

BHUTAN HIMAL: SOME FURTHER OBSERVATIONS¹

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(*Three illustrations: nos. 71-73.*)

IN the autumn of 1965, during the course of an expedition to North Bhutan primarily concerned with medical research, a good deal of topographical data was obtained about a little known area, Lunana. Probably the first Europeans to travel in this area were Ludlow and Sherriff in the 'thirties. Dr. Jackson and I visited Lunana in 1964, but except for a distant view from the Kangla Ka Chu La we were enshrouded in cloud.

The area drained by the Pho Chu, one of the main tributaries of the Punakha Chu, is known as Lunana. About five hundred people live in this region and communications with the rest of Bhutan are difficult, involving as they do the crossing of a glacier pass which is often closed during snowfalls. Lunana appears to be cut off from the rest of Bhutan from January to April.

There are two main tributaries of the Pho Chu, the western and the eastern. The western tributary is formed by the junction of the streams from six glaciers which rise from a cirque of peaks on the Tibetan border. The western border of this tributary is a mountain range running north and south, and this range is crossed by two passes, the Kangla Ka Chu La in the north and the Gongu La in the south.

The Kangla Ka Chu La (17,000 ft.) is glaciated on its eastern side and gives access in the west to the northern portion of the Mo Chu and the district of Laya. It is used mainly for bringing yaks from Laya, the main breeding area of Bhutan, to Lunana. North of this pass there is a small range of aiguilles, named by Dr. Jackson and myself in 1964 the Aiguilles of Rodofu, or Rodofu Needles. We climbed one of these and named it Peak St. George. Further north peaks on the frontier ridge between Bhutan and Tibet rise to about 21,000 ft.

The Gongu La (17,000 ft.), twenty-five miles south-east of the Kangla Ka Chu La, is another glacier pass and is on the main trade route between Punakha and Lunana. The peaks lying north of the Gongu La are between 19,000 and 20,000 ft., and there appear to be a number of glaciers whose streams drain into the western branch of the Pho Chu. This valley, uninhabited along its whole length, suffered a disastrous flood ten to fifteen years ago, when a moraine dam burst. This caused

¹ The earlier expedition is described in *A.J.* 70. 106-19. The present article is, in the main, part of a fuller one which is appearing in the *Geographical Journal*.
—EDITOR.

flooding as far south as Punakha; in fact, the river cut across the isthmus on which the Punakha Dzong stands, and this is now on an island.

The floor of this valley, up to a quarter of a mile wide, is a mass of boulders, while fully grown fir trees are entangled in the branches of the remaining trees on the side of the valley like giant de-covered umbrellas.

A tributary joins this main branch of the Pho Chu from the north-east, about fifteen to twenty miles from its source, and between these two rivers stands the village of Wache (12,800 ft.). This tributary appears to drain a series of rock and snow peaks on the main Bhutan-Tibet watershed.

The Kesha La (15,000 ft.) divides this tributary from the main eastern branch of the Pho Chu in which the majority of the population of Lunana live. It appears that a junction between the two main branches of the Pho Chu occurs about five miles south of Wache, and attempts made by the villagers of Lunana to force a way through the gorge, to Central Bhutan, have not met with success.

