British Liushen Tag Expedition

September 2014

Supported by

Kun Lun Mountains, Xinjiang, China

MEF 14-22 rev

Expedition members:

John Town, 61, British, Retired University Registrar, Alpine Club
Climbing experience in the Alps; Himalayas; Caucasus; USA; Turkey and Bolivia. First British ascent of highest peaks in the Altai and Kamchatka. First western ascent Munkhairkhan 4204m, Mongolian Altai. Led 11 climbing and exploratory expeditions to Tibet, Xinjiang and Yunnan which have made 4 first ascents of 6,000m peaks

Susan Jensen, 46, Dual Scottish/US, Data analyst, Alpine Club
Data analyst when not on a career break, and production of climbers' guides for the Scottish Mountaineering Club even when she is. Leading or participated in five expeditions with several first ascents, up to 7000m in Kyrgyzstan, Ladakh, Karakoram. Extensive experience in European Alps, winter climbing in Scotland and rock climbing in Britain, US, Europe, Africa and Asia.

Alison Stockwell, 58, British, Project Leader, Alpine Club
30 years climbing experience in the Alps. Winter climbing experience in Scotland and rock climbing in Britain, Europe and Africa. IML/WML award holder; Bremex Mountain Expedition Training group Instructor / Skills transfer Leader.

Gus Morton, 63**,** British, Retired European Civil Servant, Alpine Club
Climbing experience in numerous countries around the world with summits up to 6990m and two first ascents in the Karakoram

Zaheer Durrani, 43, British, Architect, Alpine Club
Climbing experience include a 4,600m peak in Kyrgyzstan, couple of trips to Swiss Alps 6,000m peak in Nepal. Led couple of E1 grade climbs in UK but generally comfortable with HVS 5a. Led up to grade III winter routes.

Stefan Jachmich, 43, German, Physicist, Alpine Club
Stefan has been climbing for 6 years and clocked up a wide variety of rock and ice routes and ski tours in the Western Alps, Austria and the Dolomites up to D / VI-. Also climbed in Nepal and made three first ascents in Pamiagdluk, Greenland.

Dates

Access:	8th – 11th September 2014 (4 days)
Mountain:	12th – 25th September 2014 (14 days)
Return:	26th – 28th September 2014 (3 days)

Central Asia: The Kun Lun form the boundary between the Tibetan Plateau and the Tarim Basin, centre.

Background

The satellite images available at the click of a button on Google Earth reveal a wealth of potential climbing objectives across the breadth of China and Tibet. If one can assign names, it is a short step to ascertain which remain unclimbed. Thus it was that this expedition was initially targeted on the unclimbed Zangchung Kangri in the far west of Tibet.

Sadly, the China Tibet Mountaineering Association would not give permission for this peak, or any other outwith their unexciting standard list. Some of the peaks, though, lay outside the Tibetan Autonomous Region, in the Kun Lun, along the northern rim of the Tibetan Plateau, where permits were the province of the shadowy Xinjiang Mountaineering Association.

