

Thence we went quickly down to the Col de Tracuit, walked down the alp to the zigzags, and so to Zinal in time for dinner.

I trust that nothing that I have written above of our first attempt will give any one the impression that this is either a dangerous or a difficult pass. Given settled weather and the snow in good condition it is a very enjoyable expedition.

If I were crossing the pass again I should descend directly opposite the couloir, without making any divergence, and thus to some extent the route would be shortened.

A FIRST EXPLORATION OF NUN KUN.

By ARTHUR NEVE, F.R.C.S.E.

(Read before the Alpine Club, February 3, 1903.)

FROM many of the Kashmir Himalayas, looking northwards, two mountain giants lifting their heads and shoulders well above all surrounding ranges are conspicuous—a well-known peak to the N.W., Nanga Parbat, and to the far N.E. the little known twin peaks of Nun Kun. These are the culminating points of the great middle range of the Himalayas. East of Nun Kun spread the lofty ranges of Zanskar; but few of the peaks exceed 21,000 ft., and W. of this the range tends to be lower, with a few peaks of 18,000 ft. or 19,000 ft. along the watershed between Baltistan and Kashmir for the odd 120 miles to Nanga Parbat, where the great bend to the S. takes place. On the map Nun Kun is easily found, being exactly at the junction of 34 N. with 76 E.

There is scarcely any mention of these great twin peaks in books of travel, for they lie far off beaten tracks. Even those sportsmen who are most familiar with the Wardwan or with Zanskar have but a hazy idea of Nun Kun, beyond a vivid remembrance of its vast outlying precipices seen from the mountains opposite. Two good climbers, Major Bruce and Major Lucas, once paid it a too brief visit, and were checked at no great height by the séracs, and Mrs. Bullock Workman skirted the mountain and photographed it from the Rangdum valley and Pukartse La, but was not tempted to a closer acquaintance. From the N., the W., or the E. stupendous precipices are visible, which give the mountain a truly forbidding appearance. But from the Khardong La, 150 miles N.E., through a telescope, many years ago, I obtained a view



Photo by A. Neve.

[Swan Electric Engraving Co.,

PANORAMA S.E. FROM PUKARTSE LA. NORTHERN PEAKS OF NUN KUN.

of the eastern arête of the peak which led to the trip which I now propose to describe.

It was a mere holiday trip, having to be completed within the month from Srinagar, the total distance both ways being not much under 400 miles, with five or six snow passes to be crossed. So at the most only two or three days could be available for any exploration of the mountain. Early in August the Rev. C. E. Barton and I left Srinagar, and crossing the Sonasar Pass (14,200 ft.) to the Wardwan, and the Morse La to Suru, we there dismissed our faint-hearted Kashmiri porters and took on a scratch set of sturdy Ladakis. On the Morse La (15,500 ft.) we encountered very bad weather, but after entering Ladak the weather was quite settled.

One of the grandest mountain views of the world is that from the Pukartse La, on the first march from Suru to Rangdum. The Suru River sweeps in a wide curve round three sides of the lofty spur which has to be crossed. Most of the valley is richly cultivated, and dotted over with little hamlets. The upper part of the pass is grassy, with a brave show of blue *scille* and gentians and geraniums and edelweiss. As you cross the top the mighty peaks of Nun Kun burst into view, towering up to 23,500 ft. above the sea. The northern peak, an abrupt knob, does not from this point of view show up much above its numerous satellites, mostly aigüilles ranging from 20,000 ft. to 21,000 ft. But the splendid S. peak stands out clearly by itself at the head of the great Ganri Glacier, of which the whole length is visible from the Suru River, below, where its ice cliffs break off into the foaming water; then come 6,000 ft. of continuous séracs, and then another 6,000 ft. of snow-field and spotless pyramid. Seen in profile from N. or S. it is dome-shaped, with the sides scooped out, and a comparatively gentle arête on the E. Near the summit on the N. face is one rock cliff, as there is also on the S.E. face. One arête descends to the N.W., very regular, almost smooth-looking, with a few rocks visible and in places a snow cornice overhanging the very steep northern face. Another similar arête is on the S.W., and both are at an angle of about 40°. On the W. the buttress peak (map D 41) falls away abruptly to the hitherto undescribed and unmarked Sentik La ('La' is 'Pass' in Tibetan), which we crossed on our return journey. These features are well seen in the photographs which we took.

