
MICHAEL WARD

Exploration of the Bhutan Himalaya

(Plates 90–92)

The first extensive mountain exploration in the Bhutan Himalaya was carried out in 1964 and 1965 by Dr Frederic Jackson and myself in the course of a medical research programme on the Bhutan–Tibet border. Though Joseph Hooker, in his *Himalayan Journals* published in 1854, mentioned the ‘Bhotan Himalaya’, this term fell from use and the Peaks of Bhutan were ascribed to the Assam Himalaya by geographers.¹ It was obvious to us, however, that these mountains formed a separate and integrated group, and I therefore called them ‘The Bhutan Himal’ in two articles written for the *Alpine Journal* in 1965 and 1966.^{2,3} The Swiss geologist Augusto Gansser, writing in 1965, made the same distinction.²⁶ This name has stuck.

As no reliable maps of this border area existed, I carried out a simple compass traverse, using methods similar to those of the Pundits in their exploration of Tibet in the latter half of the nineteenth century, which I had already used on the 1951 Everest Reconnaissance Expedition. In addition, in both 1964 and 1965, we climbed a number of strategically placed peaks specifically to obtain good views for photographs and compass bearings. On our return, there was enough data for a reasonably accurate map to be drawn by George Holland, chief draughtsman at the Royal Geographical Society, and for this to be published in the *Geographical Journal* in December 1966.⁴

At this time, the highest peak in Bhutan was thought to be Chomolhari (23,997ft), Peak I of the Survey of India, on the Bhutan–Tibet (Chumbi valley) border, which was climbed by F Spencer Chapman and Pasang Dawa Lama from Tibet in 1937. It became clear to us in 1964/65 that another peak in Central Bhutan, named Kangri, Rinchita, or Gangkar Puensum, was higher at 24,740ft. From the top of Aiguille St George, the first photograph of this peak was taken by us in 1964.⁵ A peak, named Kulha Kangri,* was seen for the first time on 5 September 1883 by the pundit Lama Ugyen Gyatso when carrying out a secret survey in South Tibet close to the Bhutan border.^{5A}

One of the most interesting findings of our medical research programme, completed in 1965 with the help of Dr R W D Turner of Edinburgh University, was that among the Lunana population, the world’s most isolated high-altitude group, there was no evidence of chronic mountain sickness (Monge’s disease) which is an intolerance to the stress of long-continued oxygen lack at altitude. Reported for the first time in South American high-altitude populations in 1925 and later in Tibet, this discrepancy may have arisen because (as suggested by Dr J S Milledge) the Lunana

* It is not clear whether this mountain was Gangkar Puensum, 7541m, on the Bhutan–Tibet border, or Kunla Kangri, 7554m, further north in Tibet.

inhabitants moved to a lower altitude in Central Bhutan twice a year to trade. Therefore the stress of oxygen lack was intermittent, and not continuous as it is with populations on the South American Altiplano or the Tibetan Plateau. Another interesting finding reported by Dr Frederic Jackson, a cardiologist, was the relatively small degree of enlargement of the right side of the heart, which is another feature of chronic oxygen lack in those with chronic lung disease or long stay at altitude.⁶

Early knowledge of Bhutan

Bhutan is the world's most mountainous country. It extends about 250 miles from Sikkim in the west to the North-East Frontier Agency, Arunachal Pradesh, in the east, and from Tibet in the north for about 100 miles to the Duars, a narrow strip of flat country on the Assam-Bengal border, to the south. This strip is the only flat region, and the foothills rise dramatically and very steeply to 12,000ft within a few miles. The main population lives in the central E-W valley system at about 6-7000ft.

The modern word Bhutan is derived from the Indian word 'Bootanter', which meant the whole of Tibet. The word 'Potente' was reportedly used by fathers Cabral and Cacella, the first Europeans to visit Bhutan in 1627. This word meant 'The end of Pot', and 'Pot' was a general name for Tibet.

The earliest European map of Tibet is contained in D'Anville's *Nouveau Atlas de Chine*, published in Paris in 1733. The title of this map is 'Tibet ou Bout-tan', which would indicate that 'Bout-tan' was an alternative name for Tibet. On this map, in the position of present-day Bhutan, are the words 'Pays de Pournonke'. On the copy in the map archives of the Royal Geographical Society, the word 'Pournonke' has been crossed out and the word 'Broughpa' clearly substituted. A reproduction of the map can be seen in my article 'The Exploration and Mapping of Everest' in *Alpine Journal* 99, 97-108, 1994.