The Kun Lun

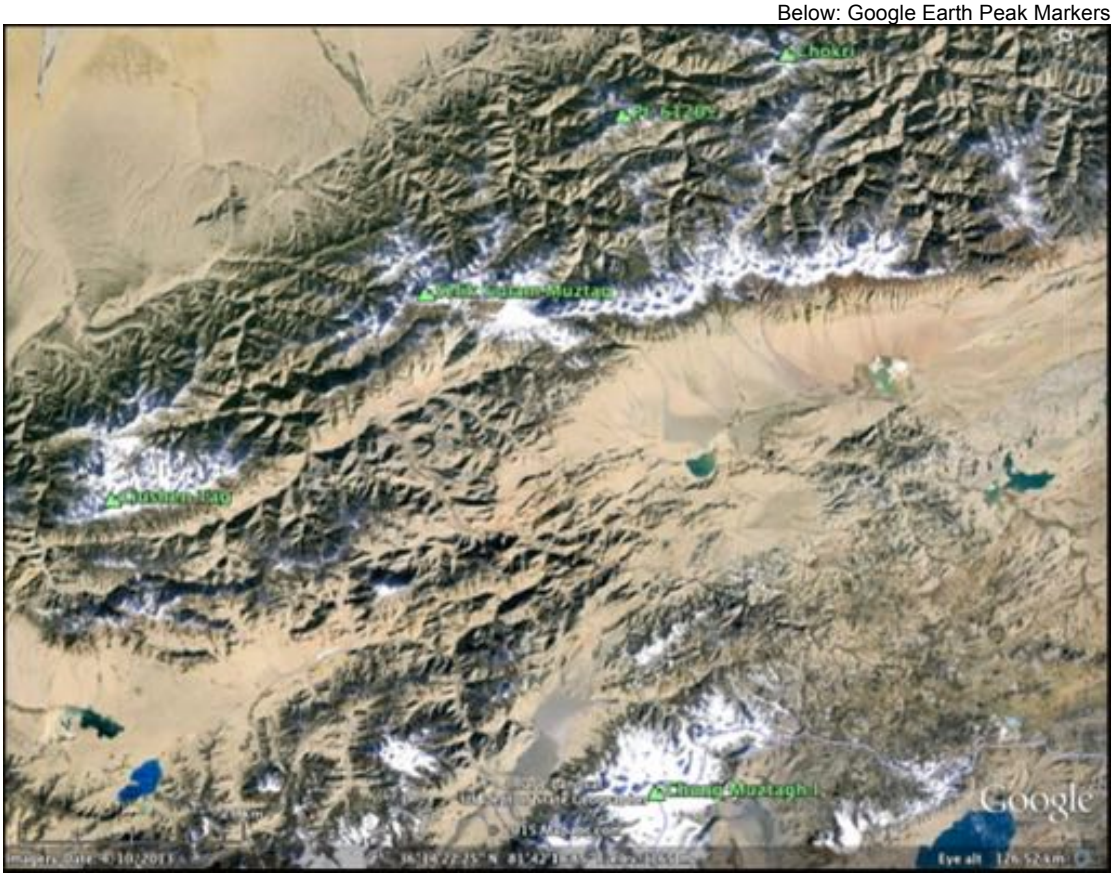
The Kun Lun are the remotest and least known of the mountain ranges of Central Asia. They stretch for 3,000 km along the northern rim of the Chang Tang, the highest and most inhospitable region of Tibet, which is almost totally uninhabited. The northern side of the range drops precipitately into an even harsher desert, that of the Tarim basin, which lies close to sea level. Where the rivers from the mountains run into the sands are a series of towns, marking the line of the southern branch of the Silk Road. The mountains are seldom visible from here, hidden in the desert haze 60 km to the south.

For much of its length the Kun Lun is not one chain but several, which split and merge in a confusing manner. The most inaccessible peaks, such as Qong Muztagh and Ulugh Muztagh lie in secondary chains, which lie behind the initial barriers and are separated from them by stretches of high plateau. They present logistical challenges which require extreme determination.

Most of the major massifs in the Kun Lun in the more accessible category have been climbed over the last forty years, mostly by Japanese expeditions, with little but the barest details appearing in English. As author of the AJ China Tibet notes in recent years, I must confess to having had trouble locating some of the peaks involved, never mind commenting intelligently on the challenges they may have posed. The peak markers that have recently appeared on Google Earth have helped greatly.

Above: Silk Road – Hotan top left, Keriya upper right. Kun Lun below.

Below: Google Earth Peak Markers



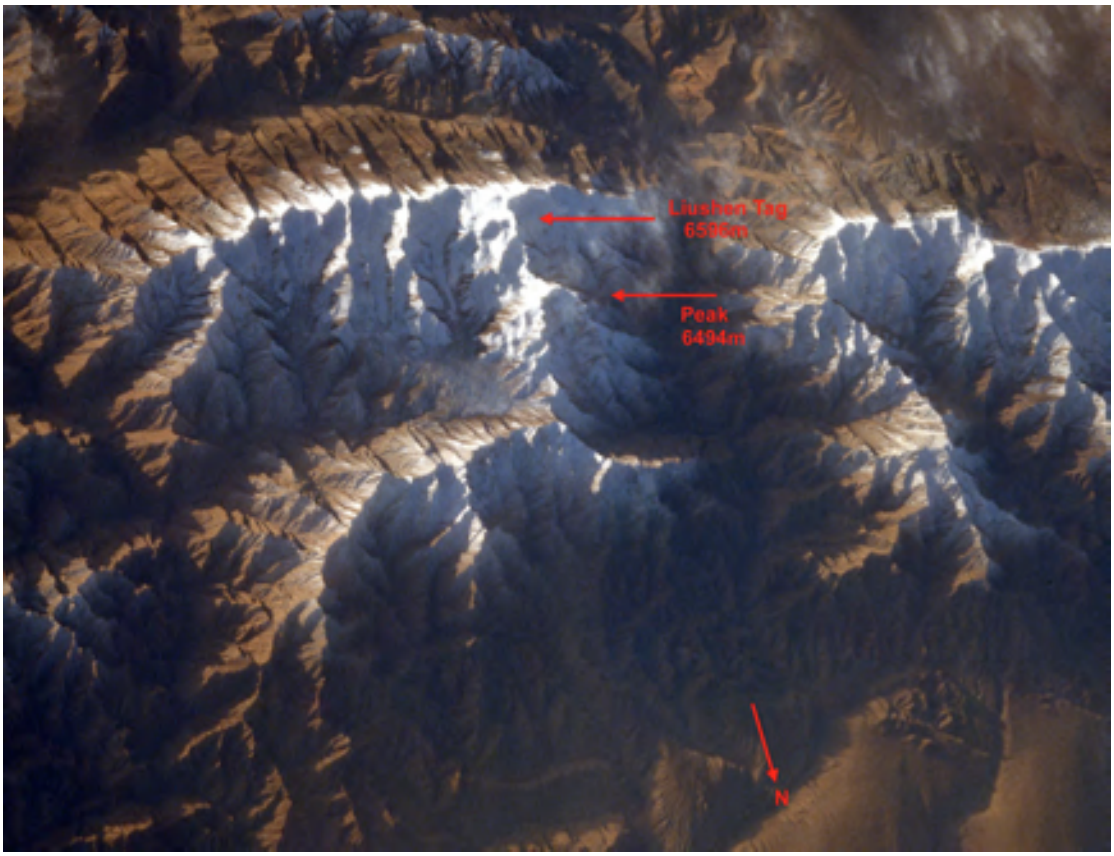
One of the marked massifs, Liushen Tag, when investigated in depth, showed no signs of having been attempted and thus became our new target,

