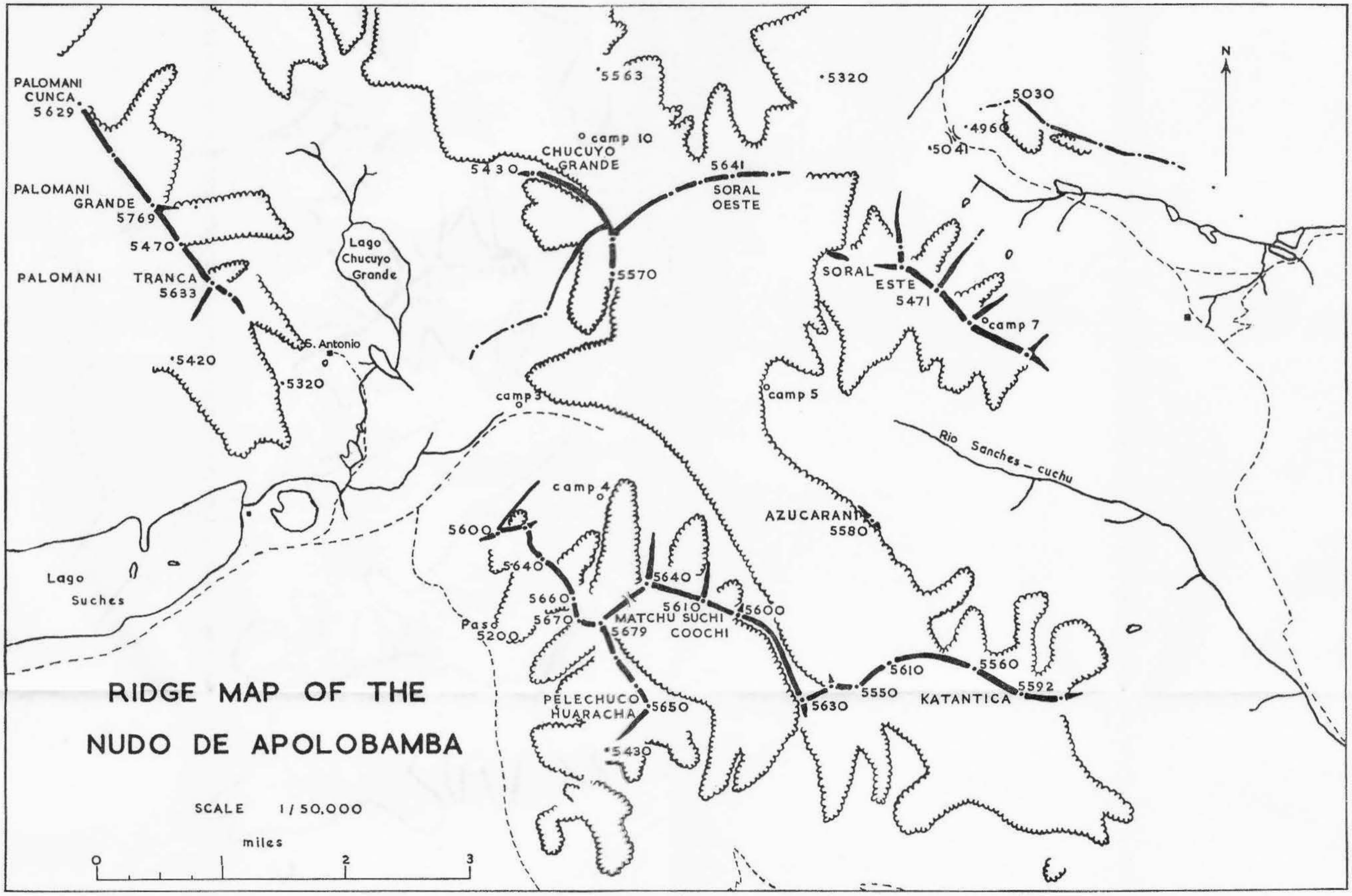
THE IMPERIAL COLLEGE EXPEDITION TO THE NUDO DE APOLOBAMBA, 1959

By W. H. Melbourne

It was late in the afternoon when the 21,000-ft. ice peaks of Illimani slipped by the starboard wing of our aircraft and below, in a huge hollow of the altiplano, we saw before us La Paz, the capital city of Bolivia. We were six members of the Imperial College, London University, under the leadership of Dr. Geoffrey Bratt, who had come to explore and climb some of the peaks in one of the last remaining unentered areas of the Andes, situated on the Bolivia–Peru border.

In La Paz we were met by Senor G. Farwig, the President of the Club Andino Boliviano. Previous correspondence had been exchanged with Senor Farwig who had promised our expedition the support of the Club, but we were totally unprepared for the wonderful reception that was forthcoming. Literally everything we required was obtained for us, and within two days of arrival the Club started to transport us and our food and equipment in their own truck on the 200-mile journey to the edge of the Apolobamba mountains. The drive up took us over the desolate wastes of the altiplano at about 13,000 ft. and round the shores of Lake Titicaca. From here we turned north round the 23,000-ft. snow dome of Illampu on the end of the Cordillera Real, and the Nudo de Apolobamba could be seen rising about 60 miles in the distance.

The word 'Nudo' means knot, and the Knot of the Apolobamba is so called because it is here that the east and west chains of the Andes meet and continue south as one chain for some distance. Parts of the Apolobamba had been visited previously, by a German party in 1957 who climbed the southern peaks, and by an Italian party in 1958 who climbed the peaks on the Peruvian side of the border. Both parties climbed the Palomanis and the Chupi Orco snow dome, which is just a few feet short of 20,000 ft.; it is interesting to note that the Italians estimated this height at about 22,000 ft. About 1913 a border survey was conducted by the Royal Geographical Society for the Peruvian Government. The main north–south ridge of the Apolobamba was used as the international boundary and the peaks which were accurately intersected during the triangulation, were used as the base for the topographical survey carried out by ourselves. The main climbing objective of the Imperial College Expedition were the Soral Peaks and the Matchu Suchi Coochi group which form the east and south walls respectively of the central Apolobamba group. This area of 170