The Bhutanese call their country 'Broukpa', 'Brugpa', 'Brugyul', or 'Druk'. The word 'Broukpa', indicating Bhutan, is placed between 'Thibetto' to the north and 'Indostan' to the south in a map drawn by Van de Putté around 1735.

Probably the first reference to Bhutan in the English literature is by Ralph Fitch, a London merchant, who visited Cooch Behar, then an independent kingdom on the southern border of Bhutan, during a journey to China between 1583 and 1591. Although he did not enter the country, he described a peak that could very well have been Chomolhari.⁷

The first European travellers to enter Bhutan were two Jesuit priests, Father Esevao Cacella, an associate of Father Andrade, who started the first Jesuit mission in South Tibet at Tsaparang, just south and west of Gartok, and Father Joao Cabral. Accompanying them was a lay brother, Bartolemo Forteboa, who died just before they reached Shigatse. They left their headquarters at Hugli in the Ganges Delta on 2 August 1626 and, despite being robbed and imprisoned at Runate, the present-day Buxar

Duar on the India-Bhutan border, managed to meet the 'King' of Bhutan. He kept them virtually 'prisoners by kindness' but Cacella managed to 'escape', cross the Tremo La and reach Shigatse where he was joined by Cabral in 1627.⁸

Over one hundred years were to elapse before the first British involvement with Bhutan. In the late eighteenth century, access to China for European coastal traders was denied by the xenophobic Manchu dynasty, and a 'back door' approach by Tibet to the markets of Western China was the only viable alternative.

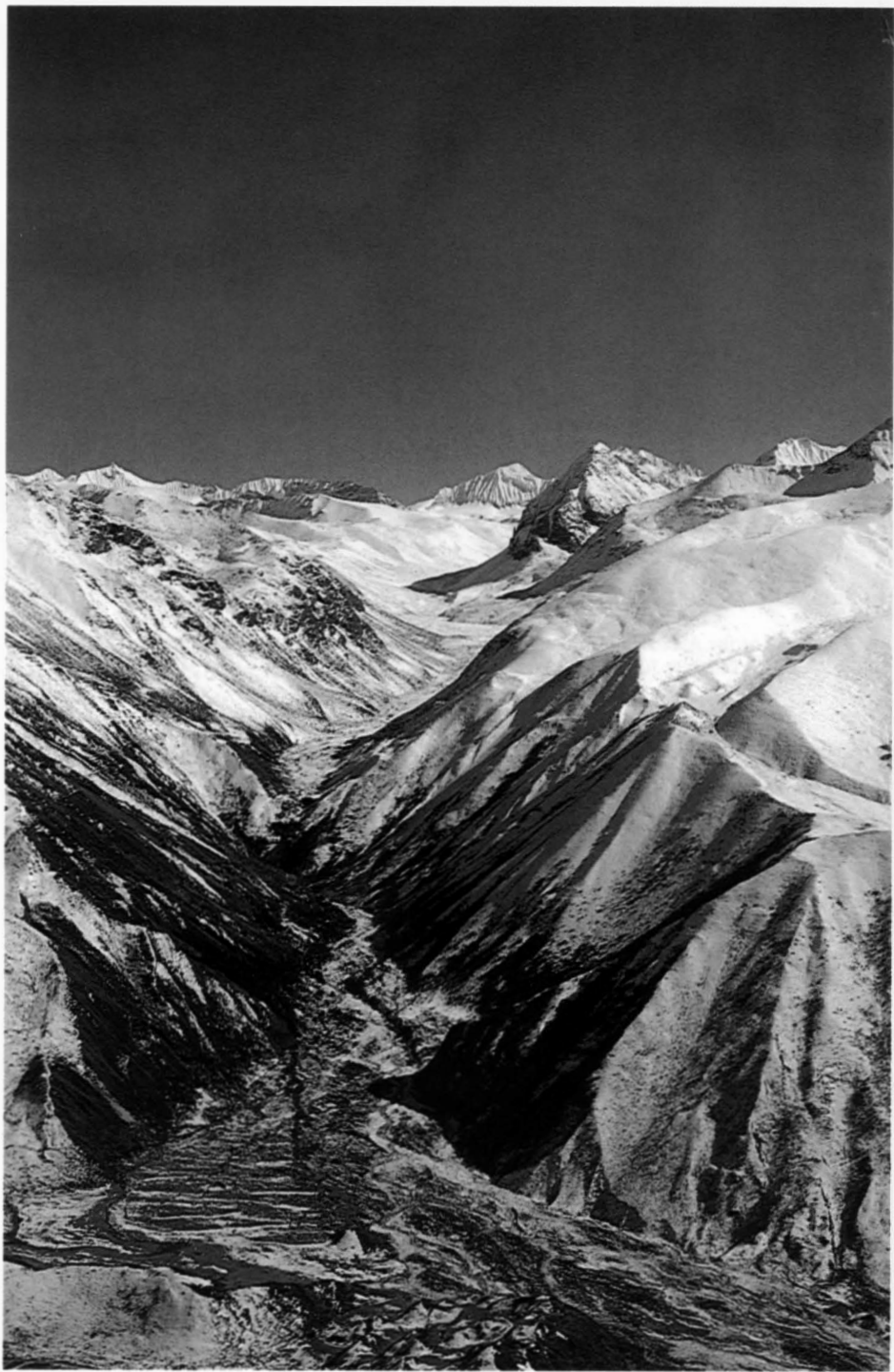
The defeat of the French at the Battle of Plessey in 1757 enabled the interests of the East India Company to extend to the Himalaya and the Independent Kingdoms of Bhutan, Sikkim and Nepal, and potentially with the fabled riches of Tibet.

