

THE LOHIT VALLEY

THE EASTERN-MOST VALLEY OF INDIA
Arunachal Pradesh, October 2007

DETAILED REPORT



The Lohit river as it emerges in the Assam plains,
near Parshuram Kund

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Expedition dedicated to memory of Lt. Nawang Kapadia



THE LOHIT VALLEY TREK, 2007

Some of us have been visiting the valleys of the Arunachal Pradesh with friends systematically over past few years. These are some of the most unknown parts of the Himalaya for a few reasons. The thick forests do not allow for pleasant trekking, the infrastructure and facilities are almost non-existent, information available is very sketchy. Above all, after the 1962 war with China these valleys are well guarded and obtaining permission from authorities is rather difficult. We were lucky to have visited the Kameng valley (Tawang area) in 2003, reaching Bum la and trekking on the Bailey's Trail. Next was the exploration of the Siang or the Tsangpo valley in 2004. We reached the exact point where the Tsangpo enters India and is called the Siang. This was the first time that human beings reached here, thus completing a century-old exploration which started from the Tibetan plateau. Takpa Siri was a place of pilgrimage, now in Tibet. But a longer route of circumambulation, called the *Kingkor*, passed through Tsari and the Subansiri valleys, now in India. We trekked in both these valleys up to the McMahon Line, as far as political realities allowed us. This was in 2005. Lastly, in 2006 we followed the route of F M Bailey and H T Morshead to the Yonggyap La in the Dibang valley.

This year, 2007, we turned to the Lohit valley, further east - the last of the five major valleys of Arunachal Pradesh. The Lohit valley, in eastern Arunachal Pradesh (formerly NEFA) is deep and thickly wooded. It is the easternmost valley of India. At its eastern extremity the borders of India, China and Burma meet at what is called the 'Tri-Junction'. To the north of Tri-Junction is Jechep la, leading to China and to the south lies the Diphu La (Taluk Pass) which leads to Burma.

The Lohit Valley and people

The Zayul Chu and Rongdo Chu flow from the north into the vast valley which becomes gradually plain as it reaches Rima. It is such a remote valley that the Chinese had made Rima a penal settlement. Later as the prisoners married local Tibetans, the population grew. Both rivers meet at Chayul and flow past Rima to Kahao. From here, in the Indian territory, it is called the Lohit river. It plunges down towards the plains taking many turns.

Lohit river takes a major turn towards the west starting at Minozong (present day Samdul) and ending at Changweiti. Not many major rivers are known to take an almost 90-degree turn like here. Finally taking many twists and turns, it emerges into the Assam plains at the holy site of Parshuram Kund. At Hayuliang two major tributaries merge with it. The Delei and the Dau rivers originating near the Tibetan borders, enlarge the Lohit. Once in the plains it spreads out and is a robust river, especially in the monsoons. The Lohit meets the Dibang river and the Siang river almost near Sadiya. Now it is called the Brahmaputra.

The Lohit flows through a forested country surrounded by mountains. Many subsidiary valleys and rivers flow into it, both from the east and the west. Towards its east, the Sat Ti (at Dong) and Ghalum (at Samdul) flow from the border with Myanmar (Burma). Each of these valleys lead to a pass which crosses into Burma.

One of the important features of these valleys are its people. Lower valleys are inhabited by Mishmis, a troublesome, fearless and violent tribe. In the past, Catholic priests were killed by them and they were also known to bring slaves from the Assam plains to be sold at Rima. Situated on the northwest extremity of the Great Triangle, they have easy access to opium. There were no roads in the upper Lohit valley (almost till early 1970s) and so these tribes were isolated and a law unto themselves.

Few settlers crossed the Diphu pass from Burma into the Lohit valley. They settled in the upper reaches of the Lohit and are called Meyors. They are a quiet and gentle tribe of farmers. Unlike in the other border areas, Meyors and Mishmis do not have much contact with the Tibetans at Rima or elsewhere. In the plains, on the bank of the Lohit the Burmese Theravada Buddhism flourishes at the village of Chonkham. There are pagodas, people of Burmese origin and ceremonies as in a pagoda. It is the unique cultural mix which has kept the religion alive, so far away from home.

Exploration

This valley is of historical significance for many reasons. Many famous names in the world of exploration visited the valley, especially known for its natural wealth, but more to discover the path to the Zayul province which is easily approachable from here.

The earliest traveller was the Pandit explorer A K (nicknamed 'Krishna' or Rai Bahadur Kishen Singh). The British, unable to enter Tibet, had trained and sent native explorers to forbidden areas. They brought back a wealth of information for the empire. AK entered the Zayul province from the north, having walked many miles across Tibet. He halted at Rima and finally went down the Lohit to the Assam plains. He calculated heights of most places, by checking the boiling point on his thermometer. As later explorations confirmed it, these readings were quite accurate. F.M. Bailey, who was with Sir Younghusband on the great Tibet expedition, was in Lohit valley in 1911-12 (See his book *China-Tibet-Assam*). He entered the Dichu valley near Kahao and stayed put at Hot Springs. His accounts of shooting of Takins in the valley are hair raising. He also explored the Delei and the Dau valley, making inroads until its head and in the case of the latter, crossing the Dau-Dakru pass. The race to search for the best route to China brought the next few explorers here. T. T. Cooper, William Griffith, Mr. Williamson, Dr Gregorson (the last two were murdered by the Abors) were amongst these.