PALOMANI
CUNCA
5629
PALOMANI
GRANDE
5769
5470
PALOMANI
TRANCA
5633
5563
5320
camp 10
CHUCUYO
GRANDE
5430
5641
SORAL
OESTE
5570
Lago
Chucuyo
Grande
S. Antonio
5420
5320
camp 3
5030
4960
5041
SORAL
ESTE
5471
camp 7
camp 5
Rio Sanches – cuchu
camp 4
5600
5640
5640
5660
5670
5610
5600
Paso
5200
MATCHU SUCHI
5679
COOCHI
AZUCARANI
5580
Lago
Suches
5610
5560
5592
5550
5630
KATANTICA
PELECHUCO
HUARACHA
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5430
RIDGE MAP OF THE
NUDO DE APOLOBAMBA
SCALE 1/50.000
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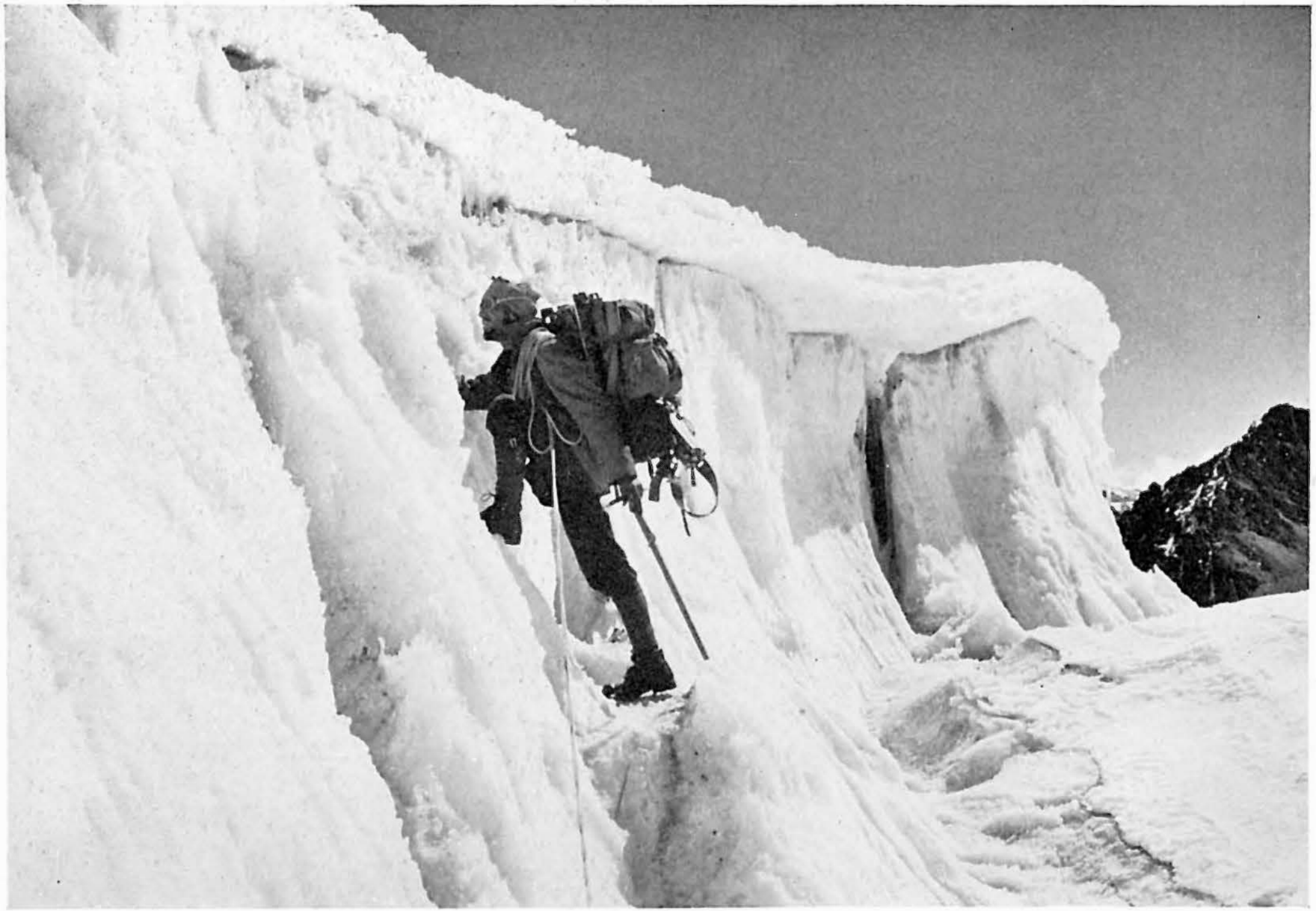
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square miles of central peaks and glaciers was mapped on plane table and is being published by the Royal Geographical Society. Three of the team were geologists and they carried out a geological survey of approximately 500 square miles, including a traverse across to the Amazon basin side of the main range.

Initially some difficulty was experienced in hiring mules from the nearby village of Pelechuco, because we arrived just before one of the many festivals celebrated by the local Aymara Indians. Several uncomfortable days were spent by the author accidentally becoming one of the attractions of the fiesta and, in the name of accepting hospitality, partaking of several of their potent alcoholic drinks. Eventually ten mules were produced and three days later we had all our food and equipment dumped at the snout of the Azucarani glacier. It had been decided earlier to dispense with a base camp for the sake of mobility and so only food and fuel were left buried in the moraine for later use.

