

THE TSANGPO EXPLORATION

Arunachal Pradesh
November 2004

D E A T I L E D R E P O R T



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(15 Dec 1975 - 11 Nov 2000)

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Expedition dedicated to memory of Lt. Nawang Kapadia

Tsangpo Bend Expedition, 2004

DETAILED REPORT

Since Kingdon Ward's day there have been no significant advances. The Tsangpo still guards its secrets, and will continue to do so until the last great Asian adventure – a journey all the way up the Tsangpo - Brahmaputra from the Assam valley to the Tibetan plateau – is undertaken.

Charles Allen in *A Mountain in Tibet* (Tsangpo Gorge)

Introduction

The Brahmaputra, one of India's mightiest rivers, originates in lake Manasarovar in Western Tibet. It starts off as an unimpressive rivulet and cleaves an easterly course across the Tibetan plateau. The river, called Yarlung Tsangpo (Tsangpo means 'river' in Tibetan) in Tibet, steadily swells up being fed by glacial melts from the Himalaya. It takes a southern course at the Namcha Barwa massif in what is known as the Tsangpo gorge. Further south, at Pemako, the river tumbles over a giant waterfall, thus acquiring the energy and momentum with which it sweeps into India. For a long time it was a matter of conjecture whether the Yarlung Tsangpo flowed into as the Brahmaputra, Irrawaddy or Salween. It was also not known whether Tsangpo flowed into the Subansiri, Siang or Dibang in Arunachal Pradesh.

In the 1880s this conundrum exercised the minds of the British in India. Tibet was closed and the Chinese were not cooperative. The British recruited a Sikkimese tailor named Pundit Kintup to go into Tibet, follow the Tsangpo and confirm whether it continued as Brahmaputra in India. Kintup was apprehended by the Chinese, imprisoned and later sold into slavery. Despite all these hardships, he did not give up. He cut notches on logs and throw them in the Tsangpo. Unfortunately he could not inform anybody downstream to look for the logs and thus his efforts were in vain.

Aerial photography and satellite imagery have now confirmed beyond doubt that the Tsangpo enters India and is called the Siang and forms a major tributary of the Brahmaputra. But, all said and done seeing is believing, and nobody had done that so far, reaching the spot where Tsangpo flowed into India to be called the Siang.

The Tsangpo bend expedition 2004 was organised with two main objectives: firstly, to see the bend where Tsangpo enters India and secondly to see if Namcha Barwa could be visualised from the Upper Siang valley. The expedition comprised of Harish Kapadia, Motup Chewang and Wing Commander V K Sashindran.

The long and winding road: Dirugarh to Along

The team set off from Dibrugarh on 17th of November. It took 1 hour and fifteen minutes to go from the city to the army ferry crossing point. The crossing is the first intimation of the size of the Brahmaputra. The ferry takes one and a half hours to cross the river, slowly find its way past numerous sand banks which keep shifting every year. From the ferry

landing on the north bank, it takes one and a half hours to reach National Highway 52A at Simen Chapori.

The journey to Itanagar involves a westerly drive up to Bandardewa past North Lakhimpur (Simen Chapori – Dhimow – Akajan – Dhemaji – Gogamukh – North Lakhimpur – Banderdewa – Itanagar, 151 km). The nearly non-existent 'National Highway' road passes through rich agricultural land. The golden paddy, ready for harvest, made a pretty picture with the blue sky and the purple hills in the distance. There is a conspicuous absence of the industry or development in this part of Assam. Bandardewa marks the border crossing between Assam and Arunachal Pradesh. Thereafter, the road snakes up hill for 32 km to Itanagar. Visions of an exotic city in the hills were dashed for the capital is just a sprawl in a wide valley totally shorn of native culture or architecture. The diversion to Itanagar was to obtain Inner line permits. The process of getting the permits took one and a half hours but presented a glimpse of our antedeluvian bureaucracy. Our emotions veered from joy at meeting a positive and charged up IAS officer to despair on meeting indifferent *babus* pre-occupied with their personal finances and to hair-tearing desperation on seeing people sitting doing absolutely nothing. Instead of retracing our journey to Akajan to get to Along, we decided to take a northerly road passing through the lower and upper Subansiri districts.