Blocked in Nepal by the Gurkha leader Prithvi Narayan, the Company turned to Assam and Bhutan as alternative routes to Tibet. In 1766-67 James Rennel surveyed part of the Bhutan border whilst mapping Bengal, and then Warren Hastings, Governor-General of all the Company's territories, cleverly used a petty squabble between Bhutan and Cooch Behar to probe Tibet. The Teshoo Lama, second only to the Dalai Lama in the religious hierarchy of Tibet, wrote a conciliatory letter to Hastings on behalf of the Bhutanese. As a result, Hastings sent a 28-year-old Scot, George Bogle, who had been with the Company for only five years, to meet the Teshoo Lama in Shigatse. He was accompanied by a surgeon, Alexander Hamilton. It was a bold move, but with great possibilities for trade. Bogle's instructions were wide-ranging, and rarely has a mission gone with so little protection into a region about which so little was known.⁹

The party left India on 9 June 1773 with no maps, and after spending some time in Bhutan, crossed into Tibet by the Tremo La and reached Tashi Lunpo monastery at Shigatse. A second mission in 1776 and a third in 1777, both by Hamilton, kept the lines of communication open. A fourth mission, in 1783, by Samuel Turner, Samuel Davis and Robert Saunders,^{10, 11} brought back a wealth of information about Bhutan.

However, in 1792 these bright prospects were destroyed by war between Nepal and Tibet. The Tibetans and their allies the Chinese suspected the British of covertly helping the Nepalese, and all the Himalayan passes were closed.

Over the next hundred years, relations with Bhutan were further strained by frontier disputes over the Duars. The Pemberton Mission of 1837-38 increased topographical knowledge of Central Bhutan, but caused a great deal of irritation and resentment.¹² Friction continued and the Eden Mission of 1863-64 was a disaster. Eden's face was rubbed in dough and he was threatened with the stocks, imprisonment and death.¹³ A treaty was signed under duress, and as the Bhutanese were disinclined to repent of their treatment of Eden, the Government of India decided to annex some of the Duars. The Anglo-Bhutan war of 1865 resulted.¹⁴



90. Bhutan Himal: Lunana Valley, leading south to Gyophu La. (*Michael Ward*) (p219)

In this war, Henry Wylie, grandfather of Charles Wylie, fought with the Guides. He later transferred to the Indian Political Service and was British Resident in Kathmandu from 1891 to 1899. The war ended with the Treaty of the Sinchu La in 1865. Internal strife continued for a further 30 years until Jigme Namgyal, the Tongsa Pönlop, emerged as *de facto* ruler of the country.

In the latter part of the nineteenth century, the main geographical problem of Central Asia was plotting the course of the Tsangpo river. Where did it cut through the Himalaya? And with which river was it continuous in India – the Irrawaddy, Dihang, or Dibang? In 1885-86 the Survey of India sent two Pundits, Rinzin Namgyal and Phurba, to traverse Bhutan from west to east, join the Tsangpo in South Tibet and follow it to India.¹⁵ Owing to local wars, both were unable to traverse the country but travelled in East and West Bhutan. Confirmation that the Tsangpo was continuous with the Dihang had to wait until 1913 and the survey by F M Bailey and H T Morshead.