At this stage Ewart and Garrard left to carry out their geological traverse and Bratt, Jenkinson, Smith and myself started to set up a camp at about 17,000 ft., on the side of the Azucarani glacier, on the side of the Matchu Suchi Coochi group. During the first two weeks we were also accompanied by Caraffa, one of the younger members of the Club Andino Boliviano, who came on several of the earlier climbs. The first climbs were made for the basic purpose of locating several of the peaks which had been previously intersected by the border survey; during the course of these climbs, the plane table and photo-theodolite were set up on the main summit of the Matchu Suchi Coochi at just over 18,600 ft. These first ascents were made within a week of being at sea level for Jenkinson and Smith, and three days longer for Bratt and myself, and it is interesting to note that the effects of altitude sickness were not severe. Carrying heavy loads in the first few days was very breathless work and on long stretches of sustained effort a feeling of nausea was experienced; however, by the time the climbing started there were no worse effects than a headache, easily fixed with an aspirin tablet, and a very fatigued feeling at the end of each day's climbing.

One of the most interesting of these first ascents was the Pelechuco Huaracha, which is just over 18,500 ft. We started at daybreak on the firm hard ice of a north-facing glacier, climbing up to a col from which the summit of the Pelechuco Huaracha had been sighted on a previous day. It was immediately after crossing this col that we struck the heart-breaking south-facing slopes for the first time. The sun shining from the north does not reach the southern slopes for long enough in the day for any melting of the snow to take place, consequently it lies in soft powder form, often waist deep, which reduces the speed of travel to several hundred yards per hour. It is incredibly



Crossing one of the stepped crevasses on the Azucarani Glacier.



THE EAST SORAL PEAK.

hard work and it was only during this type of progress that we ever felt cold feet. After about an hour of this very tedious going we reached several outcrops of rock on the ridge leading to the summit.

The ridge however was not to lead us directly up as, about 800 yds. short of the summit, it was cut by a 200-ft. deep fault in the rock. The rock was slate and very rotten, not even strong enough to find a reasonable belay, so we descended about 1,000 ft. and crossed at the lower end of the fault. From here the ascent was alternately on steep rock and ice, with a glorious climax coming in the last 100 ft. The summit itself was of a most unusual ice formation, being shaped like a very steep-sided ridge tent and with a 15-ft. tunnel running right through the middle, about 30 ft. under the top ridge. With some careful step cutting we worked our way past the tunnel and up on to the summit.

We spent nearly a fortnight in the Matchu Suchi Coochi area continuing the mapping and the geology and also building up our supply of food and fuel for the next big move to the East Soral area. During this time we made the first crossing of the Azucarani glacier to climb the pyramid-shaped Azucarani Peak on the eastern edge of the glacier. It was a short satisfying peak; the actual summit was a huge overhanging cornice, casting a deep shadow on the ice face which dropped vertically underneath for about a thousand feet before breaking with a classic bergschrund and then sweeping out across the glacier. Needless to say we did not venture the last 30 ft. on to the top of this cornice.

The East Soral Peak was one of our main climbing objectives and although only just on 18,000 ft. it proved to be the most interesting problem of all. A long approach to it from our main food dump entailed crossing the big Azucarani glacier, lower down than before, with its many crevasses and in particular the rather inexplicable stepped crevasses. These were 20 to 30-ft. ice cliffs which terraced the glacier about every 50 yds. and made the first crossings very slow until we established a route avoiding the worst of the chaos of ice. Over the glacier we climbed down a short ice cliff and set up our tents on a ledge of rock high above the valley. Opposite towered the South face of the East Soral Peak, with its ice falls dropping nearly vertically from the cone-shaped summit to the glacier below.

