

THE ZIBBY GARNETT TRAVELLING FELLOWSHIP

Report by Eliza Doherty



**Wall paintings conservation
in Lachen *Manilhakhang*, North Sikkim, India**

6 July – 6 September 2013

Photo on cover courtesy of Klara Peeters

Contents

Introduction	2
Study Trip	2
Sikkim	4
Tibet Heritage Fund	4
Lachen	5
The <i>Manilhakhang</i>	6
The Project	8
New Materials, New Techniques	9
Living in Lachen	16
Beyond Lachen: Thangu, Gangtok and West Sikkim	18
Conclusion	21
Bibliography	24

Introduction

My name is Eliza Doherty, I am twenty four years old and I have grown up in London. I am currently studying for the postgraduate diploma in conservation at City & Guilds of London Art School, which specialises in stone, stone related materials, wood and decorated surfaces. The three year course combines conservation practice with theory, and modules include laser cleaning, materials science, the theory of colour and polychromy, and microscopy of cross-sections and pigments.

I completed my undergraduate degree in Art History and Philosophy at the University of St Andrews, during which I became increasingly interested in conservation. I have always loved making things, and after four years spent in the library I knew I wanted to go into something practical. A career in conservation seemed pretty perfect to me, for it would also encompass history, ethics and a deeper understanding of materials.

Study Trip

I was very fortunate to receive funding from the Zibby Garnett Travelling Fellowship (ZGTF), which I had seen publicised at City & Guilds, to participate in the conservation of the wall paintings in Lachen *Manilhakhang*, a Buddhist temple in North Sikkim, India.

Of the many aspects of my course, I am particularly drawn to painted and gilded surfaces, and the study of pigments. I became interested in wall paintings during my first year, when we were taught fresco techniques, but had no experience in its conservation. The project in Sikkim, therefore, was a fantastic opportunity to work *in situ* in a country very different from my own, to learn more about the materials involved and gain practical experience in wall paintings conservation.

I arrived in Delhi on 7 July, where I stayed with an Indian family, and spent four days exploring temples, monuments and markets, and eating. On the fifth day I met Klara, another student involved in the project, in Old Delhi train station, where we were informed that our train was delayed by 33 hours and 50 minutes (not unusual for the *Mahananda Express*, apparently). Thankfully, we

found two beds on a more reliable train, and after two nights and a very crowded jeep ride, we arrived in Sikkim's capital Gangtok. After the heat of Delhi, the town seemed cool, calm and clean, with incredible views over surrounding valleys. We were given a room in the *Namgyal Institute of Tibetology* Guesthouse, where we met Tody, an American conservator living in Portugal and one of our fellow team members. Over the following two days we bought supplies for the project and essentials, such as chocolate, and I ate my first *momos* (Tibetan steamed dumplings served with soup). We travelled to Lachen with Katrin Krause, a wood conservator from Germany who managed the project, in a jeep laden with all our bags.



Fig. 1 Making friends in Gangtok, East Sikkim (courtesy of K.P.)

I worked in the temple for a total of six weeks, then travelled to Thangu and West Sikkim before returning home on 6 September. The total cost of the trip was approximately £1,600. I was awarded £1000 by ZGTF. The rest of the money was raised by part time work as a waitress, babysitter and helping in the school library.

Sikkim

Sikkim is located in the eastern Himalayas and borders Nepal, Tibet, Bhutan and India's West Bengal. The Lepchas migrated to Sikkim from Burma in the 13th century, followed by the Bhutias from Tibet two centuries later. Vajrayana (Tibetan) Buddhism arrived with three refugee Tibetan lamas who met in modern day Yuksom and crowned Phuntsog Namgyal the first chogyal (king) of Sikkim. During the 19th century, many Hindu migrants arrived from Nepal, eventually forming a majority of the population. This led to a decline in the Sikkimese language and culture. In 1975, after a revolt from Sikkim's Nepali population, a referendum was held which abolished the monarchy and Sikkim merged with India.



