# The British Zemu Gap Expedition 2008

## The Expedition Report of the British Zemu Gap Expedition 2008

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#### 1. Acknowledgements

The expedition members Adrian O'Connor, Colin Knowles and Jerzy Wieczorek wish to thank the following for their support:

In the UK:

The Mount Everest Foundation for financial support

The British Mountaineering Council for their statement of support

George Band, Sir Chris Bonnington, Alan Hinkes, Dave Turnbull, Stephen Venables for personal letters of support

Former expedition comrades Angela Benham, Ian Carey, Chris Drinkwater, Titch Kavanagh and Andy Phillips for their unstinting support and loan of equipment

Our wives, partners and children who patiently endured our obsessive attention to all expedition matters

In India:

Colonel 'Bull' Kumar, Akshay Kumar, Vishwas and Monisha Makhija and staff at India Insight Tours in Delhi, without whom the permit could not have been achieved

Ajay of Himalayan Voyages in Darjeeling for his sensible advice

Barap Bhutia of Sikkim Holidays, Gangtok, for his unfailing attention and logistical support

and finally:

Lindsey Griffin and Harish Kapadia for their years of diligence in bringing together information about mountaineering in India, without which many expeditions would not have been possible.

The compilers of this report and the members of the expedition agree that any or all of this report may be copied for the purposes of private research.

#### 2. Progress and Results

The expedition's objective was to link together two treks – the 'Goecha La' trek which leaves from Yuksom and terminates at the Goecha La, and the 'Green Lake' trek, which follows the Zemu Chu from Lachen to the eponymous Green Lake, and back. To make the connection it would be necessary to cross the Talung Glacier, gain the Tongshiong Glacier and cross the Zemu Gap (Zemu La) – a breche on the South-East ridge of Kanchendzonga, before descending down to the Zemu Glacier and thus to the Green Lake.

The Zemu Gap (5891m) has a remarkable place in mountaineering history. The northern approach, via the Zemu Glacier, is relatively straightforward, and documented visits include Dr. A. M. Kellas (May 12<sup>th</sup>, 1910), John Hunt (November 18<sup>th</sup> 1937) and H. W. Tilman (July 9<sup>th</sup> 1938). Tilman then crossed the gap, experiencing some interesting adventures on his descent from the Talung Glacier.

The Gap only really sprung to prominence when H. W. Tilman became suspicious about a claimed ascent from the southern (Talung) side by Captain Boustead on May 8<sup>th</sup> 1926. Tilman went to investigate and failed to climb it from the southern side on May 13<sup>th</sup> 1936. His suspicions seemed justified as Captain Boustead's account did not fit with his experience. However, unbeknown to both there was a prior claim to the first ascent from the south by Mr N. A. Tombazi, in 1925. He had mounted a photographic expedition to the area. Regrettably he had not taken any photographs as the weather had been unfavourable. However none of these protagonists had gone on down to the Zemu Gap, so the first true South to North crossing of the La was still awaiting.

Since that time the only other documented visit to the La from the south was by a group from A. J. S. Grewal' Talung Expedition in 1975. They, like Tilman, warned of the difficulties to be faced - they were prevented from crossing the Gap 'by two big open crevasses approx. 40 ft in width' just 200ft short of the col. '...it is clear that the Gap can be reached if one goes prepared to bridge the two crevasses.'

The expedition members were Adrian O'Connor from Leicester, and Colin Knowles and Jerzy Wieczorek from Bristol, all of whom are members of the Red Rope Club. Our travel plan was:

Date	Elapsed	Location	Altitude
27 March 2008	Day 0	Leave UK	
28 March 2008	Day 1	Arrive Kolkata - Transit to Bagdogra - Drive to Gangtok	1550m
29 March 2008	Day 2	In Gangtok	1550m
30 March 2008	Day 3	Gangtok - final purchases/details	1550m
31 March 2008	Day 4	Drive to Yuksom	1780m
01 April 2008	Day 5	Yuksom - tie up loose ends	1780m
02 April 2008	Day 6	Yuksom – Bakhim	2545m
03 April 2008	Day 7	Bakhim – Dzongri	4024m
04 April 2008	Day 8	Dzongri – Thangsing	3841m (4115m)
05 April 2008	Day 9	Thangsing - Samati Lake	4298m
06 April 2008	Day 10	Samati Lake – Goecha La (Acclimatisation)	4298m (4984m)
07 April 2008	Day 11	Samati Lake – Goecha La	4984m
08 April 2008	Day 12	Goecha La - Talung Glacier	5200m
09 April 2008	Day 13	Talung Glacier -Tongshiong Glacier	5400m
10 April 2008	Day 14	Zemu Gap	5500m - 5700m
11 April 2008	Day 15	Zemu Gap	5700m
12 April 2008	Day 16	Zemu Gap	5891m
13 April 2008	Day 17	Kanchenjunga ABC	5200m
14 April 2008	Day 18	Green Lake	4935m