The next day we camped near the ruins of the deserted village of Gulmatonga. A broad grassy plain, through which the river rippled swiftly in several channels over a shi gle

bed, gave promise of a possible ford, though such could only exist late in the summer or in autumn. In bathing costume, safeguarded by a rope, we successfully crossed, and next day got our porters and camp over. So far all went well. The Shafat valley was our aim, and we were delighted to find abundant fuel and a good camping-ground quite close to the foot of the great moraine. The main glacier extends two or three miles further down the valley than it is marked in the survey map. And I take leave to doubt that there was such a difference even in the fifties when the survey was made. Still it is not improbable that it has advanced of recent years, judging by the condition of the moraines; and an exceedingly long period must have elapsed since it was larger than at present, for the thicket of dwarf birch where our base camp was pitched grew on a considerable depth of peat soil. As I have shown elsewhere,* there is evidence of the advance of the glaciers of Nanga Parbat and the Mustagh range.

As is often the case, an old lateral moraine traced a comparatively horizontal line on the hill-side, and this we followed. Indeed no other line was possible. Below was a perfect chaos of crevasses, and above were precipices. A few miles on we crossed a large side-glacier, singularly free from crevasses, but covered with an intricate maze of débris and rocks of large size. Our coolies came along well, and when we left the glacier and struck an ancient grass-covered moraine progress became rapid. Before sunset an excellent camping-ground was reached at a height of nearly 15,000 ft., in a sheltered nook above the moraine at the foot of the spur, round which the main glacier, here over a mile wide, swept in great waves, bending from a course due E. to the N. At this corner there was an abrupt transformation. Behind were bare precipitous rocks and wild jagged peaks; in front everything was covered with snow, but the slopes were easy and the ridges rounded off. The doubts of the morning vanished as at sunset from Corner Camp we saw the vast glacier and snow fields to the W. ascending in gradual regular curves round the base of the steeper buttresses on the right towards the lovely spotless Dome Peak, which now came once more in view, opalescent in shadow against the glow of the setting sun.

Our only regret was that scantiness of time and provisions would prevent another night's stay in these lofty regions.

* *Picturesque Kashmir*. London: Sands, 1900.