Fig. 2 Map of India showing location of Sikkim in red (courtesy of Wikipedia)

Sikkim is a diverse and fascinating state, with eleven official languages, two main religions (Hinduism and Vajrayana Buddhism), climates ranging from subtropical to high alpine and a diverse range of wild flowers and fauna.

Tibet Heritage Fund

Tibet Heritage Fund (THF) was founded by André Alexander in 1996. It is an international non-profit organisation involved in the preservation of architectural heritage in general and Tibetan heritage in particular. Their primary

concern is to benefit local residents, and many of their projects involve relief work after natural disasters. THF's wall painting conservation programmes aim to preserve endangered historic wall paintings and support local Buddhist practitioners. They work with an international team of conservators and restorers/trainees from local communities. Completed projects include Buddhist monasteries in Central Tibet, Sichuan, Qinghai, Ladakh and Mongolia.

Until recently, the concept of conservation was relatively new in Sikkim, and a large number of historic monasteries were rebuilt in concrete, with old murals painted new. In late 2010, HRH Highness Princess Hope Leezum Namgyal invited André to examine the wall paintings in *Tsuklakhang*, a Buddhist palatial monastery in Gangtok, and a new project was initiated the following year. Sadly, André died in 2012, but his devotion to the preservation of Tibetan heritage lives on in the work that is continued by THF.

Lachen



Fig. 3 Map of Sikkim, with arrow showing Lachen (courtesy of sikkim-roadsandbridges.gov.in)

Lachen is located at an elevation of 2,750 metres in the restricted area of North Sikkim (see Fig. 3), about 50 miles south from the Tibet border. Despite the establishment of a strong Indian governing system from 1975, the traditional administrative system of self-governance known as the *Dzumsa* has been preserved in the village, with a *Pipon* (village chief) elected every year.

With the construction of new concrete hotels the village is changing fast, though the old wooden houses with their colourful Tibetan-style window frames can still be seen on its outskirts. For tourists, Lachen is the starting point for mountain treks, and people are unlikely to remain in the village for longer than a few days. In this respect, our long stay was truly unique.

The *Manilhakhang*



Fig. 4 Lachen *Manilhakhang*, seen from the north (courtesy of K.P.)

Lachen *Manilhakhang* is a small dry stone temple overlooking the village, built in the 1880s and decorated with earthen plasters and classical Buddhist wall

paintings.¹ When the project was initiated by THF the murals were in a delicate condition due to water infiltration (owing to the wet climate) and damage to the structure after the earthquake that struck Sikkim on 18 September 2011. The earthquake measured 6.9 on the Richter Scale, killing at least 116 people in Sikkim, Nepal, Bhutan, Bangladesh and Tibet, and causing significant damage to many of Sikkim's monasteries. The paintings themselves are also very dirty, due to soot produced from the butter lamps used during worship.



Fig. 5 Cleaning test carried out on the wall paintings on the north wall in the main hall, using ethanol

The stone that has been used is gneiss, a metamorphic rock prevalent in North Sikkim. The soil used originally was likely a local soil. The pigments, which are bound in animal glue, are currently being analysed by THF's Andrew Thorn in Australia, to give further insight into materials originally used. The paintings have been thickly varnished in the main hall, but appear to have only received a thin coat in the porch.

The temple is currently used by Lachen's *ninyeams* (nuns), while the monks occupy the larger *Nyudrup Choeling Gompa* just up the hill.²

¹ *Manilhakhang* literally means 'house of gods' and is basically the village's prayer hall (Balicki, A. *Lamas, Shamans and Ancertors: Village Religion in Sikkim*, Brill, 2008, 28).

² A *Gompa* is a Tibetan Buddhist monastery or temple.