One person who paid vigorous attention to the Lohit and its surrounding valleys was Frank Kingdon-Ward. He was a naturalist of great repute and was usually sponsored by the Royal Geographical Society, London. He explored the Lohit, the Zayul and crossed the Dichu valley and Diphu pass (Taluk Pass) three times to Putao (Fort Hertz) in Burma. To him we owe much information about the flora and fauna of the valley. His observations, samples of plants and geographical descriptions were faithfully recorded in books and stored at the records of the RGS. In one of his later trips his wife Jean Kingdon-Ward accompanied him. Walking from Tezu they reached Kahao, spent some delightful days in the Dichu valley at Hot Springs. They also visited Rima from where their supplies were obtained through very troublesome and opium-fed porters. While they were at Kibithu the giant earthquake of 1950, which destroyed much of the eastern Arunachal, hit the area. They had a harrowing time, retreating through broken trails, without supplies or porters willing to come with them. It was an advantage for science that such a trained person as Kingdon-Ward was present during such a calamity, and lived to tell the tale. His writing on the effects of the earthquake, measuring over 8 on Richter Scale, are a fine record for science.

1962 – India-China War in the Lohit Valley

The 1962 Chinese invasion was a tragic watershed in the military history of India. It exposed an inept Indian state both militarily and politically. But for most of the war, the fighting qualities of the Indian jawans and the young officers remained unchanged. No story of the 1962 war is complete without a mention of the heroic resistance offered at Walong., Walong is a small hamlet located near the tri-junction of Tibet, Burma and India. Situated on an ancient trade route, it was manned by an Assam Rifles post with a small airfield capable of handling Indian Air Force Otters and Caribous. The hills surrounding Walong were between 10,000 to 16,000 feet. Air drops were the only way to support this sector. The Chinese carried occasional incursions through the Lohit Valley to familiarise themselves. In response,

the army was moved into the area in March 1962 with a company posted about 2 miles from the border at Kahao. Meanwhile across the border, Chinese activity increased with posts moving closer to the border.

In the midnight of 22 October 1962, the Himalayan calm was shattered as the Chinese attacked the Indian posts. Till 13th November fierce battles raged at many points like on the Dong hill, east of the Lohit, Ladders area, and the Lachhman Ridge. After paying a heavy price in terms of men lost at the Namti plains, the Chinese made a diversionary move to reach the western 'Tri-Junction' above Walong. Indian troops were ill-equipped and ill-prepared for such battles and finally withdrew paying a heavy price. They had defended the area valiantly till the last.

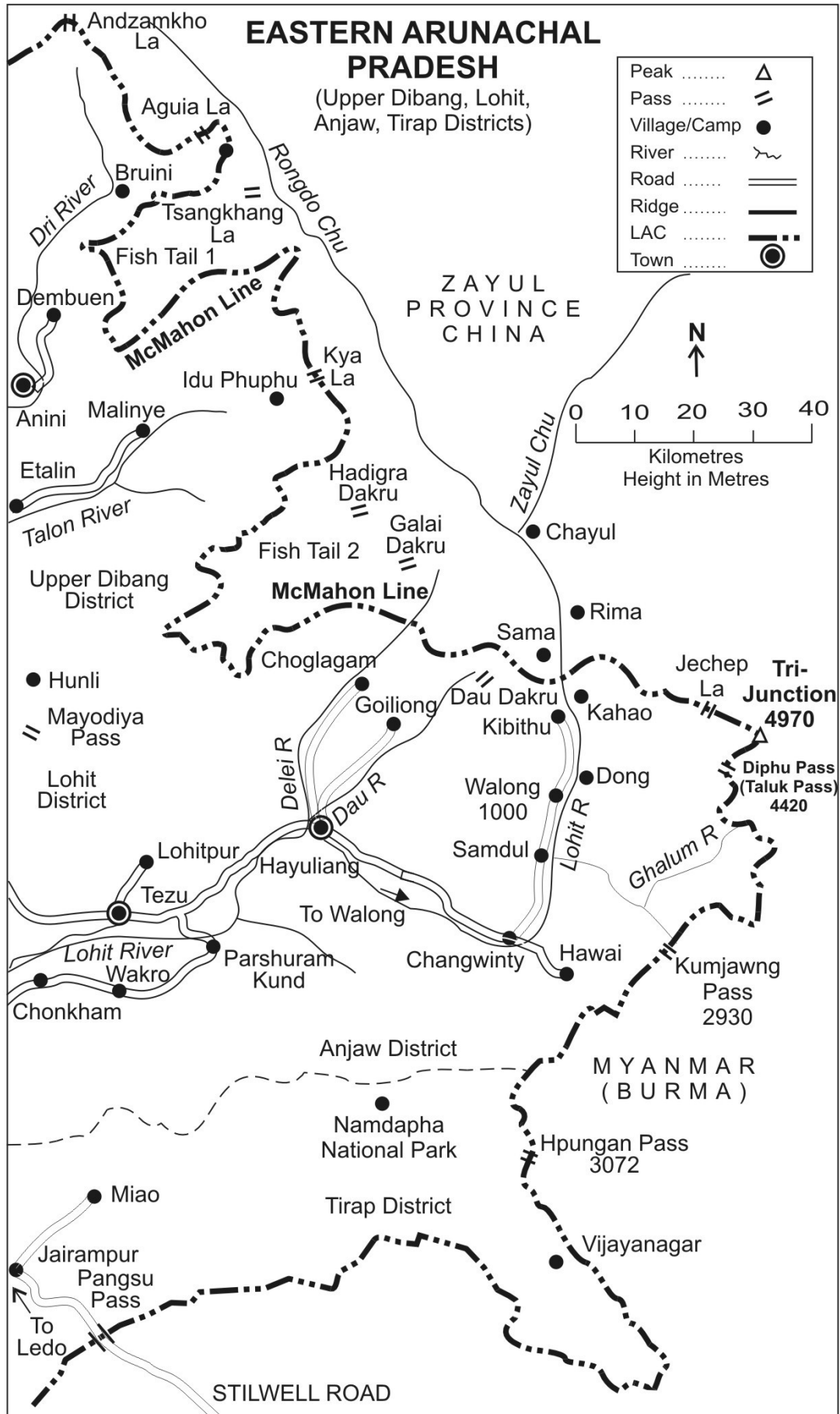
The Chinese suffered terrible casualties (almost 5 times the number of Indians). All Indian troops were asked to withdraw. Some managed to get back through the treacherous terrain. But many never got the orders. They slugged it out to the last man, to the last bullet. As Brigadier N.C. Rowley said, "6th Kumaon at Tri-Junction fought and fought and fought till there was nothing left. After this there was eerie silence." Sikhs, Kumaonis, Gorkhas and Dogras fought shoulder-to-shoulder to the bitter end. Two months after the cease-fire when the Indians returned they found that the Chinese had marked the positions of the dead. Many of the bunkers showed the dead where they had last manned their weapons. The best tribute to the Indian soldiers was paid by the *TIME* magazine which wrote : "At Walong, the Indian troops lacked everything. The only thing they did not lack was guts".