From Itanagar we drove to Kimin (44 km, Itanagar- Naharlagun – Bandardewa – Pohumarqa – Kimin). Kimin is a small township at the foot of the hills. The drive to Ziro is pleasant on a good blacktopped road. The area is in throes of development. A hydroelectric project at Poosa, 45 km from Kimin has transformed the region. Brightly lit settlements greet you at Yazali and Yachuli. The road winds uphill to Jorom Top (1680 m), which marks the saddle on the ridge. From there, it is a 7 km downhill drive to Hapoli, a village that has now merged with its bigger neighbour Ziro 5 km away (104 km, Kimin –Poosa – Yazali – Yachuli – Jorom Top – Hapoli – Ziro). Ziro used to be the summer district headquarters in British India. Today, there is a flurry of construction work and houses and hotels are coming up in a higgledy-piggledy fashion. But the place retains its charm with paddy fields and wooded copses surrounding the village-town. The development activity is mirrored on the hill slopes beyond Ziro. Forests on the lower slopes have been felled and quarrying for sand has resulted in unsightly landslides.

The 161 km drive to Daporijo in the Upper Subansiri district passes through small villages like Tamen and Saddle. The work of Christian missionaries is evident all around. Churches and mission schools abound. The people in these districts follow Hinduism, Christianity or Donyi-Paolo. Most of the dwellings are still made on stilts with bamboo matting

for walls and thatched roofs of palmyra leaves. The government supplies corrugated galvanized iron sheets at subsidized rates and the thatch roofs will soon vanish forever.

Densely wooded hill slopes preclude much cultivation. Hunting and fishing are important activities as was evident from the sight of men with *dahs* (long straight multi-purpose knives) and shotguns.

Some of the houses had elaborate bamboo decorations. Apparently they are funerary structures erected by the family of the deceased. The more elaborate the structure, the richer the family. We saw a particularly striking one in the village of Saddle. It had a mast like bamboo pole towering over a small bamboo shelter housing the grave. Cross pieces from the pole bore delicate ornaments woven out of bamboo. An eagle with its wings spread out was impaled on the pole. The sidewalls of the shelter had four Himalayan red squirrels with quaint *dokos* (conical cane baskets used by the local people for carrying loads) on their backs. It is believed that the red squirrels carry food to the soul of the dead.

Saddle marks the transit point from the Kamla river valley to the Subansiri watershed area. Daporijo, on the banks of the Subansiri, is the largest town in this area (Ziro – Raga – Saddle – Daporijo, 161 km). A road to the north goes to Nacho and beyond and this is the route for approaching Tapka Shiri (5735 m). To go to Along one has to cross the Subansiri at Daporijo and travel along its left bank. The road on the left bank offers beautiful vistas of the gently flowing Subansiri and its wide green valley. The houses seem more prosperous and land-holdings bigger. Along is 158 km from Daporijo and the drive takes six hours.

Along and Tuting

Along, on the banks of the Siyom river is essentially a large army camp. The name comes from *alo* which is salt in the local dialect of the Adis. In the olden days, salt was a valued trading commodity in this region. A landing strip makes it a vital transit point for the upper reaches of the Siang valley. From Along the road runs along the right bank of the Siyom till the river joins the Siang. It does so at Pangin, 27 km downstream. At Pangin one has to cross over to the left bank of the Siyom and travel along the left bank briefly before switching over to the right bank of the Siang. The bridge at Pangin offers a good view of the confluence of the two rivers. The sight of the Siang (Tsangpo) for the first time set our pulses

racing. The clear blue sky and warm sunshine seemed to be harbingers of a good trip. The smooth road and orange trees laden with fruit also contributed to the mood. The valley is wide here and there is paddy cultivation on the lower slopes along the river. The right side of the valley is steeper and it is puzzling that the road to Tuting is on this bank rather than the more gently sloping left bank. The only motorable bridge across the Siang in the entire valley is sixty-five km upstream from Along. Across the river a road goes to Yingkiyong, the district headquarters of the Upper Siang valley. A footbridge across the river at Yingkiyong connects it to Moying on the right bank. Moying is a large GREF settlement. It is 158 km from Along (in contrast to Yingkiyong which is 118 km from Along). The numerous switchbacks on steep hillsides are responsible for this. The tedious route had its high points. The snow clad pyramidal peak of Namcha Barwa is visible from Pakong and again from Jengging. The road deteriorates beyond Moying and the remaining 148 km drive to Tuting takes 6–7 hours.