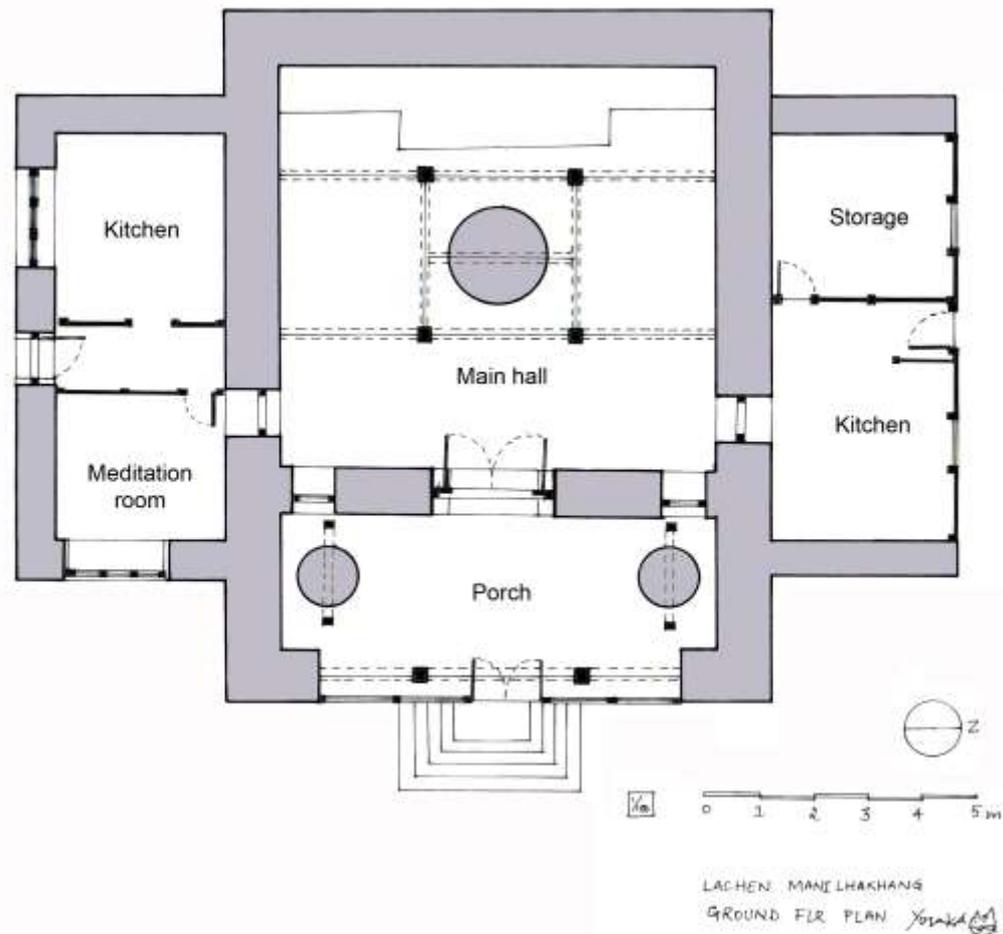


Fig. 6 Map of the *Manilhakhang* (courtesy of THF)

The Project

The project has three phases: consolidating and stabilising the wall paintings; structural repairs; and cleaning and retouching. We were involved with the first, and for me the most exciting, phase. The head conservator was Mélo die Bonnat, a paintings conservator from France, and Katrin was the project manager. The team consisted of: two trainees, Yangchen from Ladakh and Tenzing, a Thangka painter from Lachung in North Sikkim; four students, Klara from Belgium, Eva and Susi from Germany, and myself; and Tody.

New Materials, New Techniques

Before travelling to India, I attended a conference at the Courtauld Institute of Art in London entitled *Buddhist Art and its Conservation*, which offered insight into risks that threaten the survival of Buddhist heritage, and particularly wall paintings. I researched Tibetan painting and earthen plaster, but having never worked with this material in practice, I was somewhat apprehensive.