Liushen Tag

Liushen Tag (6595m) is located at 35°59'38.07" N 81°35'38.73" E and is the highest point of a massif about 20 km by 20 km which lies about 70km S of the town of Keriya on the southern rim of the Tarim depression. It was previously know as Kotaklik Shan, with the following note in the on-line database peakbagger.com:

> ***Kotaklik Shan***
> *http://www.peakbagger.com/peak.aspx?pid=14201*
> *[56] Elevation of Kotaklik is derived from SRTM, higher than the published 6488. [E2] Elevation uncertain: Soviet 1:200,000 topographic map gives 6240m. American aeronautical charts give conflicting values of 6480m and 6135m (which is used.) All of these seem wildly incompatible with the surrounding terrain that suggests it may not even reach 6000m. We did not see the Chinese maps, thus more information is desired .*

The northern aspect of the group, though closest to civilization, is not encouraging. It exhibits two features common on the northern side of the Kun Lun. The first is that the rivers flowing north from the mountains have cut deep gorges which prevent access to the upper valleys. The second is that the northern flanks are heavily glaciated with a snow line that is much lower than on the south. The mountains thus present an high icy face to the north, rising about 4000m above the desert, yet their southern faces rise only 2000m from the Tibetan plateau, with an absence of snow below about 6000m.



Liushen Tag group from above, from North (NASA, Space Shuttle Mission STS 058)

The main peak of Liushen Tag lies close to the southern edge of the massif with precipitous faces dropping to the west and steep glaciated ground to the east (see above). The southern flank is more tractable and falls for about 1500m to a long

trench at its base with a watershed in the centre. The Kurab River (also known as Ak-Su) cuts through the mountains in a deep gorge to the west of the massif and the Keriya river forms its eastern boundary (see above).

An attempt from the south would thus avoid major complications but would involve crossing the range first. There are very few passes which cross the Kun Lun and none of them are easy.

The Kurab Gorge and the Route to Tibet

Though the mountain itself has gone unvisited, it was surprising to find that the gorge to its east, into which it falls so steeply and from which it is entirely invisible, has formed the only direct route from Chinese Turkestan (Xinjiang) to Western Tibet for several centuries.

Never used for regular trade, largely because of the terrible difficulties of the Chang Tang, it has nevertheless seen an impressive trickle of explorers over the years. In the late 19th and early 20th Century it was used by Deasy, Deutreuil de Rhins and Aurel Stein in their explorations of the northern Chan Tang and Chinese Turkestan. All endured appalling weather, hunger and the loss of most of their pack animals (see References p17).

In the late ‘50s or early ‘60s the Chinese used forced labour to build a road up the gorge but this was swiftly washed away in following seasons. It formed the basis of a trail which could involve up to 20 river crossings per day. Gold miners have used the gorge over a long period and the remains of their efforts at Su Bashi can be see in satellite images.