The 1903-4 mission to Lhasa provided a chance to enhance friendly relations with Bhutan. The Tongsa Pönlop Ugyen Wangchuk, who later became the first king of the Wangchuk dynasty, was of great diplomatic assistance to Younghusband and accompanied the mission to Lhasa. Subsequently, he was friendly with J Claude White when the latter became Political Officer to Sikkim (with responsibility for Tibet and Bhutan). White visited Bhutan on three occasions between 1905 and 1907. He crossed the Himalaya by a pass north of Lingzhi Dzong and also by the Bod La, east of the better known Mon La Ka Chung La, into South Tibet.¹⁶

Frank Ludlow and George Sherriff

The Europeans who knew more about Bhutan than any other travellers at that time were the botanists Frank Ludlow and George Sherriff. Between 1933 and 1949 they made six extensive botanical explorations into what was then almost a botanical *terra incognita*; the only botanists to precede them were William Griffith on the Pemberton Mission and R E Cooper in 1914-15.¹⁷ They visited most of the valleys on more than one occasion but only once, in 1949, did Ludlow, alone, travel along the northern frontier region. It was this 'blank on the map' that we helped to fill in 1964-65.

Though both Ludlow and Sherriff published articles in botanical journals and those on avifauna, neither wrote a book.¹⁸⁻²⁰ As a result, there was only a limited record of their unique and extensive travels in SE Tibet and Bhutan until the publication in 1975 of *A Quest of Flowers* by H R Fletcher, Keeper of the Royal Botanic Gardens, Edinburgh.²¹ I visited Frank Ludlow at the National History Museum in 1964 and he gave me a rough sketch map of his 1949 journey in N and NW Bhutan.

Frank Ludlow graduated from Cambridge in 1908, where he was taught botany by Professor Marshall Ward, father of Frank Kingdon Ward whose botanical explorations in SE Tibet, Assam and Burma complemented theirs.

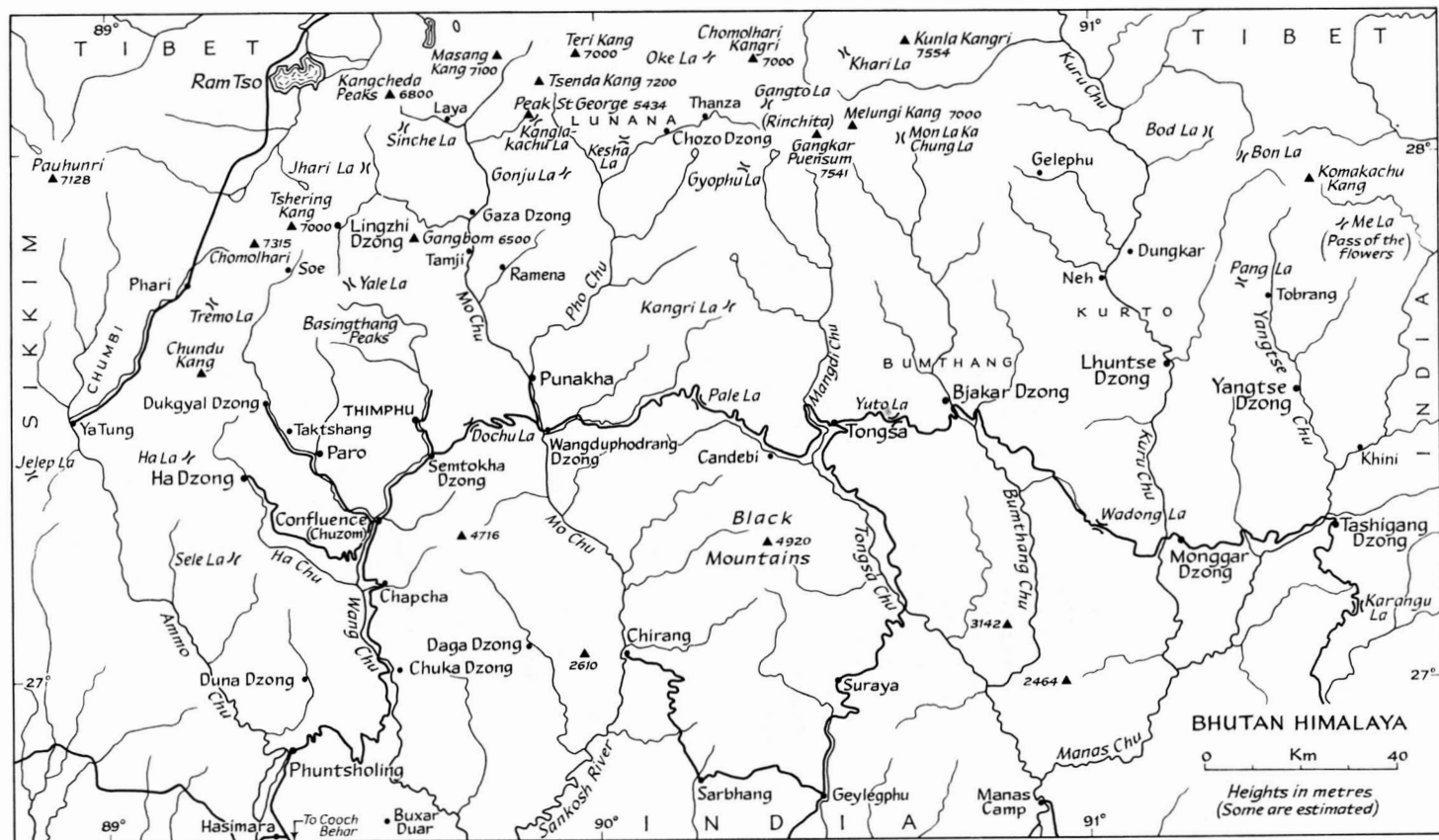
On leaving Cambridge, Ludlow became simultaneously Professor of Biology and Lecturer in English at Scind University, for, in addition to being an outstanding naturalist, he had a deep appreciation of poetry. Serving during the First World War with the Indian army he then joined the Indian Education Service, giving this up in 1922 in order to start a school for Tibetans at Gyantse. Though the school was closed in 1927 because the Tibetan Government was fearful of British influence on young Tibetan minds, Ludlow was so trusted that he was allowed more or less free access to Tibet with chosen companions.