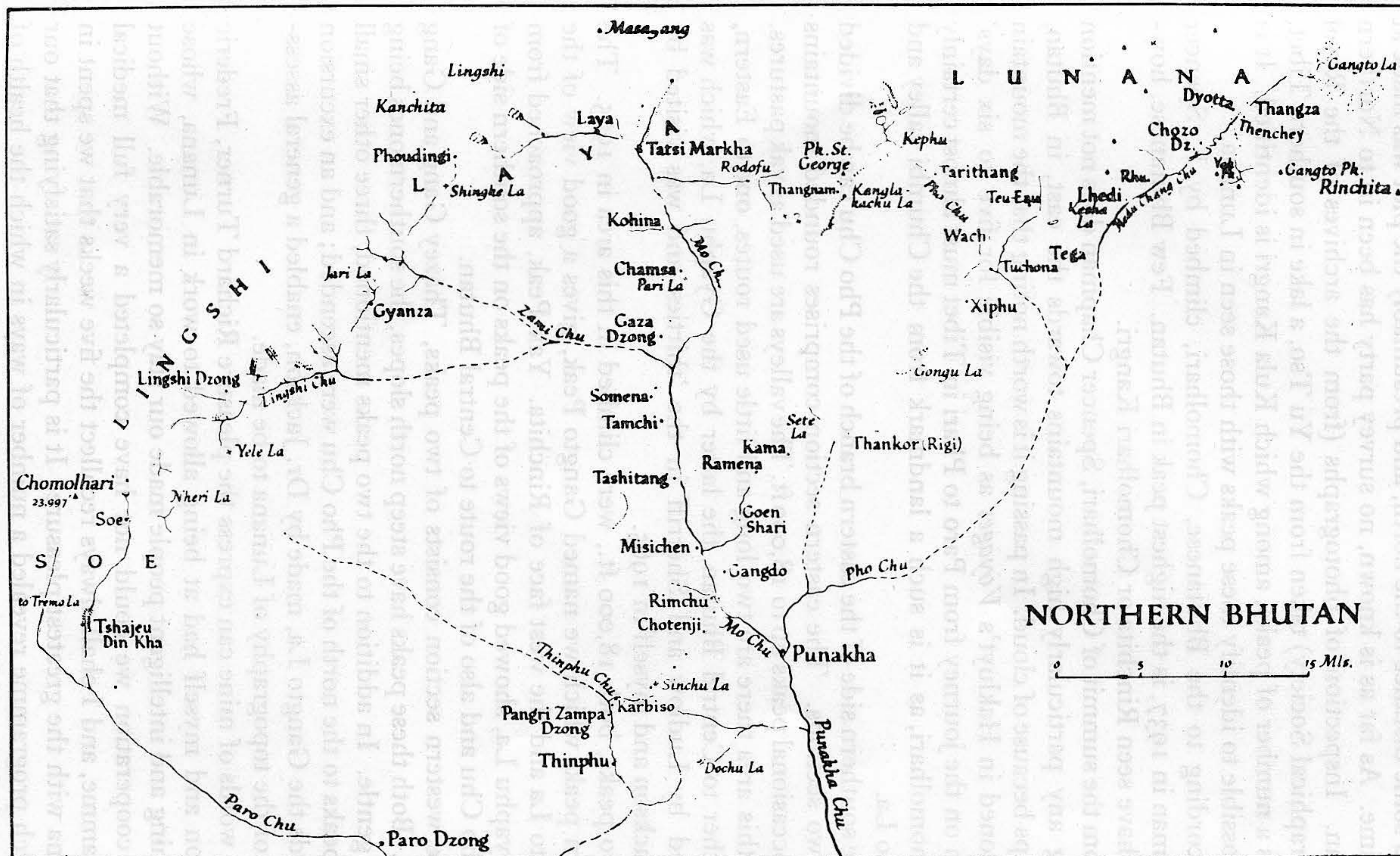
The northern border of Lunana comprises the main peaks of the Bhutan Himal. There are a number of fine peaks rising up to 23,000 ft. The Bhutan side of the pass is very steep and a few oblique views of the opposite, Tibetan, side give the impression that these slopes are a little more gentle, and are glaciated or snow-covered.

The lower hills are grass-covered yak pastures with pleasant valleys and lakes.

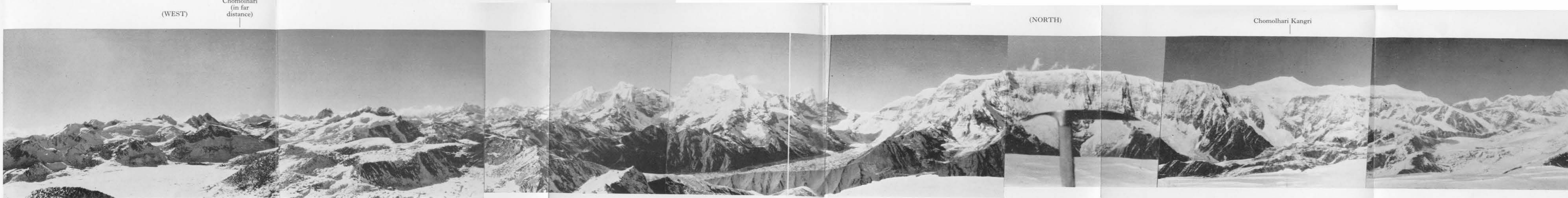
Lunana is divided into two main parts by the terminal moraine of a glacier which runs from the peaks on the Tibetan border. The river to the south of this moraine runs in a wide gorge, and the villages here we called Lower Lunana. Above the moraine, the river meanders on a plain on which there are a number of villages, Upper Lunana; the plain was presumably formed by the damming of the river by the moraine. Through this moraine the river runs in a narrow cutting.

The valley here runs in a north-easterly direction and the Gangto La, a glacier pass of 17,000 ft., gives access to Tibet at its upper end. It separates the two mountain massifs which are the main geographical feature of this region.

To the north, Chomolhari Kangri is an immense plateau whose sides rise precipitously from the valley floor, supported by flying buttresses and swept by avalanches. It is difficult to define the highest point on this plateau, but it appears to be some way back towards the north-east. This plateau is about five miles in length, and it dominates the whole of Upper Lunana. The other massif lies to the south-east and is more elegant, supported by minor peaks. It is named Rinchita. The main peak juts into Central Bhutan, and the route from Lunana to Bumtang runs close to it. The height of these peaks appears to be similar to that of Chomolhari (in the Chumbi valley). The comparative position of these two peaks is similar to that of Kula Kangri and Kangri as plotted on the Indian Survey map.