Fig. 7 The south wall (behind the prayer wheel) and half of the west wall (on the right), in the porch (courtesy of THF)

Klara and I worked in the porch, where the walls have been decorated with four protective guardians, on the south wall and half of the west wall (see Fig. 7). Before we arrived, fragments of the paintings had been collected and organised into different crates, to be re-incorporated where possible at a later stage, and a number of photographs had been taken.

Our first step was to produce two scaled maps, showing areas of damage on our walls. At the support level, there were large losses, cracks and detachments of the plaster from the wall, which were in danger of falling. In the main hall, where the paintings are thickly varnished, Mélodie, Yangchan and Tenzing had already begun temporarily facing the walls with Japanese paper and Tylose (a water soluble adhesive, which would not affect the paintings) (see Fig.

8). We soon realised that the varnish in the porch, however, is much thinner, and tests showed that many of the paints were vulnerable to both water and ethanol. As a result, we decided not to face the paintings because this risked causing further damage. This made subsequent work more challenging, because without the protection afforded by the Japanese paper, we had to be extremely careful.



Fig. 8 Tenzing and Yangchen facing the paintings in the main hall with Japanese tissue

When it came to stabilising the wall paintings, Mélodie was keen to use traditional rather than synthetic materials. We used a combination of local soils and sand (referred to simply as ‘blue soil’, ‘yellow soil’ and ‘yellow sand’), which had been recommended by people in the village. These materials had to be collected and transported (see Figs. 9-10), then dried over an open fire or in the sun, ground, and sieved to various degrees of fineness (see Fig. 11). This was a fascinating process to be involved in and I particularly enjoyed travelling to Talam (a two hour drive from Lachen) for blue soil, in the back of a truck. However, after several weeks, sieving became a bit tedious, and we were always grateful for help (see Fig. 12).



Figs. 9-11 Tsering Lama digging up blue soil in Talam; loading the back of the truck (courtesy of K.P); finely sieving outside the temple (courtesy of K.P.)



Fig. 12 One of the *ninyeams* helping to prepare blue soil (courtesy of K.P.)

For the new plaster, soil and sand, sieved to 3mm and mixed in a ratio of 1:3:3 blue soil to yellow soil to yellow sand, was combined with water until the desired consistency was achieved. This proportion was set up after trials, which assessed a number of different samples for level of shrinkage, cohesion, resistance to break and colour (see Figs 13-14).



Figs. 13, 14 Samples with different mixtures of blue soil, yellow soil and yellow sand; Tenzing testing the strength of one sample (courtesy of K.P.)

To prepare the walls, old plaster was removed where necessary, and the edges of the losses were brushed with water followed by a layer of blue soil slip.

Bamboo sticks or tubes of varying sizes were inserted into gaps for the injection stage. The plaster was then applied over the slip and allowed to dry for at least two days.



Fig. 15 The north wall in the main hall; the edges have been filled with new earthen plaster and bamboo sticks inserted into gaps (courtesy of K.P.)

Before injecting, the walls had to be supported using prepared foam blocks and large sticks of bamboo cut to size: an activity that could take all morning. The same ratio of soil to sand, more finely sieved, was used for the grouting, with more water for a more fluid consistency. This was injected through the tubes using syringes, to fill the hollow gaps between the support layer and plaster or stonework (see Fig. 16).



Fig. 16 Klara injecting prepared grouting between the wall paintings and the stonework, on the west wall in the porch

For small cracks in the wall, the fine blue slip was injected using small needles. To aid penetration and prevent mould growth, ethanol could first be injected with water in a ratio of 1:1, and mixed with the prepared earthen grouting in a ratio of 1:3 (ethanol:water). We injected as much grouting as we could into each tube; this could take many hours or several minutes. By tapping the wall it was possible to assess how hollow specific areas were.



Fig. 17 Mélodie and Eva working on the painted canvases (courtesy of K.P.)