Liushen Tag (right) and Peak 6494 (left) from SW, showing S Flank Panoramio - Otto Chkhetiani party

With the opening of China to foreign visitors in the 1980s, the gorge was used by Russian, Japanese and American climbers and others exploring the high unclimbed peaks of the Chong Muztagh and other massifs. These lie behind the main line of the Kun Lun and reach just short of 7,000m. Henry Day and 2 companions drove by

Land Rover from the UK in 2001, ascended the gorge and climbed a peak of 6061m.

In 2005 a party of five Russians led by Otto Chkhetiani ascended the gorge and crossed over on to the plateau, taking the only photo we could find of the mountain (above), which they had posted on Panoramio and was consequently flagged on Google Earth.

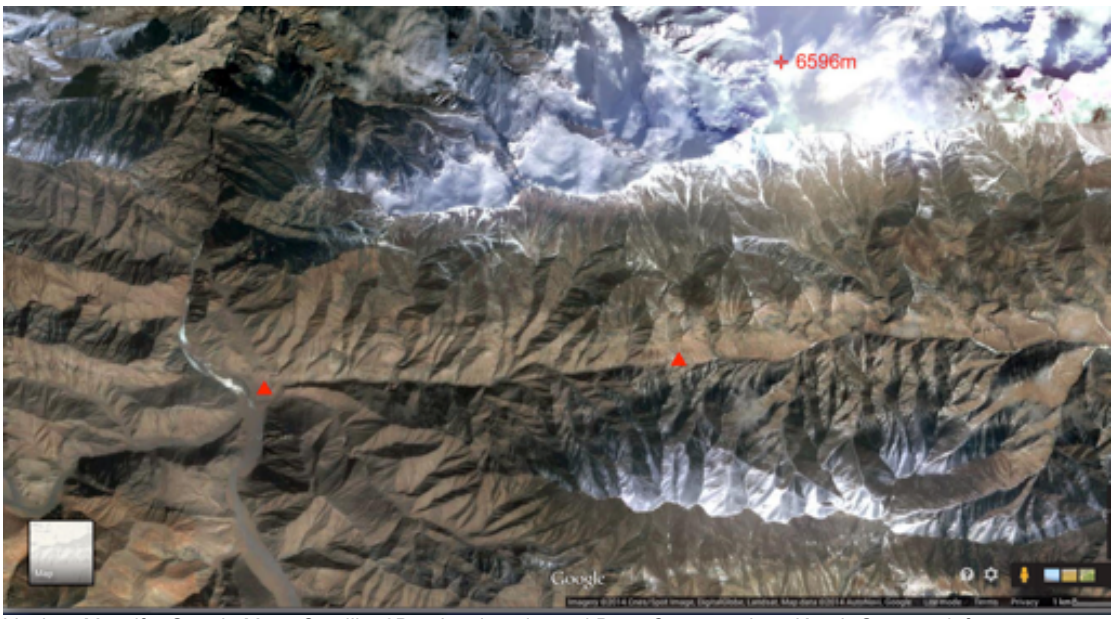
Planning (1)

Our main sources for detailed planning were the high quality satellite images of the mountain and the gorge available through Google Earth, Google Maps and Bing, together with the 1:200K Soviet Military Map of the area. It was possible to georeference these and upload them to an iPhone, iPad mini and Garmin eTrex30 for navigation in the field. In practice this allowed us to view our location to within a couple of meters on satellite images capable of showing walls and large boulders, which is an uncanny experience. Among other things this allowed us to review the river crossings in the gorge in some detail before leaving the UK.

Liushen Massif – 1:200K Soviet Military Map - main peak marked 6507. Track up Kurab Gorge at left.

We planned to fly to Hotan, on the southern rim of the Tarim Depression, from Urumchi, the capital of Xinjiang, and then drive via Keriya (1430m) to the village of

Pulu (2700m), at the bottom of the Kurab gorge. Here we would hire donkeys for the 3-4 day climb up the trail through the gorge to where it opens up at Su Bashi (4080m, uninhabited). Turning east, we would then climb up the valley below the southern flank of the mountain to pitch our base camp on the watershed at 5000m. The planned routes and location are shown on the this map and satellite photo. Care would have to be taken with acclimatization.