Tuting is an army base. The village has a big market and it is the place to stock up for trips to the upper reaches of the valley. Porters can also be hired here. Dipun peak (3388 m) towers over the village on the west. A trek to the peak would take three days and the services of a local hunter, as a guide would be inescapable. The people here are mostly Adis. People of Tibetan ancestry, Monpas, are also common. Many people in this area practice Buddhism. Dalai Lama's visit to Tuting in 2003 has catalysed the construction of a new gumpa in Tuting. There are numerous places of Buddhist pilgrimage to the northeast of Tuting, along the Yang Sang Chu (river) that is a tributary of the Siang. This valley needs exploring as it has numerous high altitude lakes and promises good mountain views. Doni Lipik with Dhankusa Tso is 8 to 9 days walk from Tuting. T. K. Bhattacharya's glowing account of the trip makes it seem like a place worth visiting (see his books) The travel up to Tuting is the only real deterrent. Pawan Hans helicopter services operate between Itanagar, Dibrugarh and Tuting. The flights are supposed to be once a week, but we saw no helicopter flying at anytime. At a small disused airstrip we saw remains of aircraft which landed here in 1988 but could not take off! It is now vandalized.

The ancient village of Jiddu is across the Siang at Tuting and can be reached by an impressive footbridge. Jiddu has nothing to recommend.

The bend unfolds: Tuting to Gelling and Bishing

A road is being laid up to Bona a small hamlet on the right bank of the river. Trucks and jeeps can now go up to a point 2 km ahead of Kopu (Tuting – Kopu 8 km). From the road

head one has to descend almost all the way to the river amidst falling gravel, due to a landslide and then climb up to the trail. The trail ascends steeply for half an hour and then it is a gentle climb to Bona (630 m). The distance can be covered in two hours. The dense foliage provides a welcome respite from the sharp sun. The hamlet has about twenty houses. There is a small gumpa. The ceiling rafters are lined with masks used in *Chham* festivals of yore. The village has an Inspection Bungalow (IB) that is a wooden hutment with two rooms separated by a room with a hearth for cooking. The rooms have bamboo platforms which double as tables and sleeping platforms. The caretaker's house is a better alternative. The room there is clean and comfortable. The orange trees in the village yield sweet fruits. Mosquito menace was negligible due to the dry season. However, a species of biting flies called Dumdum flies are troublesome and can draw blood.

It takes 3 to 4 hours to go to Gelling from Bona. Gelling is the last village on the right bank of the river inside India. It is a large village and is the seat of the local *Panchayat*. From Bona, the trail runs parallel to the river rising and falling gently. The trail is wide and easy running mostly through woods. It passes through paddy fields at the base of the hill on which Gelling (1220 m) is situated. These fields are irrigated by rivulets and hence are used for growing rice. From the foot of the hill it is a continuous one and a quarter hour climb to the advanced landing ground (ALG) outside Gelling. The village is on the hillside and the Inspection Bungalow above the village ten minutes from the landing ground. The Inspection Bungalow is handsome structure with two bedrooms attached bathrooms with running water and a dining hall. It is a princely accommodation compared to the one at Bona. A prominent saddle is visible to the north of the village and this is Keping La (1915 m). It is of strategic significance because it is a low pass and the Chinese had come into the Upper Siang valley through this pass in 1962. To the west of Keping La, the ridge forms a part of the McMahon Line, called here as 'Line of Actual Control' (LAC). To the northeast of the village is high

vantage point at a height of 2073 m. This is probably the best point on the Indian side in this area for observing the border. The village has a lot of area available for cultivation and this probably accounts for its prosperity. Most of the houses have corrugated iron sheet roofing. There is no electricity though there is lot of potential for micro-hydroelectric projects.