As well as the wall paintings, there were a number of painted canvases that had previously been attached to the wall in the main hall, which needed attention. First, old plaster had to be carefully removed from the back of each fragment with a scalpel blade (see Fig. 18). In some cases, flaking/powdering paint had to be consolidated before this stage could take place. Then fragments were reassembled and adhered together, to create four large canvases. Each was prepared on a board and faced with Japanese tissue, for protection. Once turned, holes could be filled using gauze prepared in yellow soil (to match the colour of the canvas) and synthetic resin adhesive (see Fig 19), and cracks were reinforced with white thread.



Figs. 18, 19, 20 Eva removing old plaster from the back of one canvas (courtesy of K.P);
Mélodie filling a small hole with gauze prepared in yellow soil and synthetic resin; the back of
the canvas, after treatment

Working on the canvases was particularly rewarding; the delicacy required offered a contrast to working on the wall and I became acquainted with different tools and new materials. Although not my area of specialisation, I feel that the skills I learnt (such as consolidating fragile paint flakes) will prove invaluable.

Working on site with often limited equipment and no analytical tools proved challenging at times, and simple tasks could become incredibly time consuming. However, the work was new and rewarding, and although I would have been interested to analyse original materials more closely, and put my experience in cross-sectional/pigment analysis into practice, I had a fantastic experience, became increasingly resourceful, and probably more patient.

Living in Lachen

On our first morning, Klara and I attended a funeral: a slightly unusual but particularly intriguing introduction to the village, its people and customs. The procession was led through the village and the coffin placed on a fire just above the *Gompa*, while ordinarily dressed men (we saw no women) drunk cartons of apple juice, and a few chanted, bowed and kissed the ground.



Fig. 21 Eating lunch in Pema's kitchen (courtesy of K.P.)

While working in Lachen, we slept on the floor in a small wooden hut next to the temple and ate delicious meals prepared by our cooks, Pema and Deepali, *sisnoo/sochhya* (nettle soup), *ningrio* (fiddlehead ferns) and *kinema* (fermented soybeans) were the food highlights; *churpi* (dried yak cheese, chewed to ‘pass the time’) took some adjusting to. Our working day began at eight o’clock, immediately after breakfast, by which time the sun had been up for many hours. Our two hour lunch break allowed time to walk down to the village, or sleep. Then we worked until an early dinner, at six o’clock.



Fig. 22 *Momos* (Tibetan dumplings) that we all prepared for our last lunch

Evenings were spent reading, drawing, knitting, whittling, thinking, talking, or occasionally drinking *Hit* beer; one night we befriended a boy with a guitar in the village, and were treated to number of familiar songs (*Hotel California, Country Roads*). We worked Monday to Saturday, and Sundays were spent going for walks, swimming in the Teesta River, playing badminton in the local school playground, having tea with our friend Rinzing, the postman, or collecting blue soil for use on the temple. Tasks such as sweeping the house and heating water for showers were divided amongst the group on a weekly basis.

Living conditions were not easy, with daily power cuts, limited phone signal, no Internet, and an absence of fresh fruit. In the high altitude, walking up hill could feel like a serious work-out with shortness of breath, it rained frequently and became increasingly cold at night. But I loved the simplicity and calm, grew accustomed to vast quantities of rice and excessively sweet tea, and became very attached to my small corner of the hut. I suppose it made me realise how little one needs in life to be happy (probably encouraged by working in a Buddhist temple).

The people of Lachen were friendly though often slightly shy. The temple received frequent visitors, many of whom offered their help, and walking through the village, we were often invited in for tea. Many spoke good English, but we were still able to pick up a few words in Bhutia and Tibetan. During the six weeks, there were people I grew very fond of, and I hope we will stay in touch.

Beyond Lachen: Thanggu, Gangtok and West Sikkim

Though India is a country I have always longed to visit, Sikkim was completely unknown to me; in fact, I had never heard of the state before contacting THF. I saw the final two weeks, therefore, as a chance to explore a new area of the world, to discover more about its history and meet new people.