15 April 2008	Day 19	Rest Camp	4725m
16 April 2008	Day 20	Yabuk	4040m
17 April 2008	Day 21	Jakthang	3430m
18 April 2008	Day 22	Talem	3240m
19 April 2008	Day 23	Zema	2730m
20 April 2008	Day 24	GANGTOK	1550m
21 April 2008	Day 25	Drive to Bagdogra - Transit to Delhi	
22 April 2008	Day 26	Leave India	

We intended to travel as light as possible, and to attempt the crossing of the La with the minimum of support. However, we felt that normal trek support was sensible for both our starting and exit treks. However, the documentary evidence suggested that ice climbing of a high standard might be needed to surmount the final ice wall, as well as ingenuity to cross the ultra-wide crevasses. Adrian devised a pole system which would allow for the remote placement of ice screws across a wide gap, and we worked out a ropework routine for safely crossing such crevasses. Thus it came as no great shock to find that our food and equipment, even when substantially slimmed down, weighed in at 98kg. Given that we were going to get gas in India, it was an unpleasant jolt to realise that we might each have to carry 35kg loads at high altitude.

Our interests in India were handled by the Delhi-based agency India Insight Tours, who worked in conjunction with Akshay Kumar, who has his own agency, to achieve our permit. No trekking permit had ever been issued to go into the Talung Basin since the founding of the Kanchendzonga National Park. We were pleased to hear that the permit had been raised in Gangtok by the Sikkimese State Government on 26<sup>th</sup> February. However on 21<sup>st</sup> March, less than a week before departure, we were not delighted to hear that the Home Ministry had lost the permit, and that our chances were slim as both the Home Ministry and Military Intelligence would have to endorse it. In the event we left the UK without a permit and landed in Kolkata with one.

Our logistics in Sikkim were handled by Sikkim Holidays of Gangtok, whose energetic MD Barap Bhutia, soon earned our respect. In Gangtok we met two sherpas, Karma and Chering, who were to accompany us on throughout. Apparently it is not permissible to go into the National Park without company. This at least raised the prospect that we could share some of our load of equipment. Karma rather startled us by claiming that he had climbed the Zemu La twice, but it turned out that this was a 'Lost in Translation' issue – he had twice visited the Tongshiong Glacier below the Zemu La. He said that the final ice wall was very high and very steep, even overhanging in places.

We left Yuksom on the 2<sup>nd</sup> April on a pleasant day. We had been warned that the weather in the mountains had been persistently bad throughout March, and this was borne out by trekkers coming back down from their Goecha La treks – a lot of people had been unable to make it because of deep soft snow. At this stage we were optimistic; perhaps too optimistic as we decided to improve our fitness by carrying 15kg loads. At Bakhim we camped in thick mist, felt tired, and had a wrestling match with a young dzo that thought our yellow Bibler tent might be edible. The following day we climbed incessantly on the well-maintained trail to reach the muddy clearing of Phenang (~3700m); this time it was both snowy and misty. We soon learnt that the best time for the stunning mountain views was early in the morning.

Following advice to avoid Dzongri as the extra height gain would cause acclimatisation problems, we then took a switchback subsidiary path high above the Parek Chu. Here snow lay under rhododendrons and we began to realise that things may be hard higher up. Pausing for a break at Kukchurain after a long morning, where we had gained no height at all, we moved up the broad stony valley to the vast camping grounds at Thangsing. At this stage none of us could have claimed to be acclimatised or feeling particularly vivacious.

Nevertheless at every camping ground we had gone for a walk to a higher point before turning in for the night.