It was a far more forbidding prospect than we had imagined and any thought of an approach from this side was right out of the question. The following morning a reconnaissance party went out to see if there was a possible approach from the other side. After bivouacking for the night in a miserable snow-storm they returned to say that brief glimpses through the cloud had shown that the north side looked possible, although still very steep. Two more days were spent on the

rock ledge weathering out the storm before we set out on the strenuous march round to the back of the East Soral Peak, with eight days' food, paraffin fuel and equipment on our backs, totalling about 60 lb., which means fairly hard work at 17,000 ft.

For the first time now we struck the cloud which rises almost every midday from the steaming Amazon jungles to the north, which made it impossible to do any of the plane-table surveying in the afternoon and was also a menace to the climbing. Our first attempt on the summit along the east ridge was forestalled in the last 1,000 ft. of the ridge by huge cracks in the ice and several formidable overhanging cornices.

Next morning we tried the more direct route on the northern side which had originally been rejected because of the rotten nature of the rock on the face. We started out early in the bitingly cold air after a quick breakfast of porridge oats soaked in coffee. Initially on this day we intended to climb a steep ice gully leading to a narrow ridge 1,000 yds. short of the summit. However after a short time it became obvious that this route would be a little risky due to the thin covering of ice on the rock, which flaked away under our crampons in a most alarming fashion.

The only remaining alternative was to move out of the gully and climb the 300-ft. rock face itself, which was free of ice to the ridge. After two hours of sometimes delicate work we reached the top of the face under a slightly overhanging rock shelf. Moving carefully from here on to the ridge and then alternately on rock and ice until we reached the base of the final 300-ft. conical summit. We stopped to put on crampons again and, cutting occasional steps, moved up the last few feet to the summit. Around us on all sides was a gigantic three-dimensional map of mountains, glaciers and, far away to the north-east, the jungle dabbled with the midday cloud rising up to meet us.

After about a month in the field the party reunited at an old gold mine on the western edge of the mountains. It was at this time that our diet of dried meat and vegetables was given a welcome boost with the addition of vicuna steaks. This antelope-like animal (although one of the camel group), much prized for its beautiful soft fur, was run to earth by a small dog and then killed by our Indian porter. Venancio was the only porter we used; he also caught several viscatua. These are small animals like a rabbit, which literally infest the lower scree slopes and moraines where they make their burrows in the rock debris.