War memorial at Walong.

"Helmet Top" displaying remains of 1962 war.

IF I ADV FOLLOW ME
IF I WDR KILL ME
IF I DIE AVENGE ME
SO HELP ME GOD
B COY 6 ASSAM



Our Trip 2007- Better be Safe rather than sorry !

It was our aim to reach the Diphu La (the Taluk Pass) which stands at the head of the Dichu valley. This pass leads to Burma to the south and the Tri-Junction of the borders of India-China and Burma in the northeast. Many explorers like Kingdon-Ward and others had travelled on this route often and apart from early difficulties, the Dichu valley follows the natural line to the pass. However the present day political conditions dictated that the Dichu valley cannot be approached. Hence as an alternative we had to follow the Sat Ti valley to its south.

We arrived at Walong on 17th October 2007 when the festival of Dusherra was being celebrated. This Hindu festival has made inroads into this Meyor and Mishmi country and people were busy gambling and drinking. The young in the area, who later came with us as porters, do not have much activity, education or income. They survive on wages provided by the army when they work for them. For many months when it rains heavily, they have nothing to do but smoke opium which is easily available. Many sell opium to make a living. We spent our time usefully, visiting the army memorial where the names of soldiers who had laid down their lives in defense of the Lohit valley in 1962 are engraved. There is an official Memorial and epitaph near the helipad and at the 'Helmet Top' one finds the remains of the gallant Indian defenders. Such places should be made compulsory visiting for India's younger generation so that they realise what sacrifices were made by our valiant soldiers to allow them a peaceful existence today. We walked to the 'Millennium Point' where, besides few other places, the first sun rays of the present Millennium to the Asian Sub-Continent were celebrated.

Porters

It was impossible to obtain porters till the festival was over on 21st October. However later too, we never managed to gather enough porters required for the trip. As a result we redistributed loads and some rations were put aside to be brought up later. This was a similar situation as faced by Kingdon-Ward six decades ago ! In fact Ward had to stay a week at different places to gather porters and supplies. At one point he had to time the return journey to accommodate Mishmis returning down to their country. Not many things had changed in these areas !

The Bridges

On the 23rd October, we started the trek from Dong, a village 6 km to the north of Walong and on the left bank of the Lohit. First, we had to cross a single log bridge about 100 feet above and across the Sat Ti. We had crossed many bridges on Arunachal treks in the past (Foot Suspension Bridges) which were scary enough, but in this less trodden valley, such 'single log bridges' were singularly dangerous. Kingdon-Ward has written about dangers of such bridges, particularly when the upper bark had worn out due to usage. They are a slippery hell !

The trail ahead otherwise was through thick jungles and with many steep ups and downs as usual. On the first day, we camped at the 'Slip Camp' on a moraine slip which had occurred and reached till the river. The vegetation in these valleys was thick and unique as surveyed by Kingdon-Ward. In one sweep near our camp we could see banana trees, palms (both found at sea-level), the Indo-Malayan forest (found at about 200-600 m) and pines (generally found at 1800 m) !

Near the camp was another single log bridge which had its bark worn-out due to use, making it very slippery, and it was at an angle. We fixed ropes and with care managed to go across but it was a scary affair. While the Mishmis, even though high on opium, could go across with nimble foot, others had to do it carefully.

Continuing for five hours through forest and sometimes on the boulders near the river, we reached the Patta (leaves) camp. It should have been named 'Scorpion camp' after the original habitants of this camp in the forest.