The next morning brought marvellous vistas up the classic U-shaped valley, lined with 5500+m peaks on either side, with Pandim dominating the northern skyline. We continued up the valley, gaining height steadily and slowly, before crossing a moraine ridge and dropping down to Samati Lake. Camping is no longer allowed here because the lake was becoming polluted. After a rest in the decaying rest-house, we pressed on, passing a solitary bharal drinking from the lake – unusual to see a bharal so close. We gained height over moraine and stopped at an exposed site called Chemitang at ~4600m.

This is the highest that the trek support team  $go - on a normal Goecha La trek the trekkers would get up very early and walk to the Goecha La and back. Here we would say good-bye to them, having agreed instructions that they were to be at the Green Lake camp for the three days April <math>13^{th} - 15^{th}$ . On leaving us they had to undertake a three-day forced march back to Yuksom, drive the next day to Gangtok, which would take all day, restock with food and the next day drive to Lachen, and straight away get onto the four-day trek up to Green Lake, which they will do in three days.

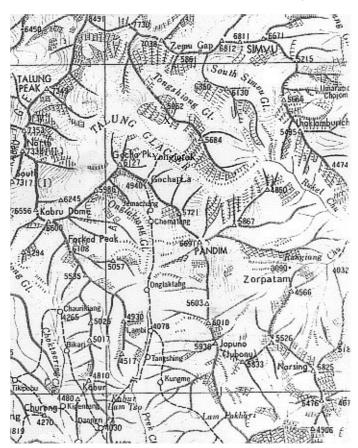
This was to be an acclimatisation day when we walked unloaded to the Goecha La and back; we felt too jaded and we had to deal with dividing the packs up equitably. Then it snowed heavily with a strong wind, so we gave in to providence and went nowhere. However it was clear that on the next day we would have to carry either astonishing loads or make double carries. The new day started well; Adrian, Jerzy, Karma and Chering opted for double carries. For all concerned it was an arduous day, because of the loads, the deep soft snow and the debilitating sun. Eventually we established camp just below the Goecha La in a dip exposed to slab avalanche, whilst the sherpas opted for a windy pitch on the La itself. All three of us felt the effects of altitude sickness.

The following day should have seen us cross the La and establish a camp above the Talung glacier. Physically this proved impossible. The day after we managed to cross and moved down to Yongiotak (~4600m). This superb campsite has excellent views of the Talung basin, and looks head-on at the impressive south-east face of Kanchendzonga. At this point we should have been across the Talung glacier but cooker problems led to time running out. We were able to survey the Talung glacier and plot a route across.

To be consistent with our plan we should have crossed the Talung glacier fully loaded the following day and established a camp on the Tongshiong glacier. It was blatantly clear that we were not yet in a physical condition to do this. Our only hope lay in recceing the route ahead and then following through with the loads the following day. We successfully crossed the Talung glacier, which is fully 70m lower that in Tilman's day, and established a route up a prominent buttress which got us to about 200m vertically below the Tongshiong glacier.

At this point we had to return; this signalled the practical end of the expedition, as we knew that even if we successfully crossed the Zemu Ia, we would fail to link with the support team, would run out of fuel and food and would have to make a four day descent trek without provisions carrying in excess of 25kg each. It just did not compute. It was a bitter moment as the expedition was two years in the planning and organising, not to mention the funding.

The return to the campsite turned out to be very tiring – the sun-softened snow made progress back across the Talung glacier and up the lateral moraines arduous and time-consuming. On our return we calculated that we could afford to stay in the Talung basin for one more day – we would have enough provisions to ensure that an orderly retreat to Yuksom could be carried out even if no food could be obtained en route.



Map of the Pandim/Kanchenjunga region, after Yakushi (1977) (X is the furthest point reached, P is the other photo high point)

> The Zemu Gap from the Goecha La (X is the highest point reached)



We decided to investigate the other Goecha La, mentioned on by Tilman, which we referred to as the Eastern Goecha La, the following morning. The Western Goecha La is close to the flank of Goecha Peak, the Eastern close to Pandim, and between the two is a minor ridge. Though it snowed overnight it also froze, and we were readily able to reach the dividing ridge up an accommodating 300m couloir. Once on the dividing ridge there were more stunning

views of the Talung basin, including a head on view of the Zemu Gap. From here the Eastern Goecha La was easily seen, though as we headed towards it the weather turned and the sherpas suggested a return to the campsite was advisable. It started to snow heavily just as we regained our base.