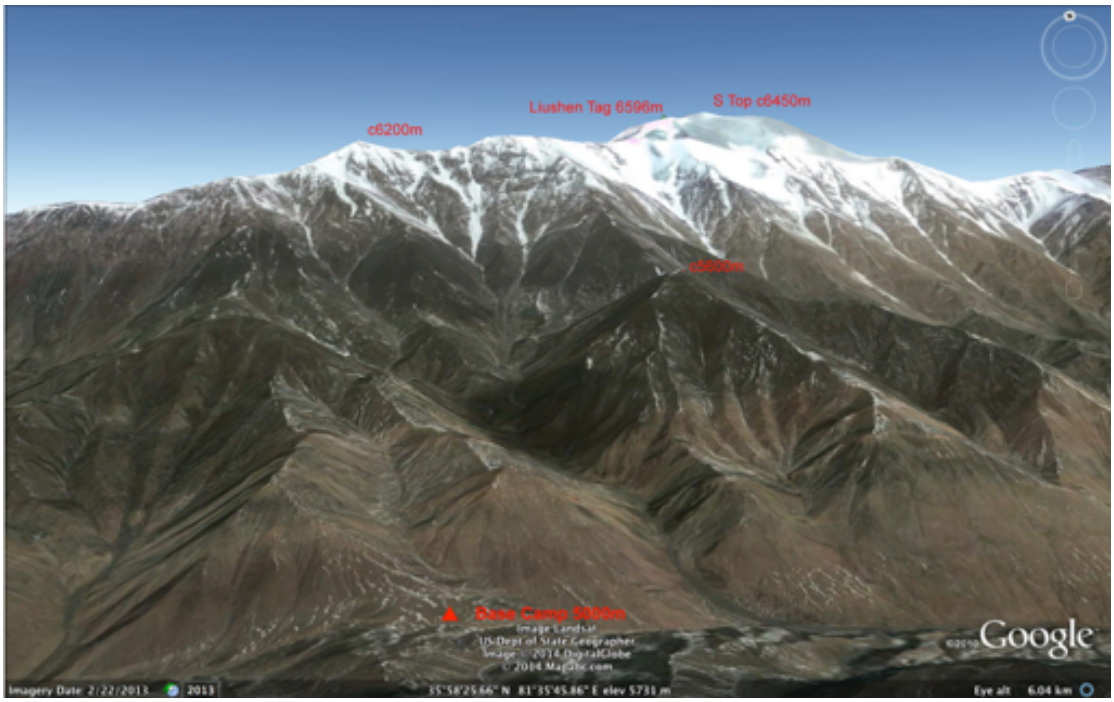


Liushen Massif – Google Maps Satellite 2D - showing planned Base Camp track up Kurab Gorge at left.

Google Earth and the Russian photo above gave us some idea of what we might expect above Base Camp. The South Face had a moderate angle and a prominent pyramidal peak of c5600m projected from it a little way east of Base Camp, leading to a spur which climbed to the main WSW- ENE main ridge (hereafter called the SW ridge) at about 6300m.

Above the pyramidal peak, which was just below the snowline, the spur became more complex but it wasn't really possible to pick up any detail. This highlights the difficulty of interpreting 3D images on Google Earth – while the horizontal resolution of the images is often less than a meter, the vertical resolution, when derived from Shuttle side-looking radar data, is very much lower at about 30m, sampled at 90m horizontal intervals.

One can be lulled into a false sense of security by these 3D images. Because of the high resolution of the 2D satellite image, when it is draped over a much lower resolution vertical 'scaffold' it gives the impression of accuracy, though the detail is meaningless. The detailed features of faces and ridges are smoothed out, leaving it impossible to see the features which are essential in assessing the technical difficulty of a proposed route. Something of this problem can be appreciated by comparing the Google Earth 3D image of the South Face below with the detailed photograph of the same ground on page 12, which was taken on site.



Southern aspect of Liushen Massif – Google Earth 3D image.

Planning (2)

A great deal of the fun in expeditions is planning how to get to the mountain and thinking about how it might be climbed. Most of the pain, for the leader anyway, is in finding enough people with the right experience, attitude and money to make up the party. There was more than usual of this kind of pain in the case of this expedition. The following graphs illustrate the situation.

Between May and July estimated costs rose by £8,000 (61%) because of exorbitant permit costs. These are often discounted but the XMA refused to do so in our case. This made it essential to have 6 members to share costs.

We had started May with three members, but five additional climbers joined us that month, restoring the expedition to financial health. By the end of June, three of the newcomers had backed out and another was refusing to answer emails. Having wasted our time in the interim, they left us facing cancelling the expedition (again). Zaheer and Stefan joined us in June and July respectively and saved the expedition. The leader might be pardoned for becoming a more cynical man during the process and for his incessant mumblings of the 'never again' mantra.

Finally things came together, with people booking flights to Urumchi from Edinburgh, Paris and London, travelling via either Beijing or Canton, which this year were the cheapest routings. With the help of a suitably stamped invitation from our agent John Hu, six visas were obtained for a mix of British, Irish and German passports.