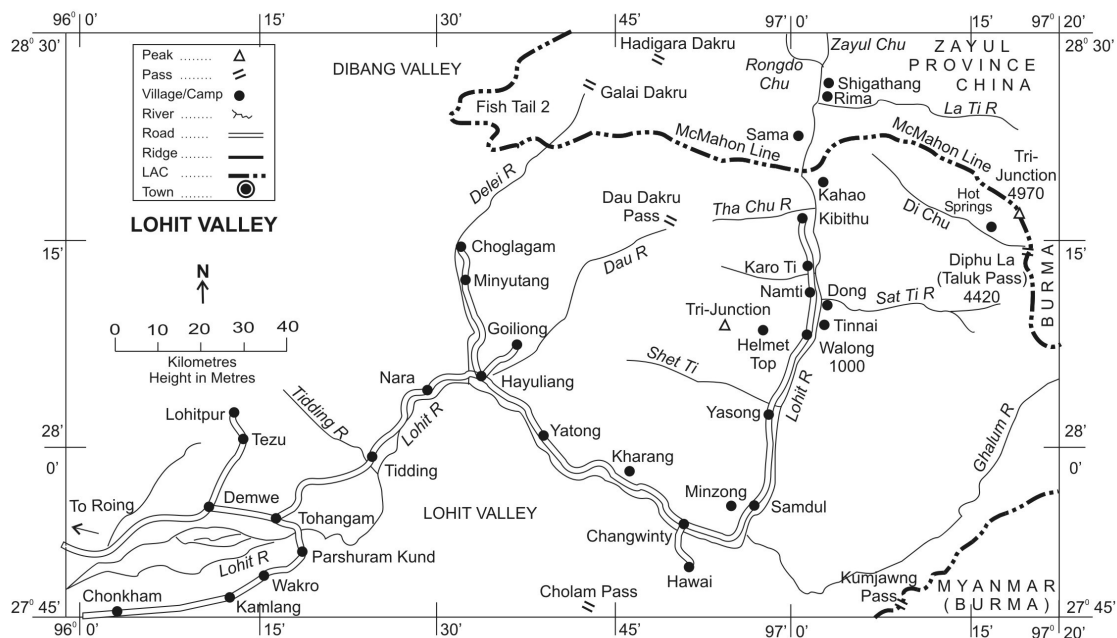
Next day, 26th October, after an hour of trekking there was a 'bridge' which was something of rarity. It was just a couple of thin branches of tree fallen across the river. One had to jump these branches across the river which was flowing over the bridge ! A wrong jump or breaking of the thin branch, would make you reach somewhere 'higher' than the other bank ! Harish and Ms Sangeetha did not feel too confident about crossing such a bridge. The porters talked of two more such dangerous bridges ahead, one almost 100 m above the river. It was time to take stock of the situation.

The Retreat

Porters were carrying far less rations than what would be required for the next 10 days, as we were slow. They were reluctant to go down to ferry rations up and their leader, called GB (Gaon Bura) would not guarantee their safe return. If these unreliable porters did not return with extra rations, we would be stranded in the upper valley with rickety bridges to block our quick return.

The final base camp in this Sat Ti valley was still three days away. From here one had to climb to the watershed ridge with the Dichu valley to the north. The trail went past a few lakes to reach a high point and then descend to the Diphu Pass (Taluk pass). The return would be to climb back to the high point and past the lakes and finally to descend to the base camp - overall about 2330 m (7600 feet) in 20 km in a day ! There was no camping available near the lakes. For us it would require at least two camps on the higher plateau to reach the pass as even acclimatisation was an issue. Obviously we were one valley south of the pass and there was no easy route to Diphu La from this valley, though we were just 10 km short of the pass. Such a long day was okay for a very fit army officer, jawans or our troublesome but fit porters but not for us !

It was thought that the discretion is the better part of valour and we decided to return - to be safe rather than sorry and prevent a major inconvenience in the area.



The Hump

The area between the Ghalum and the Dichu Pass is a high altitude plateau with several lakes. This plateau was nick named 'the Hump' by the pilots in the Second World War. These rickety transport planes flew from Chabua, Mohanbari and other airfields in Assam and supplied materials to Kuming in China. They had to rise above the Hump to clear it, where a few old machines failed and crashed. Almost 900 planes crashed in Burma and China and some on the Hump. There are survival stories of pilots who walked down from the Hump to the Changwiti village on the Lohit and lived to tell the tale.

The area has much promise for future explorations. The Delai valley, north of Hayuliang is well populated with many villages. It has no record of present day visits by trekkers or explorers. Similarly the adjoining valley from Hayuliang, the Dau valley leads to the Dau Dakru pass which descends to Kibithu, perhaps making it difficult to obtain permission. The Dichu valley, very steep at the beginning, leads to Hot Springs and naturally to the Diphu pass, the old gateway to Burma. Proceeding along the McMahon Line the Dichu valley will remain sensitive for decades. The long and deep Ghalum valley starts from Samdul and leads deep inside. A branch turns south to Khumjwang pass on the Burma border while the main branch leads to some lakes.

However one will have to wait till the political situation allows for such free movement, but it will be worth a wait for the future explorers.

Area : The Lohit Valley, Eastern Arunachal Pradesh.