As we planned our exit strategy for the following day we realised that our efforts had made some important gains. We had established that an excellent campsite existed above the Talung glacier, readily reachable from the Goecha La. We had taken a significant number of pictures which would be of use to later mountaineering parties. Finally, our observations had led us to conclude that there was every reason to believe that N. A. Tombazi had successfully reached the Zemu Gap, whilst Captain Boustead's claim was, as Tilman suspected, unbelievable, akin to Maestri's "ascent" of Cerro Torre.

The retreat from Yongiotak was not without drama. As we struggled up the powder-snow slopes towards the Goecha La, the weather turned into an icy blizzard. Concurrently Jerzy was starting to develop urethritis, and in getting the correct medication for him Adrian's hands became dangerously cold. Having crossed the Goecha La at one point the weather was so severe we thought we might have to stop and camp immediately, but fortunately we were able to continue back to Chemithang, though not without signal support from the sherpas. They had been outstanding throughout but this was their finest hour.

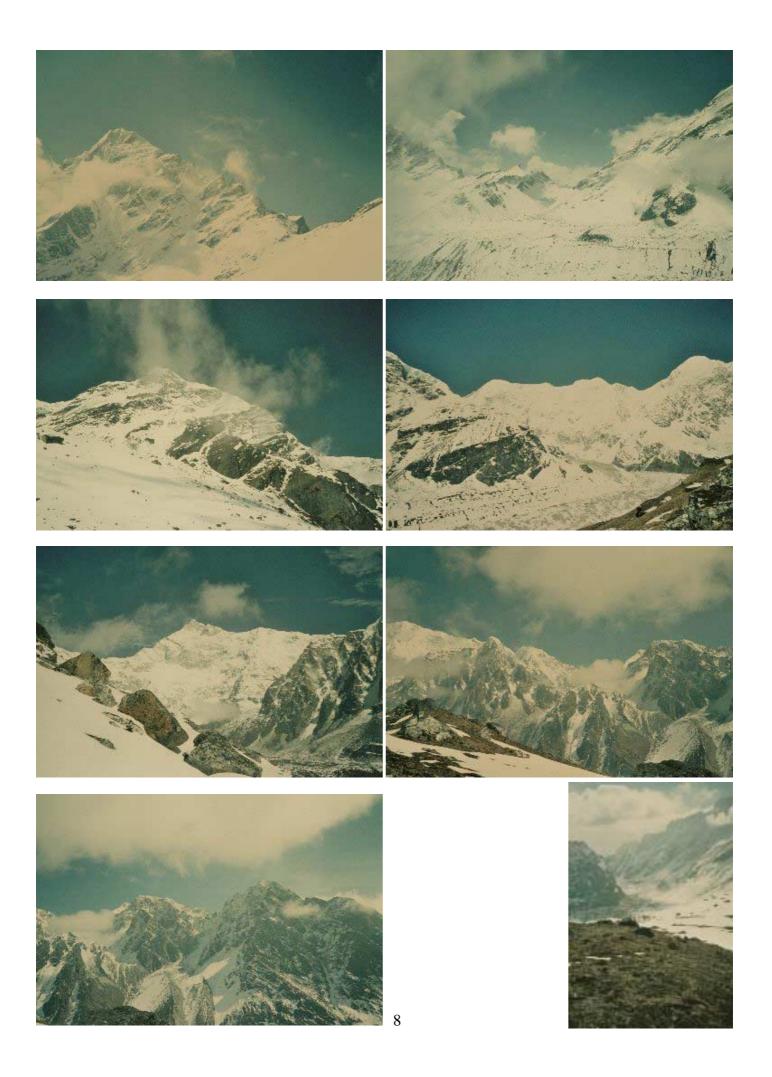
By now it was clear that we had acclimatised to both the altitude and the weights we were carrying, and the following day's march, past another bharal drinking in Samati Lake, down to Thangsing proved straightforward. That night it snowed dramatically, then cleared equally dramatically to freeze hard. The descent to Kukchurain was through a fairy-tale landscape of snow frozen on trees, rhododendrons and rocks. Every view was like looking at a Christmas card. At Kukchurain we were in high spirits, cooking breakfast in the sun and marvelling at the birds and the flowers. The long trek to Phedang dampened our spirits, but after lunch we pushed on to the welcome village of Choka, here to drink tea, eat fresh vegetables, and drink chang in the delightful village houses. Here agricultural life seems much as it must have been for many centuries; it is also the first place for a mobile phone signal.