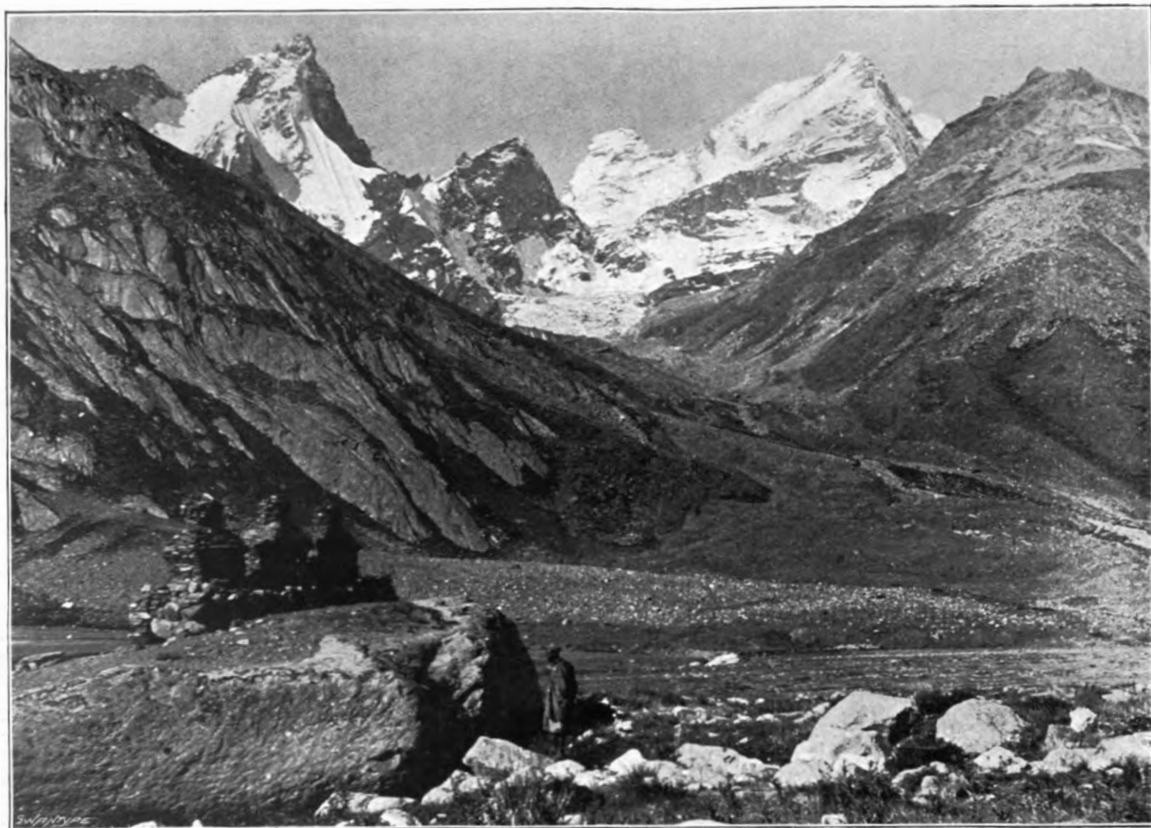


Photo by A. Neve.]

THE KNOB PEAK OF NUN KUN FROM GULMATONGA.

[Swan Electric Engraving Co.]

We had only planned to survey up the glacier to the snow field between the two peaks, and not to attempt the peaks themselves, to which the adjective inaccessible had hitherto appeared so appropriate.

Our next day's climb took us almost due W. up a lateral moraine for 1,000 ft., then a few minutes' step-cutting up the ice wall brought us out on the upper glacier. Its surface was in good condition, but scored by a thousand rivulets, which soon began to flow as the sun rose. Most of the crevasses were crusted over or very narrow, so our route was nearly direct. As the crust was not reliable we had to rope. Barton led, then followed two porters with cameras and food, while I brought up the rear. We soon overlooked the low snow ridge to the S., and saw the maze of Wardwan valleys spread out at our feet. Some of the higher peaks were partly concealed by the light fleecy clouds which had now formed, giving us grateful shade from the strong Ladak sun, but also hiding the Dome peak persistently from view. We breakfasted on some rocks at 17,500 ft.; the air did not feel cold, but one's moustache was fringed with icicles from the breath at the same time as the side towards the sun was warm. Just beyond this halting-place was another where a shelter tent might well have been pitched on some rock slabs. Here one of the porters was left, as we resolved to turn from the next snow plateau, in order to regain our base camp before dark. The slope now became steeper, and I put on crampons. We were faced by a great sloping ice wall, in most places defended by schrunds, but found an excellent line up, with a snow bridge at the schrund below the edge of the plateau. We had now reached a height of 18,000 ft.; above us, on the N., was a rocky spur from the precipitous north or Knob Peak; between this and the Dome Peak W. of us stretched a tumbled but not steep snow field.

South we overlooked the splendid peaks of the Wardwan, and behind, to the E. and N.E., were the Zanskar ranges, over which, in the far distance, we saw the snows of the Karakorum, beyond Ladak. This was our furthest point, for it was noon, and a long descent was before us. We were not arrested by any special difficulties, for the snow was in excellent condition, the gradient less than one in three, and the weather good. None of us suffered from the altitude beyond slight and transitory headaches. What would be the prospect of a party reaching the summit? It is not easy to say. To reach a peak of 23,500 ft. it would probably be necessary to camp at 20,000 ft., and I doubt whether any suitable place

could well be found on the exposed snowy arête of the great Dome Peak. But in good weather a hollow in the snow field would suffice for a camp. There was one practicable place, at 17,500 ft., to which coolies with wood and water might be brought in one day from our base camp in the Shafat Longma. Above this the average pace would not exceed 600 ft. an hour, so two days would be needed for the ascent and return to Corner Camp.