After Gyantse, Ludlow lived in Srinagar and, in 1929, was invited by F Williamson, Consul General in Kashgar, and formerly trade-agent at Gyantse, to spend a winter in Kashgar. Here he met George Sherriff, a friend of Williamson's. With Williamson (who was destined to occupy the key post of Political Officer of Sikkim) and Sherriff, he discussed plans to explore Tibet and Bhutan in the years to come. His meeting with Sherriff, 15 years his junior, was critical and providential. Their attitudes were complementary; Ludlow was the scholarly academic, whilst Sherriff was the precise, efficient, practical organiser and an expert mechanic and electrician. Both were captivated by the magic of the Himalaya and Tibet. They had a great mutual respect and harmony of views, and serious arguments and friction were unknown: yet, during all the long years of their friendship, they always addressed each other by their surnames only.

From Sedbergh, George Sherriff was commissioned in the Royal Garrison artillery and in 1919 was in Waziristan. Joining the consular service in 1928, he was posted to Kashgar, becoming Consul in 1932. He resigned because his views on burgeoning Russian influence in Turkestan were not shared by his superiors. He joined Ludlow in their now legendary botanical explorations in SE Tibet and Bhutan. Later, Jigme Dorji Wangchuk, the third King of Bhutan, spent six months with Sherriff in the UK.²²

Regular visits were also made to Bhutan by successive Political Officers of Sikkim.²³ One of the most productive of these from the geographical point of view was that of F M Bailey who, in 1922, with a survey party under Captain M R C Meade, was able to fix the positions of both Kunla Kangri (7554m) and Kangri (Gangkar Puensum, 7541m) in the course of a journey through Central and East Bhutan and South Tibet.^{24, 25}

The first geological exploration of Bhutan was carried out by Professor Augusto Gansser, a distinguished Swiss geologist, with whom I was on the Royal Society/Chinese Academy of Science's Tibet geotraverse in 1985. In 1963, with a colleague, Rudolf Hännly, he visited Lingzhi and Laya, but in 1965 was prevented from crossing into Lunana by the excessive snowfall that pinned us into this remote region for some weeks. However, in 1967, two years after our visits, he went to Lunana, entering by the Kamlakachu La and leaving by the Gyophu La on his way to Central Bhutan. Gansser was the first to name Bhutan's highest peak 'Gangkar Puensum', which in 1965 was known to the Lunana inhabitants as Rinchita.^{26, 27}





91. Gangkar Puensum, 7541m, from the NW. (*Michael Ward*) (p219)



92. Kashgar, 1930: *Seated: Frank Ludlow (L) and George Sherriff. From L standing: Pantsiloo, Williamson, unknown, Schomberg, Swedish missionary, Ridley.* (*Reproduced by courtesy of the Sherriff collection*) (p222)

The highest mountain in Bhutan, and the peaks of Lunana

In 1964 our primary reason for going to Bhutan was to carry out a medical consultation with King Jigme Dorji Wangchuk. Both Fred Jackson and I wanted X-rays taken, and a machine had to be brought up from Calcutta, together with technicians. As this would take at least three weeks to organise, there was enough time for a preliminary reconnaissance of the border peaks.