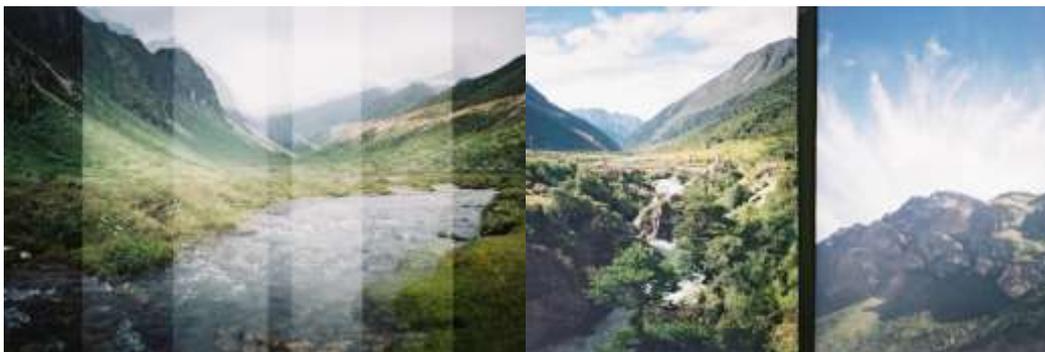


Fig. 23, 24 Views of Tsopta Valley, Thanggu

At the end of our stay in Lachen, most of the team travelled north to Thanggu for the *puja* (act of worship) of *Pang Lhabsol*,³ and slept on the floor of the nuns' kitchen for two nights. On the first day we attended the *puja* and ate rice with the monks. After being awoken at four o'clock the next morning, we walked through Tsopta Valley, climbed a giant rock and saw an entire herd of yaks. Thanggu was one of the highlights of my trip and a very special occasion. I felt very privileged to be able to attend the *puja* and I realised how little language barriers matter, as long as you can all gesture, smile and laugh.



Figs. 25, 26 The *puja* of *Pang Lhabsol* in Thanggu *Gompa*; the *ninyeams* praying in Thanggu *Manilhakhang* (both courtesy of K.P.)

³ *Pang Lhabsol* is celebrated on the 15th day of the 7th month of the Tibetan calendar to commemorate the consecration of Mount Khangchendzonga as the guardian deity of Sikkim. The festival also marks the commemoration of blood brotherhood sworn between the Lepchas and the Bhutias at Kabi in the 15th century.



Fig. 27 Group photo with the *ninyeams* in Thanggu (courtesy of Susi Nanefia)

On the night before leaving Lachen, we had a party in the community hall, which felt much like a school disco. We made over 100 *momos* filled with watercress picked from the banks of the River Teesta, tasted *chhang* for the first time (a traditional millet beer drunk through bamboo straws), and the *ninyeams* (nuns) and Rinzing, the postman, presented us with *khataks* (traditional ceremonial scarfs, usually white silk).

The following day most of us travelled to Gangtok, where we ate pizza and bought gifts for family and friends. After so long in a remote village, returning to a big town was a bit overwhelming. The next evening we threw a second goodbye party, where we prepared all the foods that we had missed while in Lachen, like fresh salads and chocolate cake.

After emotional farewells, Klara and I went to Yuksom, the first capital of Sikkim, where we met Karzong, a friend of Katrin's, who invited us for dinner in his home. Over the following days, we walked to Khechiperi Lake, a wishing lake about 3 hours away, and hiked to Tashiding. On the way, we passed Dubdi Monastery, the oldest *Gompa* in Sikkim, and Hongri *Gompa*, which have both been heavily damaged by the earthquake; the latter has since been repaired with concrete. Seeing these temples furthered my appreciation of the extent of the

damage in Sikkim and the need to preserve its historic monasteries in a sympathetic and appropriate manner.



