a long way away and I wasn't keen to take a day off work so I thought I'd give it a go.

It was bad timing in a way, because by now we're at last Wednesday afternoon and I'm sitting down in my flat with legs covered in Vaseline. Just then, Julia and Helen arrive, two friends who were up from Cambridge to do some walking and mountain biking in the Lakes. They'd come to give me beer and curry, in return for which I was to allow them to sleep on my floor. Pretty good exchange, I reckoned. Anyway, I thought Julia would be well into maggots because she's a vet and had been proudly showing me My First Book Of Paracites only a few days before. Helen, on the other hand, I hadn't really known very well up until that point, and I did think that most people arriving in a stranger's house to find maggots crawling out of his legs would run a mile. Luckily she took it wonderfully well and the two of them joined in gleefully with the removal efforts.

The first one exploded. That was a bit of a setback. It had come out a bit, and I was squeezing it to make it come out further. They've got long teeth, though, and I think they try to hold on quite tightly to prevent extraction and its little body just couldn't take the pressure. Luckily we did manage to pull the remains of its body out of the hole without leaving any behind.

We got another one out whole and alive.

The next one was massive. It took a huge amount of squeezing, and eventually popped out of its hole and hit Julia on the head. She was also splatted with blood, poor thing. Sorry again. As I mentioned, though, she's a vet and coped very well. In fact we had to remind her about 10 minutes later that she had blood all over her forehead and hair and might like to go and shower. That maggot was the size of a small acorn and, like the others, a pale creamy colour. It had little black hairs or spikes on its body, and long thin black teeth. Though I know we shouldn't judge a book by its cover and I may be no oil painting myself, that was the ugliest creature I have ever set eyes on. We kept it in a cup to show people and it prowled about looking for some Alan to eat.

By the end of the evening only two were left in my legs. I got another one out the next lunchtime (at home, not in the staffroom) and the final one came out after a massive struggle on the Thursday night.

So the Cambridge GP got it a bit wrong. The wounds wouldn't heal because maggots kept poking their tails through them to keep airholes open. And the pain was probably them chewing on my nerves. It's all healing up now nicely, and I can honestly say that it was all worth it to see that sloth".

Final Comments

The expedition was deemed a success; although sorely disappointing at first due to the lack of glaciers and very broken rock, the area provided the team with enough to climb during their time there (just). A number of ascents and new routes were achieved and most of these were thought to have been new, or at least first British/Irish. The team members agree that whilst physically and mentally demanding the expedition was also very enjoyable, and a steep learning curve for those who had not previously been involved with organising such a remote expedition.

Whilst some of the team had previous altitude experience, others did not; all team members except for one found this presented very little problem due to the attention we gave to acclimatisation. One member of the team, however, found it particularly difficult to cope with, which was immediately evident because it took him three attempts to reach the 5200m pass that the rest of the team reached the first time round. On his first route he made the 5500m summit and immediately began to feel very bad, whereupon he descended with some difficulty and decided against further high summits given all this and the general seriousness of the situation. By following the simple rule to turn back when you start to feel bad, anything more serious than temporary AMS was avoided.

Further expeditions to Quimsa Cruz are advised to take care when assessing the terrain based on the Bolivian IGM maps, and to bear in mind the apparently very rapid glacier retreat occurring in the area.

8. References

Brain, Y., 1999. *Bolivia: A Climbing Guide*, Seattle: The Mountaineers.

Dickinson, A. and Lambert, T., 2005. *Report of The Cambridge Mongolia Expedition 2005* (for MEF/BMC).

Francou B, Vuille M, Wagnon P, Mendoza J and Sicart J-E, 2003. *Tropical climate change recorded by a glacier in the central Andes during the last decades of the twentieth century: Chacaltaya, Bolivia*, 16S, *Journal of Geophysical Research*, 108, D5, 4154, doi:10.1029/2002JD002959.