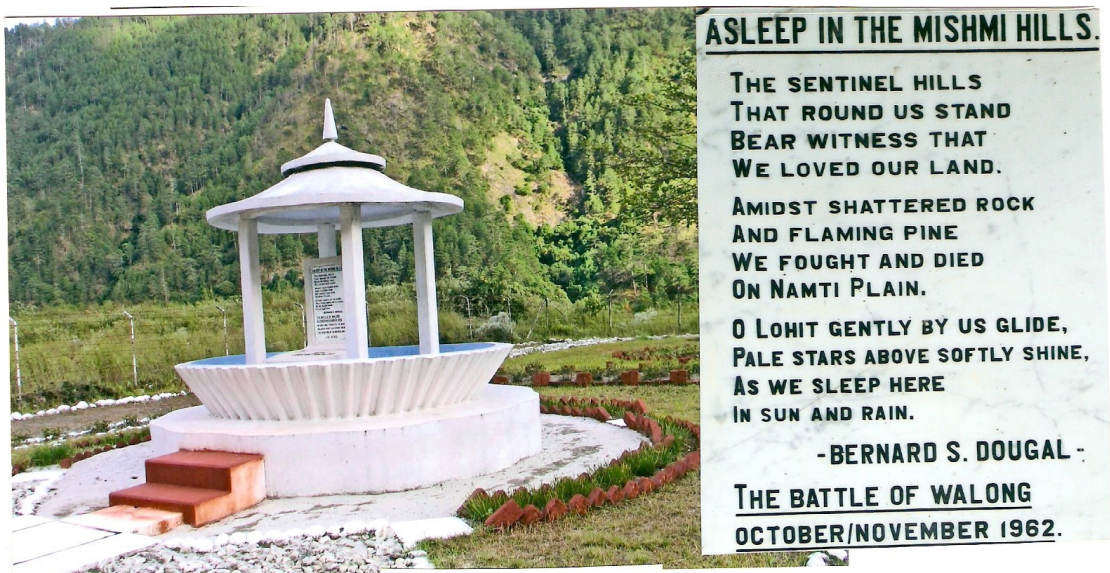
Period : 14th October to 2nd November, 2007

Members : Harish Kapadia, Wing Cdr. V.K. Sashindran and Ms. Sangeetha Sashindran. (Drs Kamal Limdi and Ms Nandini Limdi left before the trek began due to personal reasons)

Grateful thanks to the Indian Army for its help and permission.

HARISH KAPADIA

15th November 2007,
Mumbai



The War Memorial at Walong.

Appendices

Walong Inscriptions

The British developed an interest in the Lohit valley. They knew its importance for trade and defence. Hence, administrators and later, road builders were sent here.

Ronald Kaulback, who was a member of the party with F. Kingdon-Ward in 1932, had written about inscriptions on a big rock.

'Next morning (March 29, 1934) we passed the Boundary Stone, on the right bank of the river, 2 miles south of the village Tinnai. The stone has an English inscription marking the end of the road built in 1912 by Sappers and Miners, though the road itself has been swallowed by jungle long since. There is also a Chinese notice on the rock showing the limit of their claims when they overran Tibet in 1910. I say "Boundary Stone", but no one seems to have any clear idea as to where the boundary actually is in the Lohit valley.'

The Geographical Journal, (of the Royal Geographical Society, London) (Volume LXXXIII, No 3, March 1934, p.180). Article 'The Assam Border of Tibet' by Ronald Kaulback.

We made many inquiries to locate this rock after almost a century. We visited Tinnai village on the left bank and walked along the bank but nothing was found. In Walong bazaar we made inquiries but the younger generation was ignorant and uninterested. One late evening we met Bamphak Meyor lama in the bazaar who talked of such a rock in the thick forest near his fields. In an inebriated state, but sure footed, he led us down a steep hill tract and pointed at a rock. It had several Chinese characters in red ! It was a huge rock, hidden by foliage near the helipad. Next day we returned with some equipment and porters and on clearing the surroundings, the red letters of Chinese markings (written in 1910 !) were seen clearly and photographed. We did not find British markings which may require more time, tools and energy to locate on the rock or in the vicinity. It is remarkable that the rock and the inscriptions have survived the giant earthquake of 1950 which had destroyed much of the valley. We are trying to decipher the Chinese inscriptions found.

References to the Inscription of Stone at Walong

As a result of the British occupation of Lhasa, Chinese influence in Tibet grew; the British refused to deal with Tibet except through China. Tibet was soon incorporated into the Chinese provincial structure. Between 1905 and 1910, the Chinese attempted to assert their influence in Nepal and Bhutan, regions adjoining British Assam. The British became alarmed as Chinese activity and influence penetrated into the Tawang Tract. In 1910, Chinese troops planted boundary flags just below Walong; the British could not protest, as they regarded Walong as marking the Tibetan border. Yet, they felt that they could not stand by and allow China to assert influence into the Tawang Tract. The British had to do something. Sir Lancelot Hare, the Lieutenant Governor of Eastern Bengal and Assam stated that "in view of the Chinese pushing forward, that it would be a mistake not to put ourselves in a position to take up strategic points of defense." The British Government in both India and London rejected moving the Outer Line northward to meet the present limits of Chinese influence; they feared Russian reaction to any advance. The 1911 murder of Williamson appears to have provided the solution. A British expedition, headed by Major General Hamilton Bower, was mounted in late 1911; the mission continued until 1913.

By the end of 1913, the British had explored much of the Assam Himalayas. The British had inspected the Chinese boundary markers near Walong and put up British markers beside them. In the eastern Lohit Valley, the boundary retreated northwards from Walong (where both Chinese and British markers had been placed) to Kahao, 20 miles north. It simply

appeared that the British wanted the boundary alignment northward to permit good defensive points in ranges far enough north to eliminate any Chinese influence into Assam.