Fig. 28 Tashiding *Manihakhang* at 5:30am

In Tashiding we stayed with Pema, who we had met in the jeep to Yuksom, who awoke us at five o'clock the next morning, so that we could see Tashiding Monastery before returning to Gangtok. On my final two days alone, I visited Rumtek Monastery, near Gangtok, before returning to Delhi (on the fast train).

Conclusion

Working and living in Lachen, I became truly immersed in the project. Before travelling to India, I had never worked on such a large scale, nor for so long. In this way, I think the experience has prepared me for my final year at City & Guilds as well as employment thereafter. During my time in the temple, I developed a new appreciation for materials, their origin and preparation. Working and lodging with an international team of conservators and students, I befriended like-minded, creative and interesting people and we became a close-knit and inclusive group. Since returning, I think I have become calmer, more thoughtful, perhaps, and more tolerant.



Fig. 29 The *ninyeams* praying in the temple (courtesy of K.P.)

As the *Manilhakhang* is an active temple and integral part of the Lachen community, I feel that the project is a balance between preserving cultural heritage and meeting the needs of the *ninyeams*. The temple is a place of worship, and, as Anjan Chakravert writes in *Sacred Buddhist Painting*, ‘a [painting] that cracks, warps, fades or crumbles is not suitable for worship and may hamper the devotee’s invocation’.⁴ However, for me the temple is also significant in itself, with its paintings worth preserving for their own sake, as well as for the people of Lachen. Two days after returning from India, I began a four week work placement in a museum in London: a huge contrast from the *Manilhakhang*. This reinforced the impact of my experience in Sikkim.

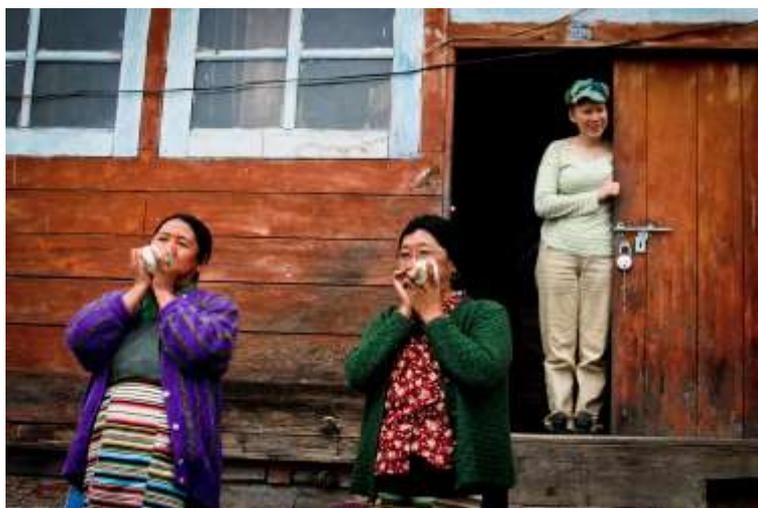


Fig. 30 The *ninyeams* blowing *dung dkars* (conch shells) to call together the *puja*

⁴ Chakraverty, A. *Sacred Buddhist Painting*, Roli Books Pvt Ltd, 1998, p. 51

Living in a small village for six weeks, we became acquainted with many people, with different customs, religion, languages and foods; while travelling I discovered more wall paintings and art forms not covered by my degree in Art History, and met extraordinarily friendly people. I would love the opportunity to return.

On the way there, two months stretched dauntingly before me, but I was amazed how quickly the time went and even after six weeks at the temple, I felt I could have stayed a few more. I will always treasure the time that I spent in Sikkim. It is difficult to describe in words, or even photographs, just what this trip meant to me, but I hope that this report has gone some way towards explaining how much I valued the experience.

I would like to thank ZGTF, THF and all the team in Lachen for this wonderful opportunity, as well as all the people I met, for their warmth and unending hospitality.



Fig. 31 Butter tea and biscuits with the *ninyeams* in the temple kitchen (courtesy of K.P.)

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