The Team: (L to R) Stefan Jachmich, Susan Jensen, Gus Morton, Alison Stockwell, John Town and Zaheer Durrani

Things were also proving challenging for John Hu, our agent in Xinjiang. In addition to failing to reduce the cost of the climbing permit, it was becoming apparent that travel to the mountain from Hotan would require upwards of 20 different authorisations as a result of a raft of regulations introduced after the death of 3 Russian river runners who had been killed some years earlier while undertaking an unauthorised expedition. The Russian Embassy had become involved and a searching enquiry had taken place.

More interestingly, John had been told that a gold mining company had reconstructed the old road up the Kurab Gorge and that it was now possible to drive from Pulu up to Subashi and beyond in a few hours. This would do away with the need for donkeys, which, because of recent price rises, had been threatening to break the budget. It would also allow Base Camp to be reached up to five days earlier than with donkeys.

The Expedition

The team assembled in Urumchi on the evening of 6th September and flew on across the Taklamakan desert the next morning to Hotan. Here we were met by our agent John Hu, translator Abdul Ghopur and our cook. After a day to buy food for the mountain and sort equipment we drove on to Keriya (Yutian) where we met with the local Public Security (Foreign Ministry) official and were given a lecture on safety by the County Chief of Police. We were also asked to confirm we were carrying a satellite phone in case of emergencies. The PSB also met us on departure and made us delete GPS data we had collected.

As we then drove south from Keriya towards Pulu, the mountains became visible in a great arc stretching across the horizon, though it was difficult to identify many of them.


Kun Lun from the road south of Keriya – Liushen massif left

We could pick out the Liushen massif, with the prominent Peak 6494, but could not make out the main peak (below).


Liushen Massif from the road south of Keriya, Peak 6494 prominent in centre with its N Face in shadow.

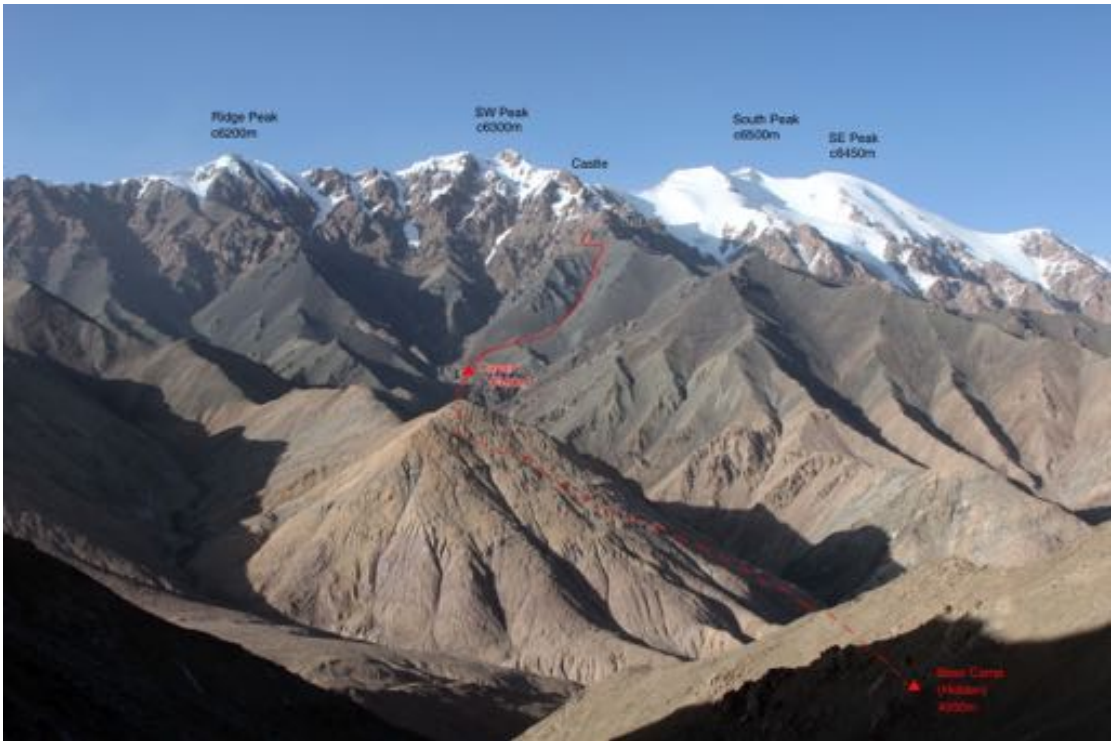
We then drove on, stopping briefly at the Uighur village of Pulu, to the checkpoint at the start of the mine road up the gorge. Only official traffic is permitted from here and we were delayed for 2 hours as news of our permit had not yet reached the men on the ground. They blocked the road with a JCB while conducting enquiries.