Harper, K., Pitkethly, V. and Saunders, V., 2002. In *Trekking and Climbing in the Andes*. ISBN: 0811729613

Instituto Geographico Militar, 1976. 1: 50,000 map: 'Mina Caracoles'. Hoja 6143 III, serie H731.

Neate, J., 1994. *Mountaineering in the Andes: A Sourcebook for Climbers*, Second edition, London: RGS.

APPENDIX 1: EQUIPMENT

Individual Kit		Group Kit	
Rucksack	Glove Systems	Rack	Pan Sets
Boots	Handwarmers	Ropes (2x ½ ropes)	Pan Grips
Spare Laces	Headgear	Tents (3x 2-man)	Aqueous Boot Proofer
Axes	Snow Goggles	Ground Sheets	Sewing Kit
Crampons + tools	Sun Glasses	Mountain Shelters (2x4-man)	Seamseal
Helmet	Dry Bags	GPSx2	Superglue
Harness	Headtorch	Tat (50m)	Ducktape
Basic Hardware (slings, screwgates, belay plate, prussiks)	Spare Batteries	Base Camp First Aid Kit	String
Rock Boots	Water Bottle	Binoculars	Aluminium Tape
Chalk Bag	Thermos	Stoves (2/3 omnifuel)	File
Survival Blanket	Bowl	Fuel Bottles	Dry Bags
First Aid Kit	Cup	Heat Shields	Cards
Sleeping Bag	Spoon	Stove spare parts	Sat Phone Kit
Sleeping Bag Liner	Multitool	Flint + Strikers	
Thermorest/Mat	Watch		
Thermal Layer	Sun Cream		
Fleece Layer	Lip Cream		
Waterproof Layer	Wash Bag		
Gaiters	Travel Towel		
Down Layer	Sock system		
Other Clothing			

APPENDIX 2: MEDICAL SUPPLIES

Group First Aid Kit

Co-codamol 30/500 tablets	Painkiller	60 tablets
Tramadol hydrochloride capsules 50mg	Painkiller	50 tablets
Ciprofloxacin tablets 500mg	Antibiotic	20 tablets
Co-amoxiclav tablets 375mg	Antibiotic	28 tablets
Erythromycin tablets 250mg	Antibiotic	14 tablets
Loperamide capsules 2mg	Diarrhoea	20 tablets
Eurax (crotamiton) ointment	Itching/skin irritation	1 tube
Daktarin (Miconazole) cream	Fungal infection	1 tube
Buccastem (Prochlorperazine) tablets 3mg	Nausea and vomiting	20 tablets
Chloramphenicol antibiotic eye ointment	Eye antibiotic	1 tube
Flamazine (Silver sulphadiazine) cream 20g	Burns	1 tube
Metronidazole tablets 400mg	Antibiotic	21 tablets
Diamox	Altitude sickness	28 tablets

Stiffneck
 Samsplint
 Triangular Bandages (2)
 Alcohol Free Wipes (10)
 Pack Small Gauze Swabs
 Large Safety Pin
 Surgical Blades
 Sterile Needle Set
 Betadine Paint (100ml)
 Pocket First Aid and Wilderness Medicine