This 12-hour day showed how fit we had become. We were blasé about the final day's march to Yuksom, and loitered in Bakhim feasting on scrambled eggs before descending through the magnolia forest now in full bloom – the rhododendrons were slightly higher. In was disconcerting to discover that the march to Yuksom took the full eight hours, and that we had been so casual about planning the final day that we ran out of drinking water.

We were able to rearrange our journey home, and so arrived in Delhi three days earlier than planned. Our principal agents, Vishwas and Monisha Makhija who run India Insight Tours, invited us for a farewell meal at their house, where we met 'Bull' Kumar. Once he'd heard our account his first question was 'Well, are you going back to finish the job?' It wasn't an unexpected question. Undoubtedly we had made some mistakes – not allowing enough time to acclimatise, carrying heavy loads too soon, and being too prescriptive about the support party's time at Green Lake were the obvious errors. The sherpas had recommended early May as a better time for an attempt. We left India in a thoughtful mood.

Pictures on the following page:

Pandim with Goecha La East	Goecha La East and Goecha La West
Goecha Peak	Kabru Dome, Kabru and Talung Peak
Kanchendzonga SE Face	Kanchendzonga, Zemu Peak and Gap
Zemu Gap with Simvu just visible	Looking East down the Talung Glacier



#### 3. Accounts

The expedition finances are summarised below. There were some outstanding issues on return to the UK, notably the loss of one kit bag containing a quantity of climbing gear which is believed to have been left behind at one transit change point. In addition some of the equipment purchased specifically for the expedition will be sold to recoup some of the outlay.

New Equipment bought	£1,394.15
Travel (ex India)	£1,985.40
Payments to local agents for	£9,263.38
Travel/Accommodation/Permits	
(India)	
Training and 1st Aid	£151.73
Expedition foodstuffs brought	£185.34
from UK	
Total Expedition cost	£12,980.00

Apart from contributions from individual members the expedition received grants totalling £800 from the Mount Everest Foundation which was gratefully received and much appreciated.

- 4. Health, Food and Equipment
- a. Medical

Specialist input on remote trauma first aid was provided by Jeff Pool from the Leicestershire Fire & Rescue Service. Jeff provided two sessions firstly on non-urgent issues relating to drugs and treatments which could, if left untreated, become serious (e.g. illness, ongoing wound care, AMS).

The second session was given to the whole team and dealt with all the usual first aid situations plus some extra scenarios and treatments that were relevant given the remoteness of part of our trek. Jeff also gave valuable input on the make-up of the first aid kits together with a detailed booklet on the topics covered and a summary sheet. The expedition members are extremely grateful for his help and advice, which thankfully was not needed to be put into action to any great extent.

b. First aid kits

Individual members had first aid kits and a secondary kit was carried by the medical officer. The individual kits consisted of a range of usual items designed to deal with the immediate stabilisation of an injury following trauma plus individual items for personal use.

The group first aid kit consisted of three main components: A range of additional items for the ongoing stabilisation and cleansing of wounds – bandages, dressings, scissors, scalpel etc. Secondly Jeff had advised that the team had available a sealed 'sharps kit' designed to accompany an injured party to hospital to guarantee the availability of clean needles locally.

Finally there was a kit of drugs including anti-biotics, pain killers and AMS (Acute Mountain Sickness) drugs. The data sheet on each drug was taken and a brief overview was laminated to the cover giving dosages and uses. Before the expedition a discussion was had relating to the use of the AMS drugs given the possible ambiguity over both the signs and

symptoms likely to be experienced and the variance in the severity of the conditions associated with AMS.

We agreed that the use of Diamox (see below) as a preventative could be useful given the rapid rate of ascent and the relative lack of acclimatisation time we had within our schedule, but Nifedipine and Dexamethasone, which we also took, were reserved for emergency use.

#### c. Health issues

Generally the expedition suffered minimal ill health. Acclimatisation happened very slowly at first, though carrying 15kg from the start of the trek at Yuksom may have been a contributory factor. One member was surprised by an attack of claustrophobia, which had never occurred before, and was probably a symptom of altitude sickness.