As our journey to Lunana took place during the monsoon, our whole trek from Paro to Thimphu, up the Mo Chu to Gaza Dzong, over the Kanglakachu La (5105m) into Lower and Upper Lunana was made in dense and impenetrable cloud and we saw no mountains, and indeed very little of anything else. On our return, as we were re-crossing the Kanglakachu La on the border of Lunana and Laya, the wind changed, the temperature dropped and the clouds began to thin out and break up. By the late afternoon, as we descended from the pass, the clouds had cleared away and we saw a climbable needle of about 5434m which we called Peak St George. This was part of the Rodofu Needles, themselves outliers of the Tsenda Kang group.

Long before dawn next day, we set off to climb this peak in a cold clear starlight night. We could not have chosen a better day or a better situated mountain, for from its summit the ranges of the Bhutan-Tibet border were revealed, from Chomolhari in the west to a serrated, spiky peak in the east. That peak we later realised was Gangkar Puensum (also known as Rinchita or Kangri). We spent two unforgettable hours on the summit of Peak St George before descending into renewed monsoon cloud. We returned by Laya, Lingzhi Dzong and Soe, catching a very brief glimpse of the Chomolhari group before reaching Paro where, with the help of adequate X-ray equipment, we were able to continue our medical consultation with the King.

In 1965 we decided to go to Bhutan in the autumn when the weather is usually fine and clear. Our main intention was to carry out a medical research programme in Lunana and we were joined by Dr R W D Turner, Reader in Medicine at Edinburgh University. After a month, our work completed, Fred Jackson and I explored the glaciers and passes of Lunana and climbed three peaks of around 5800m to obtain as much topographical information as possible.

The main feature of the Bhutan-Tibet border peaks lining the north side of Lunana was a very large plateau mountain named Chomolhari Kangri. About ten miles long, it stretched from the Oke La in the west to the Gangto La (5180m) in the east. In 1965 Fred Jackson visited this easy glacier pass that connected with the Kanang Chu and the Tola Lhobrak valley in Tibet. South of the Gangto La is Gangkar Puensum (7541m), an elegant mountain with a long north ridge. To the north of the Gangto La, but invisible to us, was Kunla Kangri (7554m), climbed by a Japanese party in 1985. They also ascended Kari Jang (7216m) further north. Kunla Kangri, which is in

Tibet, had been seen and measured by Bailey and Meade in 1922, when they descended from the Mon La Ka Chung La into the Kanang Chu valley.

Gangkar Puensum ('White Peak of the Three Spiritual Brothers'), 7541m, is the highest mountain in Bhutan. The first attempt on the summit was made from the west by a Japanese party in 1985, and they reached 6705m. In 1986 a British group got to much the same height. In the same year, an American attempt from the east failed to reach the summit, as did an Austrian party in 1987.²⁸⁻³¹

East Bhutan

Bhutan is divided by a long ridge running south from Gangkar Puensum to the Black Mountains. This ridge is crossed by the Pale La.

East of Gangkar Puensum – on the border with Tibet – is Melungi Kang, noted by Gansser at the head of the Melungi Chu. Further east again is the Mon La Ka Chung La (5334m) which has for centuries been the main route between South Tibet and Bumthang in East Bhutan. Crossed by a number of Europeans, the pass was visited in 1967 by Peter Steele who trekked in the nearby peaks.³²

Further east again, the frontier range continues until it is cut by the Kuru Chu river that rises in South Tibet and flows into the Manas river of Bhutan. East again is a group of glaciated peaks not named by Ludlow and Sherriff but now known as the Komakachu Kang. Further east is the Me La, ('Pass of Flowers'). Visited many times by Ludlow and Sherriff, it was here that the Blue Poppy, *Meconopsis grandis* was first recorded in Bhutan. Primulas also grow on this pass in great abundance. Nine different kinds were found, one being a new species named *Primula jigmediana* after Jigme Wangchuk, the King of Bhutan. Two other primulas were named after Ludlow and Sherriff.