Many old accounts of this region and maps mention a place called Korbo located on the left bank of the river on the foot of the ridge that forms the Top Spur. As per the maps, coming from Tibet, this should be the first village in this valley on the Indian side. The village no longer exists. The residents had to move out, as there was not enough land for cultivation. They settled further west on a gentle hillside in the sixties. This new village is called Bishing (970 m). From Gelling one has to descend all the way down to the river and cross it on a footbridge that is 200 m long. Thereafter the trail climbs up to Bishing. The descent to the river takes about one and a quarter hour and the ascent to the village another two hours. A huge waterfall hurtles down from the ridge above the village. It dominates the last half an hour of the walk. It is probably 160 m high and must be awesome in the monsoons.

The village is the quaintest one we passed on the trek. Rice is grown in the fields close to the river. Higher up on the hill slopes where irrigation is not possible, forest is cleared for growing millet, maize and pumpkin. This type of cultivation, called *Jhum* cultivation and once a piece of forest is cleared, that area is cultivated for 3 –5 years. It is then abandoned and the cultivators move to a new location. In any other part of the world one would have serious reservation about cutting down forests, but here, the vegetation

grows so fast and so densely that deforestation is unlikely to occur in the normal course of events. The only drawback is that when *jhum* cultivation is done on steep slopes, the heavy rains quickly wash away the topsoil and makes that hillside prone to landslides. There is a row of granaries on the northern edge of the village. These granaries called *kinsung* are used to store rice, maize and pumpkins. They are wooden structures built on stilts. The peculiar feature is the presence of a circular flat wooden piece sitting on top of every stilt below the

superstructure. These circular pieces are to keep rats and snakes away. Solar lamps have made their appearance in the village. The waterfalls could probably be used to generate enough power for six villages the size of Bishing.

The village has a bizarre air about it due to the absence of older children. The explanation is in a way sad. Most children older than eight years are sent to Tibetan schools in Dharmasala, Palampur or Mysore. The education is funded by the Tibetan government in exile and is a godsend for these poor people. Education will ensure a better future for these children but it will also mean the slow migration away from these villages. Notwithstanding this, there is a school in the village for the twenty-odd children in the kindergarten age group. The two teachers employed by the government are paid salaries that will make teachers in many of our metros turn green with envy. The village women put up a display of their traditional dance called *Ponung* in the evening specially for us. It was really sporting of them considering that they had toiled away in the fields the entire day and then returned home to cook and feed their families. Visitors are so rare in these parts that it is an occasion for them to celebrate. The full moon, blazing log fire, and *apong* (local millet beer) made it a convivial evening.

The next day Wg Cdr Sashindran and Motup Chewang climbed to the ridgeline above the village. From a height of 800 m above the village, Namcha Barwa was clearly sighted to the north. There was a high peak to the west and it must have been Nyegei Kangsang. But above all they could see the Tsangpo-Siang entering India and the first few kilometers of this river in India. It formed a 'S' turn at the border.

Towards Line of Control (LAC): Bishing to Guyor La

Two local guides were engaged to accompany us on the next leg of the journey. The river takes a southerly turn below Bishing. It is probably 4 –5 km as the crow flies from this bend to the point where the river enters India. We descended to the river, passed Korbo and then skirted up the ridge on the northern bank of the river. The dense forest and ensnaring vines made the going tough. It took four hours to reach Kasi nala (1220 m)- our campsite for the next two nights. The campsite was a small clearing in the forest. The forest was so dense that it was pitch dark by four o' clock in the evening. From this location we climbed up to Guyor la (1760 m) another pass on the McMahon Line. Unfortunately it was located in a heavily wooded area and offered no views. A metal plate nailed to a tree trunk bore the India Lion insignia and marked where our territory began. The porters had been vexed by the climb up to Kasi nala and were determined not to return the same way. While we were away at Guyor la some of them tried to chart a trail to the riverbank. The next day we descended steeply to the river and camped on the bank of the Siang (the Tsangpo). There was no dearth of firewood as the riverbank was strewn with driftwood. The open space was a welcome respite from the claustrophobic campsite at Kasi nala. The next day we set off on our final objective – the bend in the river.