It is interesting that the 1929 *Encyclopaedia Britannica* showed the disputed area as part of China, with the boundary following the alignment shown on Chinese maps ! In January, 1914, T. O'Callaghan, assistant administrator of the Eastern Sector of the North East Frontier, was sent up the Lohit Valley. Just below Walong, he found both old Chinese boundary markers and a new marker placed in 1912 by the Chinese Republic. O'Callaghan removed some of the markers which were loose, took them upstream, and simply replaced them near Kahao, just below the McMahon boundary ! He then went to Rima, conferred with Tibetan officials, and found no Chinese influence in the area. O'Callaghan proposed a road to, and a post in, Walong; but his superiors showed no interest in his proposal.

The serious fighting of the 1962 China-India Border War extended from October 10, 1962, until November 20, 1962. While the entire border was the issue, the actual fighting occurred in three widely separated areas : Walong, Tawang, and Aksai Chin. It is significant that while over 47,000 square miles of frontier were in contention between China and India, that the fighting was confined to areas where the Chinese felt that they had legitimate claims. In Walong, the British (O'Callaghan, in 1914) had moved the previously agreed British and Chinese border markers northward.

(From *The China - India Border War* (1962). By Calvin, James Barnard, Lieutenant Commander, U. S. Navy. Publisher: Marine Corps Command and Staff College, Quantico, Virginia USA. April 1984)

References to the Boundary stone and Diphu pass

(From *India's China War*, by Neville Maxwell, 1970)

Boundary Stone

During the Second World War, the British government were convinced of the need to fill the political and administrative vacuum which had been allowed to persist between Assam and Tibet ever since the establishment of the British rule. The task of making good the McMahon Line was given to J.P. Mills, the Government's adviser on tribal affairs, in 1943.

Taking a force up the Lohit, he visited Rima and, over the protests of the Tibetans, established a post at Walong; the Chinese had put up boundary markers just below Walong in 1910, and the Tibetans maintained that bond ray lay there and no some twenty miles upstream where the McMahon Line put it. Moving up the valleys, "penetrating slowly by gaining the goodwill of the inhabitants by giving them much needed medical assistance" and pacifying their incessant feuds, and turning back Tibetan tax-collectors, the British extended their hold.

(Maxwell. P 59-60)

Diphu Pass

The Diphu pass is clearly marked on the map, of scale of 1 inch to 8 miles, which the British and Tibetan representatives signed in Delhi on March, 1914 and McMahon drew his line right through it. (Maxwell Foot Note p. 213)

The treaty map showed the Sino-Burmese boundary ending at the Diphu Pass, in accordance with the McMahon Line, thus, it would seem giving India a strong new argument for maintaining that the McMahon Line must be the Sino-Indian boundary too. But instead of seizing solely on that point, India proceeded to argue that the trijunction lay not at the Diphu Pass but five miles to the north of it...Peking replied that the location of the trijunction could not be determined until all three parties were prepared to co-operate, in other words until Indian agreed to 'seek a reasonable settlement of the boundary question' in friendly negotiations. (Maxwell: p. 213 – 214)

The discrepancy resulted from British second thoughts. McMahon had drawn his line through the Diphu Pass but later surveys had shown that, from the British point of view, the Talu (Taluk) pass, five miles to the north, made a better boundary feature. British map therefore began to show the boundary as running through the Talu Pass.

Burma accepted this in 1957, according to Nehru, but the Chinese maintained that, while they were prepared to treat the McMahon Line as the *de facto* boundary, this had to be the Line as McMahon drew it – not as the British or the Indians may have amended it. (Maxwell : Foot note p, 214).

1950 Earthquake

A giant earthquake of more than 8 on the Richter scale caused havoc in the Lohit and the lower Dibang valley and changed the course of several rivers. It's epicentre was near the old town of Sadiya and its effects were felt strongly in Rima. Kingdon-Ward couple, who were at Rima at the time could not take a step when the earthquake shook the area with many after shocks.

In the lower Dibang valley, Nizamghat and Sadiya, two major towns and entry points to the upper valley, were literally wiped out from the map during this earthquake. The Dibang river changed its course and many of the lower tributaries merged at different points. Today we have the Sadiya district, but there is no Sadiya town. Nearby a small settlement of Roing barely managed to survive. The residents heard a rustling sound after the earthquake and fearing a flood, they climbed up a small hill. In front of their eyes they saw their homes being destroyed by floods. After several days spent in hunger, they were rescued. The majority of paths, trails and roads were destroyed. The trail, now a motorable road, was rebuilt by a different alignment from Roing across the Myodiya pass to Anini. Further east the earthquake shook up and destroyed the famous holy site of Brahmakund and Parshuramkund. The fakir's rock where many pilgrims took a holy dip was obliterated and the Lohit river now flows into the Kund which has remained only a holy name.

F. Kingdon- Ward

(From article by Ulrich Schweinfurth (*Himalayan Journal* Vol., 34, page 1)

There is a certain definite quality about F. Kingdon-Ward and his writings. They open up a region unknown to the reader in such a way that even someone not much inspired by his own imagination is likely to be lured away into the wilds by Ward's vivid description. Ward usually succeeds in transforming his readers into travelling companions or at least into a typical armchair mountaineers.