Generally speaking each of the expedition's UK members suffered to some extent from AMS, with varying symptoms, ranging over mild loss of appetite to complete inability to eat, and from general malaise to headaches and vomiting, breathing difficulties at night, and general difficulty ascending.

All of us took Diamox at various times during the ascent phase of the expedition, with mixed results. It helped the symptoms of AMS but at the same time contributed to feelings of coldness, and numbness in extremities, such as fingers, ears and noses. The dosage taken ranged from 125mg – 375mg per day and was taken over a few days and usage was dropped as soon as individual members felt that the symptoms of AMS were fading.

All members started nursing unresolved injuries – for example a shoulder injury that caused some pain for several days, probably due to carrying a rucksack for eight hours a day, but the symptoms were relieved by Voltarol. General pain killers were taken infrequently (paracetamol, Ibuprofen, Voltarol) as needed.

One member took antibiotic tablets and ear drops to deal with an ear infection that flared up on the flight into India. Another developed a possible urine infection during the arduous ascent out of Yongiotak, carrying a full load, in quite poor weather conditions. This could have been exacerbated by a certain level of dehydration, but was quickly brought under control by a course of antibiotics, allowing him to function relatively normally the following day, in the descent from Chemithang to Thangsing.

#### d. Equipment – some general and some personal comments

Due to the circular nature of the expedition, we had to be prepared to carry everything that we took between us. During the preparation phase, every last item of gear that it was proposed to take was weighed, and it quickly became apparent that we could not take the entire amount of equipment, since its total weight came to about 120kg. After some fairly drastic pragmatic decisions (e.g. halving the amount of fixed line to take), we managed to reduce this to an estimated 95kg to be carried between three of us. However without the help of our sherpas this load could not have been taken.

Before we arrived in India we had assumed that it would be just the three of us making the attempt on the Zemu Gap. In planning we faced the problem that if an immobilising injury had occurred to one of us, the dilemma was whether to leave the injured person on their own while two people sought help, or take the risk of a single person going for help. Both satellite phones and Personal Locator Beacons (PLB) were considered as possible solutions. It was decided to take a PLB, partly out of a desire to sustain the "unsupported" nature of the expedition and partly due to concern about the battery life of a satellite phone, especially in

low temperatures. The PLB<sup>1</sup> we chose had a battery with guaranteed shelf life of 7 years, was rated down to -20°C and weighed 250g.

There was much debate over the amount of gas that would be required. In the event we took 10 250gm canisters, acquired in India. In combination with the MSR Reactor (see below) this was more than adequate; in fact we gave the Sherpas our emergency backup gas stove and two canisters after their stove stopped working, and still had some gas to spare.

We took lithium AA and AAA batteries to power cameras and headtorches since they have a very long lifetime and are significantly lighter than alkaline batteries. We carefully chose headtorches that worked with lithium batteries. Two of us took compact film cameras, which performed well. The third took a digital camera. By choosing a camera with a viewfinder and switching off the LCD screen for much of the time, remarkably one pair of lithium AA batteries lasted for the duration of the trip. The digital camera performed well, even in sub-zero temperatures (e.g. early morning shots when it would have been at its coldest).

The range of Paramo gear that I wore was generally excellent. The clothing system taken included underwear, mid layers, shell outer plus salopettes. The system coped extremely well with the range of conditions presented and offered the apparent advantage of having fewer items of clothing than might otherwise be the case. (AO'C)

By contrast we used the Icebreaker Merino wool base-layer tops, which proved very flexible, robust and non-malodorous. (CK)

The Bibler tents were very strong and durable, Rab waterproof, down jacket and sleeping bag performed extremely well. Merino wool base layers were very comfortable and smell resistant. A few pieces of foam sleeping mat weighed almost nothing but were extremely useful for insulation from the sides of the tent. (JW)

I bought some Mountain Hardware FTX Ventigaiters, which looked fabulous in the shop but fell to pieces in use. A massive disappointment as well as being bad news for my feet (CK)

My MacPac Ascent XPD expedition rucksack just didn't fit properly, despite being (theoretically) the correct size, and was significantly heavier than the others. Its fully detachable lid was very useful as a handy bag of bits at night. (JW)