Chomolhari (7315m) and the Lingzhi-Laya group

Chomolhari was first climbed in 1937 by F Spencer Chapman and Pasang Dawa Lama.^{33, 34} An outstanding 'signpost' peak on the way from Sikkim to Lhasa, it was Peak I on the list of peaks of the Survey of India in 1861. The second ascent was made on 28 April 1970 by an Indo-Bhutanese team led by N Kumar. Unfortunately, an attempt the day after the second ascent ended in tragedy.³⁵

Jichu Drake (Tshering Kang), 7000m, just north of Chomolhari, seen fleetingly and photographed by us in 1964, was climbed for the first time in 1988 by a British party led by Doug Scott.³⁶ Previously, in 1984, the South Summit had been climbed by a group of Japanese climbers.³⁷

The peaks of the Lingzhi-Laya group, a rampart between Bhutan and Tibet, were photographed by us in 1964 and by many others since.³⁸⁻⁴⁰

Masang Kang (7100m), a fine peak north of Tatsi Markha, had its first ascent by a Japanese party in 1985. A second attempt, in 1993, by a British party from the east was not successful.⁴¹

Gangbom (6500m) and the Basingthang Group

West of Gaza Dzong is a fine peak, Gangbom (6500m), identified in 1964. Its first ascent was made by a Japanese party in 1985.⁴² A further ascent was made in 1992 by a Dutch group.

On its west side are the Basingthang group of peaks (c5600m), clustered around the valley of the Thimphu Chu. In 1991 several first ascents were made in this area by a British party led by Peter Mould.^{42, 43}

I have been fortunate in completing three pieces of pure mountain exploration in Central Asia: the Nepalese side of Everest in 1951, Mount Kongur, the highest peak of the Pamir, and Kun Lun Shan in 1980, and the first extensive exploration of the Bhutan Himalaya in 1964 and 1965. The first two involved years of research and preparation; the third was a sudden bonus – a gift from the gods, and appropriately the King of Bhutan is considered to be a god. It is given to few mountaineers to see for the first time a hundred-mile stretch of an unknown and unexplored part of the world's greatest mountain range, to climb four of its peaks, to map it and to re-name it.

REFERENCES

- 1 In particular, K Mason, *Abode of Snow*. Hart-Davis, London, 1955.
- 2 M Ward, 'Bhutan Himal' in *AJ70*, 106-119, 1965.
- 3 M Ward, 'Bhutan Himal: Some Further Observations' in *AJ71*, 281-285, 1966.
- 4 M Ward, 'Some Geographical and Medical Observations in North Bhutan' in *Geographical Journal* 132, 491-500, 1966.
- 5 F S Jackson, M Ward, 'The Highest Mountain in Bhutan' in *AJ72*, 325-326, 1967.
- 5A Lama Ugyen Gyatso's third season, 1883. *Records of the Survey of India, Vol 8, Part II. Exploration of Tibet and Neighbouring Regions 1879-1892*. S G Burrard. Dehra Dun Office of the Trigonometrical Survey, 1915.
- 6 F S Jackson, R W D Turner, M P Ward, *Report on I B P Expedition to North Bhutan*, Royal Society, London, 1967.
- 7 R Fitch, 'The English Voyages and Navigations 1583-91' in Vol 2, page 257, of Richard Hakluyt's *Principal navigations, voyages, traffiques, and discoveries of the English nation, made by sea and overland, to the remote and farthest distant quarters of the earth*. George Bishop, Ralph Newberry, Robert Barker, London, 1599.
- 8 C Wessels, *Early Jesuit Travellers in Central Asia 1603-1721*. Martin Nijhoff, The Hague, 1924.
- 9 C R Markham, *Narrative of the Mission of George Bogle to Tibet and of the Journey of Thomas Manning to Lhasa*. Trübner and Co, London, 1876.
- 10 S Turner, *An account of a Mission to the Court of the Teshoo Lama; containing a Narrative of a Journey through Bhutan and part of Tibet*. W Bulmer and Co, London, 1800.