APPENDIX 3A: RISK ASSESSMENT

Risk Assessment			
Hazards	Likelihood and Risk	Control Measures	Additional Action
TRAVEL AND TRANSPORT			
<i>Air Travel</i>	<i>Very Low</i> <ul style="list-style-type: none"> • <i>In case of an accident death would be certain</i> 	<ul style="list-style-type: none"> • <i>Follow safety procedures as instructed, make sure not to carry fuels on aircraft.</i> 	
<i>Road Travel</i>	<i>High</i> <ul style="list-style-type: none"> • <i>Possibility of getting lost or breaking down in remote region</i> 	<ul style="list-style-type: none"> • <i>Ensure that when taking public bus we use a respectable bus company.</i> • <i>Make sure that we take regular 'bearings' from the GPS so in event of impassable object we can retrace our route</i> • <i>Make sure when travelling we have sufficient supplies in case of delays</i> 	<ul style="list-style-type: none"> • <i>Only use main highways (although there are few) as there will be more traffic to offer help</i>
ENVIRONMENT			
<i>Altitude Sickness</i>	<i>Medium</i> <ul style="list-style-type: none"> • <i>Possibility of reduced speed</i> 	<ul style="list-style-type: none"> • <i>Make sure we acclimatise gradually. Spending several days in La Paz at 3900m will help with our acclimatisation later.</i> • <i>Descend to a safer altitude if symptoms are felt</i> • <i>Ensure proper hydration at all times to allow acclimatisation</i> 	<ul style="list-style-type: none"> • <i>Use previous experience to ensure correct procedures are followed</i>
<i>Sunstroke/ Burn</i>	<i>Medium</i> <ol style="list-style-type: none"> 1. <i>Pain and discomfort</i> 	<ol style="list-style-type: none"> 2. <i>Take high factor sun cream for use on glaciers</i> 3. <i>Wear glacier glasses and sunglasses appropriately</i> 	
<i>Frostbite</i>	<i>Low</i> <ul style="list-style-type: none"> • <i>Loss of digits, mobility and possible death</i> 	<ul style="list-style-type: none"> • <i>Always make sure enough clothes are worn, especially warm enough socks and footwear</i> • <i>Prevent Boots from becoming frozen, keep them in sleeping bag if necessary</i> • <i>If wet socks must be worn make sure they are as dry as possible, either heating them in a sleeping bag or using stove</i> • <i>Do not handle metal in cold temperatures to prevent skin loss</i> 	<ul style="list-style-type: none"> • <i>Look for signs of frostnip</i> • <i>Re-warm effected areas</i> • <i>Descend from mountain if condition serious</i>

<i>Snowfall</i>	<i>High</i> <ul style="list-style-type: none"> • <i>Loss of visibility and reduced movement likely</i> 	<ul style="list-style-type: none"> • <i>Assess whether to retreat for heavy snowfall</i> • <i>Be extra-vigilant for crevasses in reduced visibility</i> • <i>Decide whether to reach a safe area from and wait for a break in the weather</i> • <i>Take extra care with navigation</i> 	<ul style="list-style-type: none"> • <i>Only attempt routes when there is a period of good weather</i> • <i>There shouldn't be too many snowfalls as the precipitation levels are at their lowest in July.</i>
<i>Poor Visibility</i>	<i>High</i> <ul style="list-style-type: none"> • <i>Loss of visibility and reduced movement likely</i> 	<ul style="list-style-type: none"> • <i>As above</i> 	<ul style="list-style-type: none"> • <i>As above</i>
<i>Hypothermia</i>	<i>Low</i> <ul style="list-style-type: none"> • <i>Possible immobility and death</i> 	<ul style="list-style-type: none"> • <i>Always carry spare dry clothes and if this proves impossible then attempt to dry clothes each evening</i> • <i>Be vigilant for signs of hypothermia and if signs are spotted then find a safe place to pitch the tent and immediately re-warm team members</i> • <i>Ensure we always carry enough fuel to warm ourselves up in an emergency</i> 	<ul style="list-style-type: none"> • <i>Try to attempt routes in periods of warm weather</i>
CAMPING AND LIVING			
<i>Tent Damage</i>	<i>High</i> <ol style="list-style-type: none"> 2. <i>Loss of shelter leading to hypothermia, frostbite etc.</i> 	<ol style="list-style-type: none"> 3. <i>Ensure that bivvy bags are carried for emergencies</i> 4. <i>Pitch tent in sheltered spots, if this is not possible then consider bivouacking instead</i> 5. <i>Cook well away from tent at all times, be vigilant of naked flames.</i> 6. <i>Keep away from low lying areas near water sources to prevent tent being washed away</i> 	<ol style="list-style-type: none"> 7. <i>Carry pole repair kit and general repair materials to effect repairs</i>
<i>Cooking and Fuel</i>	<i>Medium</i> <ul style="list-style-type: none"> • <i>Burns and scalds</i> 	<ul style="list-style-type: none"> • <i>Regularly check stove for leaks and cracks, using repair kit if necessary</i> • <i>Follow manufacturers instructions for use of stove</i> • <i>Be sure to use fuels which are not too volatile</i> • <i>Always use pan handle for hot pans</i> 	<ul style="list-style-type: none"> • <i>Keep stove and fuel away from vegetation and tent</i>