The presence of the new road and the expense of hiring 4WD vehicles for more than a couple of days had blown away our acclimatization strategy. The day had started at 1380m in Hotan and would end at Subashi where altimeters registered 4500m. Despite recommending it to other members in these circumstances, I was the only one taking acetazolamide prophylactically.

On reaching camp all but myself suffered from varying degrees of acute mountain sickness. On the next day we drove east up to the watershed pass at about 5100m and descended a short distance the other side to a suitable site for Base Camp at 4959m. After assessing the surroundings, the rest of the climbing team decided to descend with the vehicles to Subashi and re-ascend to BC on foot the next day.

Alison was the worst affected and, after a very unpleasant night at Base Camp, decided to descend. Fortuitously, a vehicle full of mine officials arrived an hour or so later and offered to take her down and drop her at the bus stop in Keriya, which they duly did.

South Face from Base Camp



Southern aspect of Liushen Massif , showing route - main peak is out of sight 1km beyond South Peak

Other members recovered in a few days, while cautiously beginning to explore the possible approaches to the upper part of the South Spur. This was marked by the ‘Tower’, a steep 100m outcrop blocking our path.

Stefan and Susan climbed to the top of the pyramidal peak, finding it long and hard

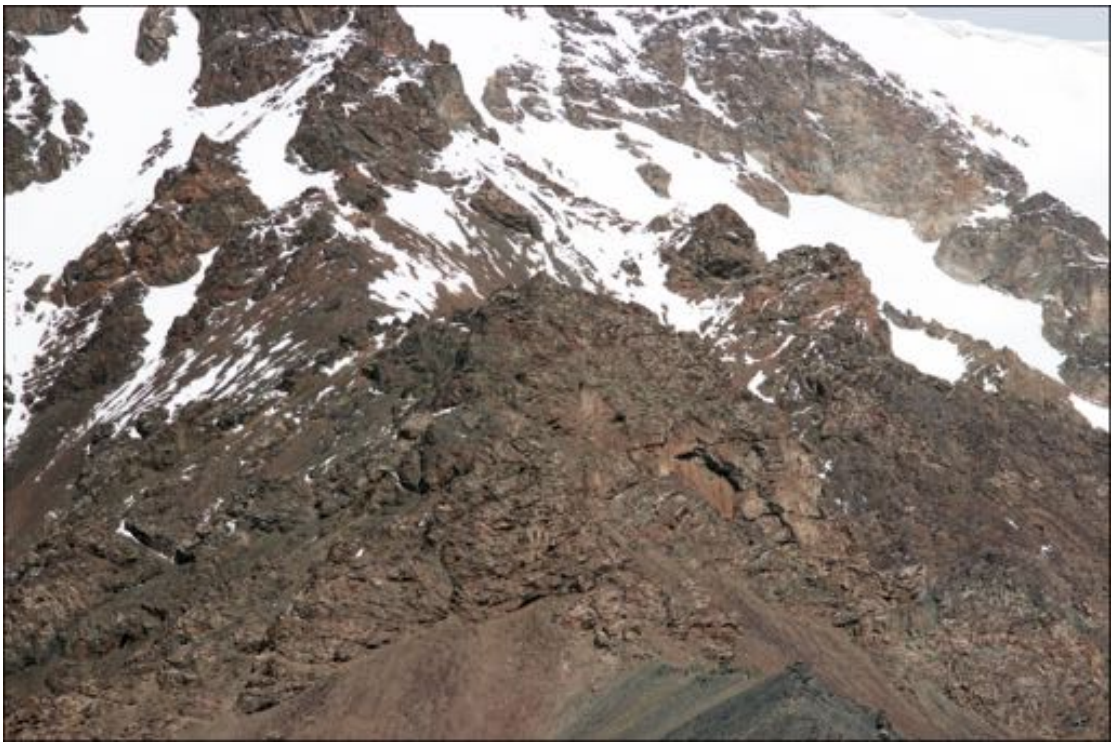
going over broken scree and outcrops and were confronted with a steep descent from the summit to the start of the upper Spur. Zaheer and Gus undertook a magical mystery tour of the various gorges and ridges at the head of the valley which ran down to Base Camp. One zig-zag route proved the key to reaching the long scree slope leading to the base of the upper Spur.