Many were the dangers he lived with on his travels; in fact they no doubt were so frequent that they are seldom actually mentioned. One supreme encounter that a peril he encountered – and at the same time a unique scientific experience – was his involvement in the great Assam Earthquake of the 15th August 1950, which he was able to observe in the Lohit valley – in fact, sitting more or less right on top of the epicentre! His reports about this geological cataclysm, its consequences to the topography, the rivers courses, plant life, etc., make not only thrilling reading, but also widen our understanding: only very rarely is someone with a trained mind in a situation to observe the forces of nature at work in such a catastrophic way – and afterwards to be able to get away with the experience and accurately report it.

The Forest of Tibet

(by F. Kingdon-Ward, *Himalayan Journal*, Vol. 7, page 103)

Kingdon-Ward the great naturalist writes about the question that was in our mind all along. Why the valleys of Arunachal Pradesh are thickly wooded and even the land of Tibet across the pass are equally wooded, unlike the barren Tibet as we know of it. He writes that 'whereas Tibet is known to the world as a barren-wind swept plateau and in fact a desert, I

am only here concerned with that part of it which is the exact opposite. About 1/10 of Tibet far from being a desert, is more or less forested. This forested region is not, however, today part of the plateau, consist of bewildering maze of mountains, slashed by deep gorges; and though there is abundant evidence to show that most of it anyway was once the part of the plateau, glaciers and rivers have so much ploughed it up, that it has now lost any resemblance to a plateau. The whole area of Tibet is around 750,000 sq. miles and the forested region occupies 75,000 sq. miles, an area as large as Great Britain though forest is by no means continuous over this large region. "

The forest region which we may call the river gorge country, comprises the whole of south eastern Tibet, embracing the provinces of Pemako, Pom and Zayul with part of Kongbo and the Tibetan districts along the great Himalayan range east of Bhutan. He narrates the reasons for such a contrast between the Tibet of the west as we know it and Tibet of the east. The main reason according to Ward is the fact that only one great river, the Indus, pierces the mountain ring at the western end of the Himalaya, while five rivers, the Tsangpo, Kameng, Subansiri and Lohit, in Arunachal Pradesh, with Salween and the Mekong further east, pierce it at the eastern end of the Himalaya. Besides these five the Irawaddy and the Dibang has broad passages and deep valleys, which allows the rain bearing winds to follow. All these rain bearing winds from Bay of Bengal cross across to Tibet through these gorges and the deep valleys of the Dibang.

The forested areas of Tibet lie towards the south of the main plateau. Hence before the plateau rises to the barrenness, thick forest, almost as thick as Arunachal Pradesh exists in this part of Tibet. In fact someone may claim that this country to the southeast is not Tibet at all. It has lost its plateau like appearance and though there is evidence that once it may be part of the plateau. And ethnically too, it is not for the most part inhabited by the true Tibetan race. It differs from the main plateau in a degree that the rivers are cut deeper, they are wider troughs and mountains are sharper by contrast with the other gorges. The forested slopes contrast strangely with bare mountains of the plateau. However, forest or a plateau, politically is a part of Tibet and now a part of China.

Another interesting aspect that Kingdon-Ward has written about is the variety of vegetation in the same valley. In the lower valleys it starts as an Indo-Malayan jungle and as we go up towards the passes to Tibet, huge pines and various other rhododendrons and conifer forests are seen. Thus each valley in Arunachal Pradesh specially the Lohit and the Dibang is a complete store house or a dictionary, a sheer delight for a botanist.

Geology and tectonic history of the Lohit Valley, Eastern Arunachal Pradesh, India
By N. S. Gururajan, B. K. Choudhuri. Wadia Institute of Himalayan Geology, 3 General Mahadeo Singh Road, Dehra Dun 248001, India

Abstract

The Lohit River section of eastern Arunachal Pradesh comprises four tectonic units. From SW to NE these are : the Lesser Himalayan rocks, the Mishmi Crystallines, the Tidding Suture Zone and the Lohit Plutonic Complex. The Mishmi Thrust underlies the basal Lesser Himalayan unit, while the Mishmi Crystallines are thrust over the Lesser Himalayan unit

along the Main Central Thrust. The grade of metamorphism in the Mishmi Crystallines increases up the structural section from chlorite to staurolite–kyanite zones, exhibiting inverted metamorphism. The relationship between deformation and metamorphism shows that the metamorphic peak was syn - to post-tectonic in relation to the main ductile shearing event. Continued deformation, after the metamorphic peak, was accommodated along millimetre scale shear zones, developed throughout the sequence, parallel to the regional schistosity. Movement along these shear zones has resulted in inversion of the metamorphic zones.

The rocks of the Tidding Suture represent an ophiolitic *mélange*, thrust over the Mishmi Crystallines, which in turn are overthrust by the Lohit Plutonic Complex along the Lohit Thrust. The Lohit Plutonic Complex is subdivided into western and eastern belts separated by the Walong Thrust. The western belt consists of deformed quartz-diorite, diorite, gabbro and trondhjemite, intruded by basic and acid dykes. The eastern belt comprises garnet–sillimanite gneiss, intercalated with crystalline marble bands, followed by a complex zone of leucogranites, aplites and pegmatites, which intrude the early foliated quartz-diorite, soda-rich granite and microdiorite. The rocks of the eastern belt are the northward continuation of the Mogok Gneissic Belt of central Burma. The occurrence of intrusive rocks in the eastern belt suggests that the magmatism related to subduction extended to the east, far from the subduction zone. The peraluminous leucogranites, aplites and pegmatites are the products of crustal melting, induced by crustal thickening related to the intracontinental Walong Thrust. Subsequent to metamorphism and shearing, the whole sequence was folded into an antiform, forming the Eastern Syntaxis, and this deformation steeply tilted the earlier low angle thrusts and foliations. Later compression partitioned into right-lateral strike-slip motion, producing a superimposed sub-horizontal lineation observed mostly in the Lohit Plutonic Complex.