Gloves proved more of a problem, with a couple of instances of very cold hands that appeared to be exacerbated by using Diamox to help acclimatisation (see above). (AO'C)

The stove the expedition team took was excellent (MSR Reactor) and was certainly the best gas stove I have seen. In contrast the MSR Whisperlite used by the sherpas was a near disaster. It was clearly out of it's depth at altitudes above 3500m and running on kerosene. It constantly clogged up giving a very sooty burn which was not only extremely inefficient but also left any food cooked almost inedible. These problems are stated in MSR's own publicity and are well worth repeating. (AO'C)

<sup>&</sup>lt;sup>1</sup> Personal Locator Beacons – a type of lightweight Emergency Position Information Radio Beacon or EPIRB designed to be small and lightweight for personal use. Once activated, an EPIRB sends a signal to a network of satellites which will be received by both authorities in both the country of activation and the country of registration. Between those, a rescue effort is coordinated.

#### 5. References

A. M. Kellas, The Mountains of Northern India and Sikkim, Alpine Journal 26 (1912) pp113-142. Kellas with three coolies camped at 18,200 ft in the Zemu Gap and then went to the col on the morning of May 12<sup>th</sup>, 1910. 'The slope fell away steeply in front, and a few yards down there was a crevasse that stretched right across the gully.'

A. M. Kellas, The Mountains of Northern India and Sikkim, Geographical Journal 40 (1912) pp241-260. Kellas with three coolies camped at 18,200 ft in the Zemu Gap and then went to the col on the morning of May 12<sup>th</sup>, 1910. 'The slope fell away steeply in front, and a few yards down there was a crevasse that stretched right across the gulley.'

The Editor, Mountaineering in Sikkim and Garwhal, Alpine Journal 26 (1912) pp52-54. Reports on A. M. Kellas's exploits in 1910, including his visit to the Zemu Gap May  $10^{th} - 12^{th}$  1910.

H. W. Tobin, Exploration and Climbing in the Sikkim Himalaya, Himalayan Journal 2 (1930) pp 1-12. This historical review mentions en passant his experience with Harold Raeburn in 1920 [H. W. Tobin, (Alpine Journal 34 (1920?), pp33-50)] where he describes the approach to the Zemu Gap from the Tongshyong Glacier as 'the narrow entrance and the mountain sides raked with such a continuous hail of rocks and debris that an approach by this route would have been little short of suicidal'. {Tilman disagreed}

N. A. Tombazi made a tour of the locality in 1925 [Alpine Journal 38 p150, Geographical Journal 67]. He claimed to have made the first ascent to the Zemu Gap from the south. {Our experience supports his claim}

Captain Boustead alleged he reached the Zemu Gap from the south in 1926 [Geographical Journal 69 pp344-350] {Tilman and Captain Sams disagreed – so do we}.

The Zemu Gap is also referred to as Cloud Gap – see Himalayan Journal 8 (1936) pp132-135.

John Hunt, A winter visit to the Zemu Glacier, Himalayan Journal 10 (1938) pp50-70. During a winter expedition lasting nearly two months, John Hunt and Pasang Kikuli reached the Zemu Gap from the north on 18<sup>th</sup> November. Evidence showed (?) that the German party had already been there earlier. 'A short descent was made to where the slope ends in a vertical ice-cliff, some 200 or 300 feet high, falling into a snow basin. Below the basin an icefall was visible that promised further difficulties, ...'.

H. W. Tilman, When Men and Mountains Meet, Cambridge (1946) pp 48-75. His first attempt, from the south in 1936 accompanied by Pasang Kikuli, was thwarted 'where we had a good view of the final wall ...It was fully as high as we had feared, all iced, and appeared to overhang in places.' The second attempt, from the north in July 1938, was successful on July 9th, though the descent down the steep southern side was fraught with difficulties.

A. J. S. Grewal, Talung 1975, Himalayan Journal 34 (1974-75) pp39-47. The main emphasis was on an April ascent of Talung peak; having abandoned the attempt on April 25<sup>th</sup> due to avalanche danger, a subsidiary team of three investigated the Zemu Gap from the Tongshiong glacier. They were prevented from crossing the Gap 'by two big open crevasses approx. 40 ft in width' just 200ft short of the col. '...it is clear that the Gap can be reached if one goes prepared to bridge the two crevasses.'