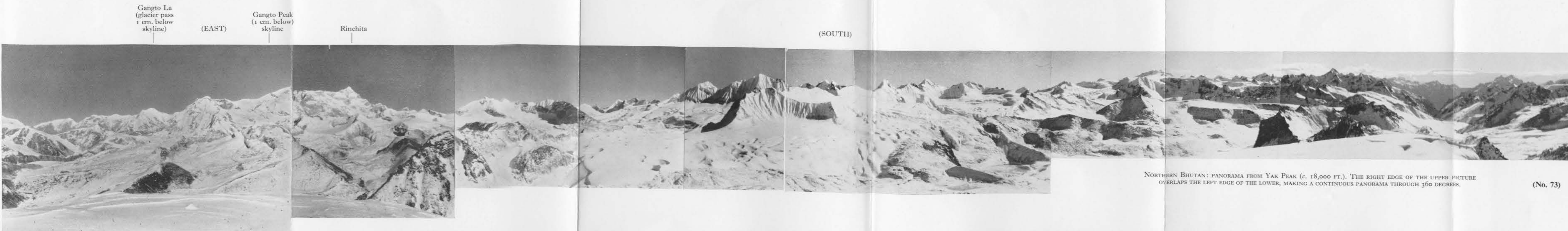


This map was drawn by G. S. Holland, of the Royal Geographical Society, from observations made by Michael Ward in 1964 and 1965.



Photos: Michael Ward]

(No. 72)



NORTHERN BHUTAN: PANORAMA FROM YAK PEAK (c. 18,000 FT.). THE RIGHT EDGE OF THE UPPER PICTURE OVERLAPS THE LEFT EDGE OF THE LOWER, MAKING A CONTINUOUS PANORAMA THROUGH 360 DEGREES.

(No. 73)



Photo: Michael Ward]

GANGTO PEAK (c. 18,000 FT.), NORTH BHUTAN.

Inspection of the appropriate sheets shows that survey points were placed some distance to the north, and presumably the plot was made at this time. As far as is known, no survey party has been in to Northern Bhutan. Inspection of photographs (from the archives of the Royal Geographical Society) taken from the Yu Tso, a lake in southern Tibet, shows a number of peaks, among which Kula Kangri is identified. It is not possible to identify these peaks with those seen in Lunana.

According to the Bhutanese, Chomolhari, climbed by F. Spencer Chapman in 1937, is the highest peak in Bhutan. Few Bhutanese, however, have seen Rinchita or Chomolhari Kangri.

From the summit of Chomolhari, Spencer Chapman does not mention seeing any particularly high mountains towards the east, in Bhutan, perhaps because of cloud. In passing it is worth noting that the mountain mentioned in Hakluyt's *Voyages* as being visible for five to six days' march on the journey from Paro to Phari in Tibet must almost certainly be Chomolhari, as it is such a landmark from the Chumbi valley and Tremo La.

The southern side of the eastern branch of the Pho Chu can be divided into two sections. The eastern section comprises rounded mountains with occasional peaks up to 18,000 ft. The valleys are used as yak pastures.

In this area there are two long and little used routes, one to Eastern, the other to Central Bhutan, the latter by the Gyaphu La, which was crossed by Ludlow and Sherriff in the 'thirties and was visited by Dr. Jackson and myself in 1965.

Two peaks, both 18,000 ft., were climbed in this area in 1965. The eastern peak, which we named Gangto Peak, gives a good view of the Gangto La and the west face of Rinchita. Yak Peak, approached from the Gyaphu La, showed good views of the peaks on the southern side of the Pho Chu and also of the route to Central Bhutan.

The western section consists of two peaks, Thazey Gang and Gang Karp. Both these peaks have steep north slopes, the southern ones being more gentle. In addition to the two peaks mentioned, three other small rock peaks to the north of the Pho Chu were ascended; and an excursion towards the Gangto La, made by Dr. Jackson, enabled a general assessment of the topography of Lunana to be made.

No words of mine can express the pleasure Richard Turner, Frederic Jackson and myself had at being allowed to work in Lunana, whose charming and intelligent people made our stay so memorable. Without their cooperation we could not have completed a very full medical programme, and I shall always recollect the five weeks that we spent in Lunana with the greatest pleasure. It is particularly satisfying that our research programme revealed a number of ways in which the health of the population could be protected and improved.²

² Information for this article was gained during expeditions made in 1964 and 1965 with Dr. Frederic Jackson and Dr. Richard Turner, O.B.E. We should like to thank His Majesty, the King of Bhutan, for permission to travel in his country.