The Final Exploration: To the Tsangpo – Siang Bend

The trek involved walking across boulders strewn on the riverbank by a landslide in the past followed by an ascent to traverse a cliff. The winding Siang was touching the rock cliffs at several places and all these have to be surmounted with difficulties by climbing along

the cliffs, traversing in the forest above and then descending on the other side. The traverse is 1.5 km long and through thick foliage. A descent followed by a kilometer's walk bring you to a point on the river bank from where the bends on the Tsangpo can be clearly seen. Huge rocks offer vantage positions for photography. Steep slopes covered with impenetrable forest make the 'Spur Tip', the border point, inaccessible. The river actually makes a 'S' shaped bend as it enters India. The top spur projects into the concavity of the second bend. At the

opposite end of the second bend along its right bank is the mouth of Nugong Asi nala which today marks the official boundary between India and China on the river. The snow-capped Dapang peak (5570 m) is visible at the head of the valley. The river enters India at an altitude of 580 m. The altitude at our camp 4 km downstream was 568 m. This gradient is maintained all the way to Pasighat and this explains the velocity of flow. Watermarks on the rocks and cliffs show that it rises by 5 to 15 m during the summer months.

The return journey was made along the river to the nala below Bishing village. Two cliffs had to be crossed on the way. Exposed rock faces extending to the river necessitated fixing rope on both cliffs. Beyond the nala below Bishing, the trail soon joins the trail going from the footbridge to Bishing. The distance to Tuting was covered in one and a half days with a camp in the fields below Gelling. From Tuting, we travelled to Moying, and crossed the footbridge to Yingkiyong. The travel from Yingkiyong to Along takes two hours less than the journey on the opposite bank. From Along we traveled 133 km to Lekhabali on the Arunachal Pradesh – Assam border and a further 24 km to the ferry point. We were safely back to Dibrugarh.

Conclusion

This expedition was undertaken to sight and photograph the bend on the Tsangpo on its point of entry into India, to sight Namcha Barwa, the massif, around which the river takes a right angle turn southwards and reach Guyor La. The trip was completed in 21 days. This included 11 days of trekking. The total altitude gained during the trek was 2720 m and lost was 2860 m. We walked 96 km at an average of 9 km per day. The distance seems slight but the terrain and vegetation are tough. Much of route had to be hacked through dense forest by two guides who led the way. Since we were trekking in winter, we were spared the leech and mosquito nuisance. In summers they can be vexing. Due to low altitude and thick vegetation where sunlight rarely penetrated, the conditions were extremely humid and energy sapping.

The travel to Tuting entailed a distance of 985 km over less than perfect roads. The distance was completed in 5 days, with the jeep traveling at an average of 25 to 30 km/hour. The return journey to Dibrugarh involved a journey of 440 km and was done in 3 days. This journey is definitely meant only for the brave-hearted. Introduction of regular helicopter services in this valley and easing the inner line restrictions will be key factors if the adventure and tourism potential of this region can be fully exploited. These activities will contribute to the prosperity of the people and will also play a role in preventing migration away from traditional homes.

Acknowledgements

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Members: Harish Kapadia (Mumbai - author), Motup Chewang (Ladakh - adventure tour professional) and Wing Commander V. K. Sashindran (Assistant Professor, Armed Forces Medical College, Pune), with Lt. Rippon Bora (17 Kumaon, Indian Army).

Dates: (2004) 16th November to 5th December.

Date	Place	Height
19 th and 26 th November	Namcha Barwa sited from Jengging and above Bishing.	Namcha Barwa (7756 m – 25,446 ft). Gyala Peri (7151 m – 23,460 ft)
28 th November	Guyor La reached	1760 m
30 th November	Tsangpo - Siang Bend reached	580 m

References:

1. Allen, Charles, *A Mountain in Tibet, 'The Missing Link: the Exploration of the Tsangpo Gorge'*, Andre Dutsch, London, 1982
2. Walker, Derek, *The Pundits. 'The Tsangpo-Brahmaputra Controversy: Lala, Nem Singh and Kinthup.'*, University Press of Kentucky, Kentucky, 1990
3. Bhattacharyya, T. K.: *Alluring Frontiers*, Omsons Publications, New Delhi, 1988
4. Bhattacharyya, T. K.: *Enticing Frontiers*, Omsons Publications, New Delhi, 1992
5. Bhattacharjee, Romesh, *Lands of Early Dawn*, Rupa, New Delhi, 2002
6. Ward, Michael, 'Exploration of the Tsangpo River and its Mountains', *Alpine Journal*, London, 2000.
7. Bailey, F. M. *China, Tibet, Assam*, Jonathan Cape, London, 1945.
8. Bailey, F. M. *No Passport to Tibet*, Rupert Hart-Davis, London, 1957
9. Kingdon Ward, Frank, *Himalayan Enchantment*, Serinda Publications, London, 1990
10. Maxwell, Neville, *India's China War*, Natraj Publishers, Dehra Dun, 1997
11. Gazetteer of East and West Siang District, Govt. of Arunachal Pradesh, Itanagar, 1994

The JOURNEY AND THE RIDDLE OF THE TSANGPO

At foot of the pass Mayum la, little southeast of Kailash and Manasarovar lake, starts a small stream. One cannot imagine that this stream will be a large river and travel long distance and cause much debate. This is the source of the Tsangpo (for Tibetans, simply the 'great river').

It travels along the great Tibetan barren plateau on its eastward course gathering many small rivulets and soon acquires name of the Yarlung Tsangpo to distinguish itself from other rivers. At Saga in Central Tibet it is a huge river and has to be crossed in ferry. Two bridges are built across it, at Lhatse and Gonggar give easy access now, but in the early days it was crossed by small boats, sometimes on inflated animal skins—all sounding romantic but it was dangerous. It continues east to Yamdrok Tso (lake) and passes Lhasa, little to its south. The Younghusband Expedition to Tibet in 1904 had to cross the Tsangpo in improvised boats to finally reach the city.

Further east its course is blocked by the great massif of Namcha Barwa (7756 m – 25,446 ft) and Gyala Peri (7151 m – 23, 460 ft) It forms a deep gorge between the two, and is joined by Po Tsangpo. Turning south the river starts losing height quickly to enter India.

Over a century it puzzled explorers and map makers as to where and how the Tsangpo cuts through high mountains and after the gorge which direction it takes. One school of thought believed it to proceed further east to join the Irrawaddy or the Salween and flow into the Myanmar area. Others believed that it flows south into India what is now the Arunachal Pradesh.. But here too it was matter of conjecture how it flowed south: to the Subansiri, Siang (also called the Dihang) or into the Dibang. Due to various names and hostile tribal areas the course could not be fully investigated. The final question was that does it flow into the Assam plains to finally form the Brahmaputra?

In 1715 Fathers Ippolito Desideri and Manuel Freyre stood on Mayum La and were the first outsiders to view the source of the Tsangpo. They travelled along the Tsangpo to reach Lhasa. Their report that this was the beginning of the great river was confirmed only in 1913. They were followed by several other explorers. George Bogle (1774) who described the middle course, Thomas Manning (1811) who followed the route of Desideri from its source, Edmund Smythe (1864) and Sven Hedin.

With the interest in the Tsangpo growing the Survey of India deputed first of its Pundit explorers, Nain Singh¹. He travelled in disguise as Tibet was closed to outsiders, and in two epic journeys, in 1865 and 1874, followed the course to Lhasa and beyond. Reaching Chetang, east of Lhasa, as his subterfuge was known to the Chinese he was forced to turn south and crossed into India at Tawang. His notes and information were invaluable. Another Pundit, Lala was deputed to continue south from Chetang where Nain Singh had reached but he failed in 1876 and 1877.

¹ Nain Singh was awarded the Patron's (Royal) Gold Medal by the Royal Geographical Society in 1877 for his two pioneering journeys. He was the first Indian to receive this Royal honour. He lived in Milam till his last days.

The exploration from the south, Assam valley started in 1824 when Lt Wilcox surveyed a number of rivers including the Siang and the Lohit that formed the Brahmaputra. They learnt from locals that the Tsangpo and the Siang were the same river but it could not be verified as hostile tribes did not allow any entry along the course of the Siang. At the same time various theories again surfaced about the Tsangpo flowing into the Irawaddy and the Salween, specially a view held by Robert Gordon who was a government official in Assam. Lectures at the Royal Geographical Society saw much heated exchanges between explorers.