<i>Fires</i>	<i>Low</i> <ul style="list-style-type: none"> <i>Risk to vegetation</i> 	<ul style="list-style-type: none"> <i>Make sure that if we have to use fire that we dig a pit to contain it and keep it away from vegetation</i> 	<ul style="list-style-type: none"> <i>Keep water nearby for emergencies</i>
MOUNTAINEERING			
<i>Navigation Error</i>	<i>Medium</i> <ul style="list-style-type: none"> <i>Possibility of serious delays and failure to complete route</i> 	<ul style="list-style-type: none"> <i>Always carry a compass and mark important objects for bearings on a sketch map on outward journey</i> <i>Ask locals for directions when practical, although do not always trust their answers</i> 	<ul style="list-style-type: none"> <i>Use GPS to get general directions for if we get into trouble</i>
<i>Belay or Abseil Anchor Collapse</i>	<i>Very Low</i> <ul style="list-style-type: none"> <i>Possibility of death or injury leading to death</i> 	<ul style="list-style-type: none"> <i>Avoid abseiling whenever possible, take longer descent if necessary</i> <i>For belays make sure have at least two good anchors to take the load</i> <i>Aim to use indirect belays to avoid overstressing the anchors</i> <i>Use prussic loop backups for abseiling to reduce risk</i> 	<ul style="list-style-type: none"> <i>Make regular inspections of climbing equipment to ensure it has not been damaged</i>
<i>Cornice Collapse</i>	<i>Low</i> <ul style="list-style-type: none"> <i>Probable death</i> 	<ul style="list-style-type: none"> <i>Always stay away from edges of snow ridges</i> <i>Make sure to keep a wide spacing on the rope so one team member can act as a counterbalance if another falls through a cornice</i> <i>Consider whether to not go to the actual summit if it requires going onto a cornice</i> 	<ul style="list-style-type: none"> <i>Carry an ice axe to effect ice axe arrest in case partner falls through cornice</i>
<i>Avalanches</i>	<i>Medium</i> <ul style="list-style-type: none"> <i>Possibility of death or serious cold related injury</i> 	<ul style="list-style-type: none"> <i>Dig avalanche test pits to determine whether an avalanche is likely</i> <i>Stay away from areas with lots of fresh snowfall, although precipitation levels should ensure this will occur infrequently.</i> <i>Move quickly through risk areas to minimise exposure</i> 	<ul style="list-style-type: none"> <i>Stay off slopes that have been exposed to sunlight for long periods</i>
<i>Climbing Falls</i>	<i>High</i> <ol style="list-style-type: none"> <i>Possibility of death or serious injury</i> 	<ol style="list-style-type: none"> <i>Take rope and climbing protection to minimise risk</i> <i>Climb routes of a much lower technical difficulty to our limit to reduce risk of falling</i> 	<ol style="list-style-type: none"> <i>Attempt alternate route if primary route is too difficult</i>