- 11 J Stewart, *An Account of the Kingdom of Thibet*. Read at the Royal Society, 17 April 1777. W Bowyer and J Nichols, London, 1777.
- 12 R B Pemberton, *Report on Bhutan*. G U Huttman, Bengal Military Orphan Press, Calcutta, 1839.
- 13 *Papers relating to Bhutan*. East India (Bootan). House of Commons, 1865. And *Further papers*. 1866.
- 14 Surgeon Rennie, *Bhotan and the Story of the Dooar War*. John Murray, London, 1866.
- 15 G W E Atkinson, 'Narrative of Rinzin Namgyal's Explorations in Sikkim, Bhutan, and Tibet in 1885-1886', pp363-379, and 'Narrative Account of Phurba's explorations in Tibet and Bhutan in 1885-1886', pp379-381, in *Records of the Survey of India, Vol 8, part II: Exploration of Tibet and Neighbouring Regions 1879-1892*. S G Burrard, Dehra Dun, Office of the Trigonometric Survey, 1915.
- 16 J Claude White, *Sikkim and Bhutan*, Arnold, London 1909.
- 17 D G Long, 'The Bhutanese itineraries of William Griffith and R E Cooper'. *Notes from the Royal Botanic Gardens, Edinburgh*. Vol 37, No 2, 355-368, 1979.
- 18 F Ludlow, 'The Birds of South-Eastern Tibet' in *Ibis*, 43-86, Jan 1944; 176-208, April 1944; 348-389, July 1944.
- 19 F Ludlow, 'The Birds of Kongbo and Pome, South-East Tibet' in *Ibis*, 547-78 (93), 1951.
- 20 F Ludlow, 'The Birds of Bhutan and Adjacent Territories of Sikkim and Tibet' in *Ibis*, 1-46, Jan 1937; 249-93, April 1937; 467-504, July 1937.
- 21 H R Fletcher, *A Quest of Flowers*. Edinburgh University Press, 1975.
- 22 Michael Aris, *The Raven Crown. The Origins of Buddhist Monarchy in Bhutan*. Serindia, London, 1994.
- 23 P Collister, *Bhutan and the British*. Serindia, London, 1987.
- 24 F M Bailey, 'Through Bhutan and Southern Tibet' in *GJ64*, 291-297, 1924.
- 25 H R C Meade, 'Narrative Report of the Bhutan and South Tibet Survey Detachment 1922' in *Records of the Survey of India Vol XXI*, Dehra Dun, 1925.
- 26 A Gansser, 'Geological Research in the Bhutan Himalaya' in *Mountain World*, 88-97, 1964/5.
- 27 A Gansser, 'Lunana' in *Mountain World*, 117-131, 1968/69.
- 28 'Jichu Drake, Gangkar Puensum, Masagang' in *American Alpine Journal* 28, 210-211, 1986.
- 29 'Gangkar Puensum, Masagang Kula Kangri' in *AAJ* 29, 219, 295-7, 1987.
- 30 'Gangkar Puensum, Jichu Drake' in *AAJ* 31, 182, 1989.
- 31 S K Berry, *The Thunder Dragon Kingdom*, Crowood Press, 1988.
- 32 P Steele, 'Perambulators in the Land of the Thunder Dragon', in *AJ72*, 264-272, 1967.

- 33 F Spencer Chapman, 'Chomolhari', in *AJ49*, 203-209, 1937.
 34 D F O Dangar, T S Blakeney, 'Chomolhari' in *AJ72*, 304-307, 1967.
 35 'Chomolhari, Second Ascent', in *AAJ 17*, 432-433, 1970-71.
 36 D Scott, 'Bhutan. A Summary of climbing and the Anglo-Indian ascent of Jichu Drake', *AJ94*, 38-52, 1989/90.
 37 'Jichu Drake' in *AAJ 27*, 244-245, 1985.
 38 E Peck, 'An October Trek in Bhutan', *AJ91*, 94-101, 1986.
 39 M S Kohli, 'Mountaineering in Bhutan' in *AJ90*, 18-21, 1985.
 40 P Mould, 'Mountaineering in Bhutan' in *AJ90*, 21-23, 1985.
 41 J Freeman-Attwood, 'Climbs & Expeditions: Bhutan' in *AAJ36*, 201, 1994.
 42 'Basingthang Peaks, Gangbom, Tsenda Kang' in *AAJ34*, 183-184, 1992.
 43 P Mould, 'Basingthang Peaks – Exploring in the Hidden Kingdom' in *AJ97*, 55-62, 1992/93.

Some early travellers in Bhutan

1627	Fathers Cabral and Cacella
1774	G Bogle, A Hamilton
1776	A Hamilton
1777	A Hamilton
1783	S Turner, R Saunders, S Davis
1811	T Manning
1815	Kishen Kant Bose
1837-8	R B Pemberton and companions
1863-4	Ashley Eden and companions
1865	Anglo-Bhutan War
1885-6	Pundits Rinzin Namgyal and Phurba
1905-7	J Claude White and companions
1914-15	R E Cooper
1912-47	Visits of Political Officers of Sikkim
1921-28	F M Bailey and companions
1933	C J Morris
1933-34	F Ludlow, G Sherriff and companions
1936-37	F Ludlow, G Sherriff and companions
1937	F Spencer Chapman and Pasang Dawa Lama
1949	F Ludlow, G Sherriff and companions
1963	A Gansser and companions
1964	M P Ward, F S Jackson
1965	M P Ward, F S Jackson, R W D Turner
1967	A Gansser and companions
1967	Peter Steele and family

Note: This article is part of a monograph (unpublished) on the exploration of Bhutan. A bound copy has been lodged in the Alpine Club Library.