The first 5 km of the route, to 5400m, proved good going, though the stream froze extensively each evening, making early starts problematic. The 400m easy angled gully leading up from here to the Tower was a nightmare, containing some of the worst and most unstable scree any of us had come across. The base of the Tower was the obvious place for Camp 1 but it was devoid of water of any kind. The camp had to be placed at 5400m where the last running water could be found - very strange when the snow line was some 700m higher.

In order to gain a better view of the route beyond the Tower, Zaheer and Gus climbed the 6,004m peak situated to the south of Base Camp. This was a first ascent and was repeated some days later by Stefan and Susan. Above the Tower the slope eased and there were snow patches which would provide water. The angle then increased leading to the 'Castle', a 150m fin which might either be passable by traversing steep snow slopes to the west, or climbed direct on rock (see below).

'Castle', South Spur

The team now turned its attention to the Tower, having ferried gear up to a cache at its base. Susan and Stefan reached the expedition's high point of 5,900m high up on its left flank but were forced to retire because of illness and lack of time. Zaheer subsequently soloed to the same level.



South Spur – the Tower. High point was high up on its left flank.

Scrambling on the Tower, descending from the high point. (Susan Jensen)

By now our time had come to an end and water was becoming a serious problem. The large stream at BC and the water source at Camp 1 had disappeared, the upper part of the mountain having frozen solid. The mine had withdrawn all of its staff and equipment a week earlier.

South Spur (right), with 2014 high point marked and ‘Castle’ above. South Summit out of shot to right.

Another 400m of the South Spur remained to be climbed, including the Castle. From the top of the Spur(c6300) we could see the corniced main ridge leading to a subsidiary peak and on to the South Summit (c6500). At a distance the main ridge looked relatively straightforward.

South Summit 6500m w. pyramidal peak and lower part of South Spur in foreground. High point marked.

The South Summit blocked our view of the main summit, which lay about a kilometer north and only marginally higher. We therefore departed on 26th September frustrated at not seeing or photographing our final objective. It was only on returning to the UK that I was able to look closely at the 300mm telephoto shots taken on the journey in and process them to cut some of the haze. The resulting image of the main summit is shown below.

Weather conditions

The weather was generally very good, though cold. Snow fell on two mornings but burned off quickly the same day at lower altitudes. Night time temperatures at BC (5000m) often reached -5C to -10C. Stormy squalls often blew in from the south but usually lasted less than half an hour.

There were no accidents and no cases of serious illness. Minor problems included two cut fingers, AMS of varied severity and giardia contracted in Hotan. Our translator was treated for a serious case athletes' foot.

John Town
Expedition Leader

Liushen Tag (6596m) centre, Peak 6494 right, from the north.

The Expedition is grateful to the Mount Everest Foundation, without whose aid the expedition would not have been possible, and to the Kailas Group of China whose extensive donation of equipment eased our path up the mountain.

Income and Expenditure Statement

INCOME				EXPENDITURE		
Members				**Payments to Agent:**		
				Food/Accommodation	$4,064	£2,489
Contributions	6@	£3,669	**£22,014**	Transport	$9,586	£5,870
				Translator/Cook	$5,826	£3,568
				Equipment	$304	£186
				Reconnaissance	$480	£294
				Permits	$15,634	£9,574
					$35,893	**£21,981**
Grants				**Other:**		
				Food/Accommodation		£467
Mount Everest Foundation			**£1,650**	Fuel		£199
				Communications		£326
				Office Costs/Bank Charges		£167
				Medical Supplies		£156
				Baggage		£179
				Gratuities		£189
						£1,683
Total Expenditure			**£23,664**	**Total Expenditure**		**£23,664**

Note: The Income and Expenditure Statement excludes insurance and airfares, which were paid directly by members and averaged about £200 and £750 respectively per person. The full cost of the Expedition to members was thus about £4,600 each and the total cost about £29,400.

References

1. Henry Day, Himalayan Journal 2002
2. Mark Newcomb, American Alpine Journal 1997 p129 "Ultima Thule. A short walk through China's Kun Lun Shan"
3. Chkhetiani, American Alpine Journal 2006 p438 and 2007 p403
4. Jeannette Mirsky, Sir Aurel Stein: Archaeological Explorer p307-310
5. Shigeru Kodama, Japanese Alpine Journal, Qong Muztag – Reconnaissance & First Ascent, South of Taklamakan, West Kunlun
6. Fernand Grenard, J.-L. Dutreuil de Rhins. Mission Scientifique dans la Haute Asie, 1897, p53-59
7. Daniel Lal Sander, Stephen Sander, Bahadur Lal Singh: Sir Aurel Stein's Surveying Companion, Exhibition Sir Aurel Stein, Colleagues and Collections leaflet, p3

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