In 1874 Assam survey was placed under Lt Henry Harman who measured the flow of various rivers and found that the flow in the Siang was greater than others. This made it most likely river to be the Tsangpo. He recruited Nem Singh in 1878-79 to be dispatched to Tibet. He was accompanied by Kinthup, a tailor from Darjeeling. They followed the Tsangpo from Chetang onwards between the gorge of Namcha Barwa and Gyala Peri and turned south to reach Gyala Sindong before returning. They taken the exploration further by 287 miles (460 km) and made a major contribution.

Harman, now posted to Darjeeling, again deputed Kinthup to Tibet in 1880. As Kinthup was illiterate he was accompanied by a Chinese lama. From Darjeeling they went to Lhasa and followed the course of the Tsangpo to Chetang and Gayala Sindong. After 15 miles (24 km) they reached Pemakochung village where, as Kinthup described, the Tsangpo fell 150 ft (45 m) in a waterfall which came to be known as the 'rainbow waterfall'.

The Chinese lama unfortunately sold Kinthup to slavery and disappeared. Kinthup escaped and reached Marpung, 35 miles (56 km) downstream but was captured. However later he was allowed to go on a pilgrimage. He crossed the Tsangpo to opposite bank and prepared 500 logs with special markings. These were to be thrown into the Tsangpo, and if they appeared in the Brahmaputra it would conclusively prove the course of the river.

In 1882 he was allowed on another pilgrimage to Lhasa from where he arranged a letter to be sent to Nem Singh in Darjeeling to inform Harman about the logs and dates when he would throw them in water. Unfortunately Harman had left India and the letter was not opened. Not knowing this Kinthup returned to Marpung and threw logs into the river. Afterwards he followed the Tsangpo down stream as far as small village Onlet (Olon). It was close to Dalbuing (called Tarpin by Kinthup). He could see haze of the Assam plains and a small village (Korbo?) on banks of the Tsangpo in India. He was about 40 miles (64 km) in a straight line from the border. He returned to Darjeeling in 1884 and took up his old job as a tailor. Two years later the Survey debriefed him, but was less believed. It was in 1913 that he description was acknowledged as remarkably accurate.

Attempts to follow the course of the Siang/Tsangpo upstream from Assam were abandoned due to tribal conflicts. F. M. Bailey², who was a member of the Younghusband expedition to Lhasa, explored the Lohit. As the Lohit flowed from Tibet, north to south in to India, that left no room to doubt that the Tsangpo had to be flowing south into the Brahmaputra as it could not cross the Lohit to go east to the Irrawaddy basin. Later he joined General Hamilton Bower's Abor expedition to go further north. In 1911-12 A. Bentick followed steps of Kinthup but challenged his travels. As a result F. M. Bailey returned to the area to check the

topography. He was accompanied by H. T. Morshead³, a surveyor. They travelled east of The Tsangpo to Showa turned west to Gyala Sindong to try to locate the falls at Pemakochung. He found all the topographical description of Kinthup correct except that the

² F. M. Bailey was awarded the Patron's (Royal) Gold Medal by the Royal Geographical Society in 1916 for his explorations. He continued his distinguished service and died in 1967, aged 85.

³ H. T. Morshead received the Macgregor Medal of the United Service Institute of India in 1916. Morshead was unfortunately murdered in the jungle near Maymyo in Myanmar, 'during an early Sunday morning ride' on 17 May 1931.

waterfall was on a side stream and not on the Tsangpo. They travelled upstream along the Zayul river (the Lohit in Assam) and by late June reached Shugden gumpa (monastery). He discovered that a river not far to north from here, the Nugong Asi chu, ran into the Tsangpo. He was very near to the border, as it is now known!