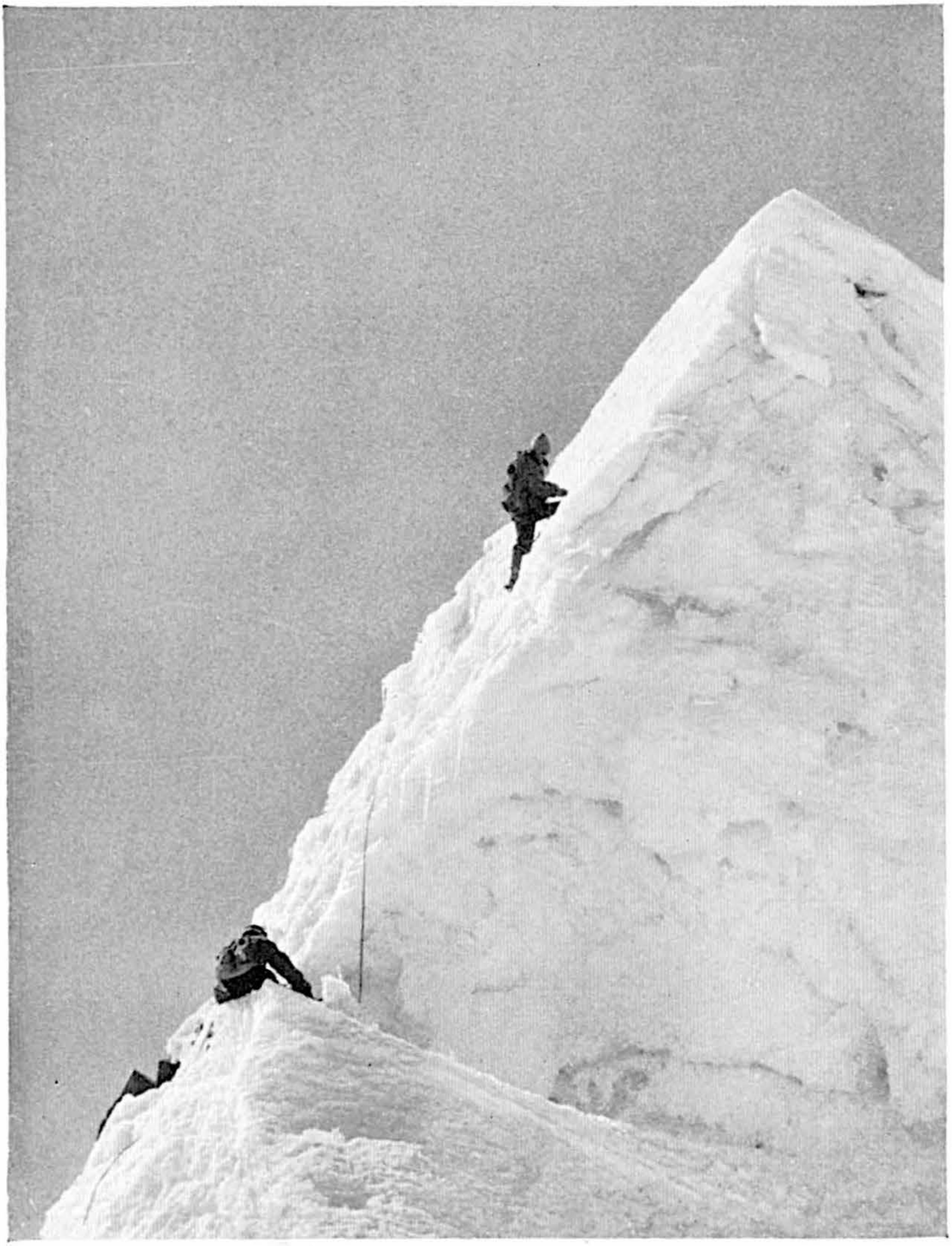
Towards the end of our stay we directed our energies towards the West Soral Peak. Several earlier attempts from the southern side had been frustrated by the soft snow, and so our new approach was from the north about four miles up one of the biggest glaciers in the area.

Bratt and Jenkinson made the first reconnaissance and established a camp in the middle of the glacier about two miles up from the snout. The following day Ewart, Garrard, Smith and myself followed their steps and found the tent and equipment they had dumped. Camping that night, we slept fairly comfortably, with duvet equipment, in one sleeping bag on a hip-length air mattress. Two of us used a hip-length strip of one-inch-thick foam plastic, folded double under the hips, for the full time in the mountains and found it extremely warm and comfortable. Even this is a luxury, as Bratt proved by not using anything but duvet equipment and one sleeping bag all the time. The lowest temperature we recorded was 34° F. below freezing at this camp, at which the slider in the thermometer jammed. Normally the temperature would go down to the region of 20° F. below freezing at night, but not at any time did we experience the polar cold which, according to H. Ertl, condemns the month of August for climbing in the Cordillera Real, nor did we find it necessary to use canvas overboots; the isolated cases of cold feet could always be relieved by loosening boot-laces for a while.

The climb of the West Soral Peak started early next morning so as to be on the glacier before the sun had melted the top crust and after several hours we made the ridge at the head of the glacier. From there on crampons had to be used on the hard ridge ice all the way to the summit. The last 200 ft. was very steep with the ice dropping away beneath our feet 3,000 ft. to the glacier below, but with a lot of step cutting we reached the top just before midday. The return down the glacier proved very tiring, as by now the top crust had melted and every few steps we would break through and sink down over our knees. So we floundered rather than walked back to the tents, where warm drinks were quickly made ready; one gets incredibly thirsty and dry when breathing heavily through the mouth in the blistering sun.