<i>Crevasses</i>	<i>Moderate</i> 8. <i>Possibility of injury along way from help</i>	9. <i>Always rope up on glaciers so as to make self rescue possible</i> 10. <i>Avoid areas of glacier with large numbers of crevasses</i>	11. <i>Try to cross glaciers early in the day before the snow bridges become weaker</i>
<i>Rock and Sérac fall</i>	<i>High</i> 12. <i>Possibility of death or serious injury</i>	13. <i>Avoid areas below séracs.</i> 14. <i>Wear helmets</i>	15. <i>Try to climb early in the day where there is a risk of rock fall being induced by ice melting</i>
HEALTH AND PHYSICAL STATE			
<i>Insufficient Diet and Malnourishment</i>	<i>Medium</i> • <i>Inability to keep up pace and complete objectives</i>	<ul style="list-style-type: none"> • <i>Take vitamin supplements in case we cannot get hold of any fresh fruit or vegetables</i> • <i>Be sure to take more food than is required in case of enforced delays</i> • <i>Make sure we are aware of the effects of altitude on appetite and compensate accordingly</i> 	<ul style="list-style-type: none"> • <i>Make sure we eat as much fresh food as possible whilst near markets and food supplies</i>
<i>Food Poisoning</i>	<i>Low</i> • <i>Possibility of serious illness and debilitation</i>	<ul style="list-style-type: none"> • <i>Ensure that food is only washed in water that is safe for drinking</i> • <i>Make sure food is well cooked to kill bacteria</i> • <i>When buying food try to ensure it has been prepared hygienically</i> 	<ul style="list-style-type: none"> • <i>Carry medications to take to reduce the effects of sickness caused by food poisoning</i>
<i>Waterborne Infections</i>	<i>Moderate</i> 16. <i>Possibility of disabling illness</i>	17. <i>If necessary sterilise water, even in towns as the tap water may be suspect</i>	18. <i>Take medication to moderate the effects of any illness</i> 19. <i>Take water sterilisation tablets</i>
<i>Rabid Dogs</i>	<i>High</i> 20. <i>Likelihood of Death</i>	21. <i>Stay clear of stray dogs.</i> 22. <i>Take iodine to clean any scratches from dogs</i> 23. <i>We will get vaccinated before the expedition</i>	

APPENDIX 3B: CRISIS MANAGEMENT PLAN

Crisis Management Plan

This document describes the strategies that will be employed in the event of a crisis developing during our expedition to Bolivia in July/August 2006. Our aim is to avoid getting into a dangerous situation, and all possible steps will be taken to avoid this happening. However, it is essential to plan for the worst possible scenario and to think through in advance how to deal with a potential crisis.

Our crisis management strategy is based on the Royal Geographical Society's principals of crisis management¹. These are:

24. Put in place planning systems and measures which help to recognise a crisis in the making.
25. Prevent a crisis from occurring in the first place.
26. Effectively handle a crisis if one does occur.

These points will now each be discussed in turn.

1. Recognising a Crisis in the Making

Avoidance of crises will primarily be achieved by having close regard to the hazards identified in our Risk Assessment, and adhering to the control measures and additional action that is described in that document. Both members of the team have been involved in the consideration of the risk assessment, and both are familiar with its contents. Despite this, we also intend to review it shortly before departure to ensure that it is fresh in our minds.

The small size of our team is a distinct advantage in recognising a crisis early. Because our expedition has only four members, communication should be constant and both of us should always be well-informed of the current situation. We have discussed the need to be open with each other regarding, for example, minor injuries, so that small problems are dealt with in their early stages and do not develop into a more serious situation.

8. Prevention of Crises

The prevention of crises will also be achieved by consideration of the Risk Assessment. Safety will be our most important consideration during any decision-making, and we will not attempt any course of action that we deem too risky. This includes the acknowledgment that we may need to adjust our plans if it becomes clear from conditions on the ground that it would be unsafe to proceed in our planned manner.

Any terrain that appears to be very steep or hard to cross will be avoided. Routes will be sought to move around the difficult area. If none can be found, then our only option will be to retreat along the known route. Despite the fact that both members of the expedition are good rock climbers, we will not attempt any movement beyond what would normally be considered an easy scramble in Britain. Certainly any movement that would be

¹IRGS Expedition Handbook, 2003

thought of as a rock climb in the UK would be avoided on the grounds that the consequences of a fall are potentially so serious and that we will not be able to carry the required safety equipment.