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Road Distances from Dibrugarh to the Lohit Valley (2007)

Dibrugarh to Kamlang

Dibrugarh	0	
Tinsukia	11	
Dum Duma	3	
Rupai	12	Bifurcate to NH 52 from NH 37
Kakopathar	19	
Dirak	15	Enter Arunachal Pradesh
Jengthu	7	Namsai 2 km from here on old route
Lathaho	17	
Chongkham	16	
Medo	15	
Kamlang	13	

128 Km - 6 hours

Kamlang to Hayuliang

Kamlang	0	
T Junction	4	
Wakro	16	
Parshuram Kund	16	Cross Bramakund Bridge
Tohangam	16	Bifurcate to Demwe for Tezu
Udayak Pass	11	
Salangam	19	
Tidding	7	
Nara	24	
Hayuliang	16	

129 Km- 6 hours

Hayuliang to Walong

Hayuliang	0	
Yatong	13	
Kuibiang	13	
Kharang	12	
Changwiti	12	To Hawaii 12 km
Samdul	11	90 degree turn on the Lohit
Yasong	14	
Walong	21	

96 Km- 4 hours

Walong to Kibithu

Walong	0
Tillim	4
Namti	4
Yakung	4
Karoti	11
Kibithu	9

32 Km- one hour

Other Roads

Walong	0	Above Walong	Meteriolong	11	
Helmet Top	18		Choglagam	36	
				57 Km	
Hayuliang	0	In the Delei	Hayuliang	0	In the Dau valley
Valley			Goiliong	13	
Chapru	10				

L t . N a w a n g K a p a d i a

(15 December 1975 – 11 November 2000)

Lt Nawang Kapadia, who was commissioned in the Fourth Battalion the Third Gorkha Rifles, died while gallantly fighting Pakistan based terrorists in Kupwara district of Srinagar on 11th Nov 2000.

Nawang Harish Kapadia was born on December 15, 1975, in Mumbai three years after his elder brother, Sonam. As his surname indicates, theirs is a family of traditional Gujarati cloth merchants, of a community that has a scarce presence in the Defence Services. From his early childhood, Nawang had imbibed the best adventurous talents of his parents, Geeta and Harish. Sonam and Nawang were named after famous Sherpa mountaineers; ironically both are Gorkha names. Nawang means “leader of men”, a very apt name for an able soldier.

Nawang did his initial schooling at New Era School and subsequently at the St. Xavier’s Boys’ Academy. He did his B. Com. from Jai Hind college, Bombay. In college, his interests included trekking, hiking, mountaineering (which of course, was in his genes), sports, martial arts and music. He enjoyed life to the maximum, and it was most evident in his passion for food. When it came to eating, no one could match him. Nawang could out-eat anyone and at anytime.

The happiest day in twenty four year old Mumbai-born Nawang’s life was when he joined the Officers’ Training Academy at Chennai. His parents, well-known mountaineers Harish and Geeta, encouraged him to the fullest in spite of the cynical views of others. It was a proud moment indeed at the Passing Out Parade on 2nd of September 2000 when his family and friends saw him receiving his Lieutenant stars on commissioning to the prestigious Fourth Battalion of The Third Gorkha Rifles. After a brief visit home, Nawang proceeded to the Regimental Centre at Varanasi from where he joined his Battalion on 29th Oct 2000. The Battalion was, during this period, continuously involved in operations against foreign terrorists who had infiltrated and were in the process of establishing their bases in the Kupwara area of Jammu and Kashmir. Nawang was immediately involved in these operations where his qualities of heart and mind as well as his abundant courage were a beacon to the troops under his command.

On the 11th of Nov the Battalion received information of a large number of terrorists hiding in the notorious jungles of Rajwar near Kupwara. Search and destroy operations were immediately launched with Nawang leading his own platoon. At approximately 11 am, a large hideout was discovered by the Battalion and Nawang’s platoon came under fire from a group of eight to ten terrorists in the vicinity. Havaldar Chitra Bahadur got a burst in the stomach and fell mortally wounded. At this stage, Nawang instinctively rushed to rescue Chitra Bahadur, firing his weapon, under the covering fire of his comrades. A terrorist who was hiding in the nearby foliage fired at Nawang. In the crossfire, Nawang got a bullet in the face and died, leading his troops in the highest tradition of valour and sacrifice.

Lt Nawang Kapadia’s sacrifice will remain a shining light to inspire future generations. The city of Mumbai should be proud of its son who lived his life here and leaves behind a sorrowing family and a large circle of friends. Incidentally on 11th November at 11 am, world pays homage to Martyrs of wars by observing two minute silence, as “Remembrance Day” (In the USA, “Veteran’s Day”).

He was cremated with full military honours on Tuesday, 14 November, 2000 in Mumbai in presence of large number of family and friends and army officers. Nawang lies in peace, having chosen a career as he desired and dying for the country, trying to save a life, in best traditions of the army.