They travelled upstream to Chetang and turned south to reach Tawang and Darjeeling. Details of their travels formed the basis on which the McMahon Line was drawn on the maps at the Shimla conference in 1914, which determined the borders between India and Tibet. Kinthup was summoned to Shimla, debriefed again and given Rs. 3000 for his services. He died in Darjeeling in 1915, relatively an unsung hero who had done much to explore the course of the Tsangpo. Though journeys of F M Bailey and Kinthup had effectively settled the doubts about the exact course of the Tsangpo one gap of 40 miles (64 km), remained to be explored.

In 1910 the Chinese had expanded their influence in the Pome and Zayul districts and down the Lohit into Assam. This alarmed the British government who decided to move to interiors of the tribal country of NEFA (North East Frontier Agency). Noel Williamson who was following the Siang to check the Chinese infiltration, was murdered by tribes. A major punitive force under General Hamilton Bower was sent which burned many Abor villages. The main force of the expedition stayed at Kebang while other detachments went up many side valleys. One detachment followed the Siang to reach Singging about 40 miles (64 km) from the border. The gap between this observation and Kinthup's observation from Onlet was only 80 miles (128 km) in a straight line.

In 1924 the botanist Captain F. Kingdon Ward and Lord Cawdor managed to close the gap further. They climbed down the gorge at several points and it convinced them that the river dropped fast and dramatically thousands of feet in more or less unbroken rapids but there was no possibility of any waterfall. They could not proceed further down stream towards India.

With the First World War intervening attention was drawn away from the remaining exploration. The British soon were busy with the Indian independence movement and left India in 1947. The area was more or less unvisited and the Tsangpo was left alone.

In 1962 the Chinese invaded the NEFA territories. Though the main force of attack was near Tawang several columns came down in the eastern sections down the Lohit and Walong. One

attack was on Keping la, a pass little to the west of where Tsangpo enters India. In a skirmish two Indian soldiers were killed and a small monument in their memory is erected at this pass. Other column came down Lushe La further west. The Chinese reached Tuting, burnt some villages and retreated later. The Indian army moved up in strength, roads and camps were constructed and today one can travel through the lower valleys by road till Tuting. But the romance of exploration of the Tsangpo was not over as yet!

Since Kingdon Ward's day there have been no significant advances. The Tsangpo still guards its secrets, and will continue to do so until the last great Asian adventure – a journey all the way up the Tsangpo - Brahmaputra from the Assam valley to the Tibetan plateau – is undertaken.

Charles Allen in *A Mountain in Tibet* (Tsangpo Gorge)

The areas ahead along the Tsangpo from the last village, Korbo or Bishing, on the Indian side was not visited ever. The last village on the Tibetan side is Shirang and between them the Tsangpo, taking a huge 'S' turn enters India. The river, observed by F. M. Bailey, the

Nugong Asi nala joined the Tsangpo at the border! By reaching and observing this junction the final exploration would be complete.

This was achieved in 2004. A party of Indians. Harish Kapadia ⁴, Motup Chewang, Wing Commander V. K. Sahindran and Lt Rippon Bora reached the border at the point of entry of the Tsangpo from Tibet into India. It is joined by the Nugong Asi nala. They travelled from the Bramaputra to the entry point of the Tsangpo completing a full record of its journey in India.

Down stream in India the Tsangpo is called the Siang (or Dihang), flowing past Tuting to meet the Siyom at Pangin and down to Sadiya in the Assam plains. Here, joined by the Lohit and the Dibang, it becomes a large river and is called the Brahmaputra. It flows through the Assam valley to Bangladesh and into the Bay of Bengal.

The small rivulet originating near the Manasarovar lake thus completes its journey in eastern India, thousands of miles away. It is a river which threw several riddles from 1715 to be finally observed in 2004.

The riddle of the Tangpo Gorge and Bend is now fully solved !

⁴ Harish Kapadia was awarded the Patron's (Royal) Gold Medal of the Royal Geographical Society in 2003, 'as an outstanding explorer in the finest traditions of the great Himalayan pioneers'. He is the only other Indian after Nain Singh to receive this award, after a gap of 125 years. He lives in Mumbai.

Lieutenant Nawang Kapadia

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 in Kupwara district of Srinagar on 11th Nov 2000.

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 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.

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, both of whom have many achievements under their belt. 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.

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.

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.

www.nawang.com