After one and a half months in the mountains our time was drawing to a close and we made our way back down to Lake Suches. Here we were met by Senor Farwig who, by an amazing feat of manœuvring, had driven a small bus up into the mountains as far as Suches. During our time in the Apolobamba we had reached the summits of fourteen previously unclimbed peaks about 18,500 ft. high, several of which still have no known name.

We returned to La Paz, bearded, incredibly filthy, to be given a wonderful reception by the Club Andino Boliviano and the British Embassy, to whom the expedition is greatly indebted for their help. The expedition was financed by the Imperial College Exploration Board, and the Mount Everest Foundation; the surveying instruments were lent by the Royal Geographical Society. The expedition gratefully acknowledges the support of these organisations.



THE LAST 200 FT. TO THE SUMMIT OF THE WEST SORAL PEAK.

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APPENDIX

Summary of the Expedition

The members were:

G. C. Bratt	Leader and Surveyor
W. H. Melbourne	Dep. Leader, Surveyor
J. W. Jenkinson	Surveyor
A. Ewart, A. Smith, P. Garrard	Geologists

Carlos Caraffa was a young Bolivian member of the Club Andino Boliviano who accompanied the expedition until August 28.

List of Peaks Climbed

July 21 — Camp 4 established.

July 22 — Bratt and Smith traversed four peaks on the Matchu Suchi Coochi ridge, north-west to south-east. Peak heights 5,640 m., 5,660 m., 5,670 m., 5,680 m.
Jenkinson and Melbourne climbed a peak north-east of M.S.C. Peak, height, 5,640 m. Descent by North rock ridge.

July 23 — Bratt and Smith attempted Soral Oeste via West Soral glacier but abandoned it 1 mile from ridge after taking $4\frac{1}{2}$ hours to travel 2 miles.
Jenkinson, Melbourne and Caraffa climbed Pelechuco Huaracha (5,650 m.).

July 24 — Bratt, Jenkinson, Melbourne, Smith ascended Azucarani (5,580 m.).

July 27 — Bratt, Jenkinson and Caraffa traversed two more peaks on the M.S.C. ridge. These were east of those climbed on July 22. Peak heights 5,610 m., 5,600 m.

July 28 — Jenkinson and Melbourne climbed M.S.C. to establish a survey station.

July 31 — Bratt and Jenkinson climbed extreme North-west peak of M.S.C. ridge via the North-east ridge. Peak height 5,600 m. Camp 5 established (16,900 ft.).

Aug. 3 — Melbourne and Smith attempted Soral Oeste by the edge of the West Soral glacier. Abandoned $\frac{3}{4}$ mile from ridge.

Aug. 5 — Camp 7 established.

Aug. 6 — Bratt, Jenkinson, Melbourne, Smith climbed peak south-east of Soral Este by East corner, thus avoiding gendarmes on North-east ridge. Bratt and Jenkinson traversed the peak to the south-east and descended by east side of North-east ridge. Peak heights 5,380 m., 5,280 m.

Aug. 7	Bratt, Jenkinson, Melbourne, Smith ascended Soral Este by North-east ridge. Bratt and Jenkinson traversed two more peaks to north-west and descended from the last by a gully to the east. Peak heights 5,470 m., 5,430 m., 5,390 m.
Aug. 12	Camp 10 established.
Aug. 15	Ewart, Garrard and Melbourne climbed Soral Oeste via glacier and West ridge. Peak height 5,640 m.
Aug. 16	Ewart, Garrard and Smith climbed the end snow dome of the Soral Oeste ridge. Peak height 5,560 m. Bratt and Jenkinson climbed Chucuyo Grande to establish a survey station.
Aug. 19–20	Ewart and Smith attempted to climb Katantica via the West Soral glacier and the ridges beyond. Attempt abandoned because of stolen food dump and poor visibility.