Several of the routes may require a traverse or ascent of a glacier. Movement over the glacier will only be attempted when roped together, and both members of the group will carry an axe and an ice screw, and are familiar with the techniques required for a crevasse rescue. In the event that one of us falls into a crevasse, we are confident that the other would be able to bring him to safety without the situation developing into a crisis.

The danger of falling rock and ice will be mitigated by choosing routes that avoid risky areas, such as gullies, and by wearing helmets. Both members of the party intend to take helmets, and to wear these whenever the situation appears at all dangerous. This would include all movement when on the mountaineering routes.

The other main peril that needs to be avoided is disease. Rabies is a concern, and we will both be vaccinated before leaving the UK. In the event of a bite from an animal, our first priority will be to seek immediate medical attention. This will mean the abandonment of whatever our current plans are, and moving immediately to the closest hospital or medical centre. Speedy diagnosis and treatment of the disease in its early stages is essential to ensuring that it can be dealt with before becoming a crisis. Prevention is better than cure, though, so every precaution will be taken to avoid the situation in which a bite may occur. Dogs and wild animals will be avoided wherever possible, and the threat that they pose must be in our minds at all times. Other tropical diseases are a threat, and all necessary vaccinations will be taken before departure, according to the NHS's travel advice for Bolivia.

Disease in the form of food poisoning and water-borne disease is another threat whose likelihood will be reduced by taking sensible precautions. Water taken from populate areas will be sterilised. Food, especially any meat eaten, will be properly cooked. One of the expedition members is unfortunate enough to have suffered from giardia in South America, and will be able to recognise its symptoms. This is a reoccurring condition, so it is important that antibiotics are taken to treat it, rather than continuing on the basis that the trouble is 'only an upset tummy'.

3. Handling a Crisis Effectively

The RGS suggests an eight-point basis to a crisis management plan. We have adopted their strategy.

1. Immediate care of casualties and other involved parties.
 - First aid will be administered. Both members of the group will have attended a course on first aid in remote environments.
2. Evacuation to relevant medical care
 - Walk out if casualty is mobile, for example with broken arm only.
 - Assisted walk for a badly injured casualty, for example with injury to one leg. Non-essential equipment will be abandoned. Non-injured team member will support casualty, and will carry enough food, water and equipment to provide shelter for the evacuation to the nearest road.

- If movement of the casualty is impossible, the uninjured team member must summon help. The casualty must be quickly moved to a comfortable safe position with adequate shelter food and water. The other team member must then proceed, with enough provisions to sustain himself, down to the nearest road and organise a rescue party.
3. Revision of expedition logistics/objectives
 - Being a four person expedition, a serious crisis would not necessarily mean the end of our expedition. The casualty would be escorted and evacuated to a town to recover. If the situation had been very serious, evacuation to the UK might be appropriate.
 - In the event of being able to deal quickly with the crisis, it might be possible to continue with some of our expedition aims. Our timetable is deliberately flexible to accommodate possible changes of plan. The decision would be made jointly, and would be based on the circumstances.
 4. Communication with interested parties at home and overseas
 - Telephone from nearest town.
 - Internet from larger towns.
 5. Monitoring of casualty in care
 - With one member of the group injured, the other would not continue alone. He would stay near the hospital and monitor progress of the casualty.
 6. Liaison with families/close relatives
 - This would be achieved as described above.
 7. Liaison with insurers/assistance agencies
 - Call direct from Bolivia. Numbers to be carried at all times.
 8. Follow-up and review
 - Discuss the situation together immediately in Bolivia.
 - Review in expedition report.
 - Publish review on our website.

Other Considerations

Language

Several members of the team have previously visited South America and can be competent enough at speaking Spanish to be able to deal with most difficult situations. A phrase-book and dictionary will also help in difficult situations.

Consultation

We have already been in touch with a number of people who have experience of travel in Bolivia or of mountaineering in remote regions. We hope that their advice will enable us to prepare adequately.

We intend to visit the British Embassy upon arrival in La Paz to notify them of our plans.