Our descent was fairly rapid, but caution was taught by breaking through into one or two small crevasses, and the rope was kept on. It was nearly 3 before we reached Corner Camp, had a hasty lunch, and then, resuming our way, descended the fatiguing moraines to our base camp, which we only reached at dusk. How home-like seemed that bleak little patch of grass and dwarf willows as we lay in front of a blazing bonfire and watched the moon rise behind the jagged peaks!

Two days later we arrived at Suru, and the friendly kotwal made prompt arrangements for a fresh set of porters. The march to Tongul was fairly level, if uninteresting. Tongul is a group of small hamlets at the acute bend of the Suru River. There is a remarkable contrast between the right bank, which is bare red granite, and the left with its fertile fields and grassy slopes and abundant wild flowers. Still more remarkable is the natural tunnel in which flows the main Suru River. Loaded with grit from the glaciers, it has cut its way down in the solid granite between narrow cliffs, so narrow that boulders from the hill above have blocked the upper part and the river has continued to cut its channel in the black unseen depths. It is thus arched in for two or three hundred yards. At Tongul we were fortunate in securing the services of an old man who had some thirty years ago been over the pass to the Wardwan, as guide to Captain Moore, who is apparently the only Englishman who has previously traversed the route. As we subsequently discovered his memory was somewhat at fault, but on the N. side of the pass he led well. Two paths diverge close to the village; one, which is used for laden yaks, goes S.W. up the side stream. Our route led S.E. by goat tracks up a steep hill-side only fit for very lightly laden porters. After nearly 4 hours' climbing we dropped over a rocky neck, marked by cairns as well as a gendarme point, into a little grassy basin close below a glacier. There were no signs of previous camps, and scarcely any fuel was obtainable, but there was good water. The peak D 41 was immediately S.E. at the head of the glacier. Next morning,



Photo by A. Neve.

[Swan Electric Engraving Co.]

NUN KUN MOUNTAIN FROM THE SENTIK PASS. PEAK ON THE RIGHT IS D41.

making an early start, we were soon on the ice. In the clear Ladak air the pass ahead had looked only an hour's climb, and we intended taking one of the side peaks *en route* while waiting for our porters. But the distances lengthened out. Far up the glacier we came on some yak footprints leading across the ridge on the right to Thannak, the camp in the Tongul nullah; evidently our path was more direct. As we ascended a wonderful view of the great Dome Peak of the Nun Kun opened out on the E., and it became clear that D 41 is merely the W. buttress of its greater neighbour, and that the splendid icefall across the glacier on our left was chiefly derived from the main peak. The upper snow field out of which the pyramid rises is, on this side, nearly 19,000 ft. above the sea. If porters could be got up the side of the séracs a fairly good camp might be expected on the snow field, near some rocks, and if so the western arête, which is at an angle of about 40 degrees, might well be attempted. This is certainly the nearest place to any basis of operations as regards supplies and transport. Another surprise awaited us when we reached the low rock ridge (16,500 ft.) which our guide called the Sentik La. To the S. and W. we looked, not, as marked in the survey map, down into the Wardwan, but on to a vast snowfield, stretching E. and W. In places it was two or three miles wide, and so level as to look more like a frozen lake than a glacier. Although it was scarcely 200 ft. below us the descent was difficult for our Suru men, who wear the 'pabu,' a sock of untanned leather without projecting heels or any nails. However with the aid of a rope used as a hand rail we got them safely down, and crossing the level snow to the S.E. in another $\frac{1}{2}$ hr. we reached a gap in the low ridge and overlooked the deep valleys of the Wardwan. This is called the Barmal La. The view is magnificent, especially of Nun Kun with a bold bluff at the head of the glacier, and then the fine sweep of snow and ice away to the W. to the Bhot Kol nullah. Our guide, who had so far done pretty well, now lost his bearings. Pointing away to the E. he said that Moore Sahib had gone in that direction, but whether to Zanskar or the Zoj Nai he knew not. Apparently he had never descended at all into the Wardwan valleys. We thought it best to make him lead for a while, but he soon brought us to some crevasses, and the first warning we received was that I broke into a narrow one and was saved by my elbows from disappearing entirely in the depths. We promptly roped, and, taking only the tiffin coolie, made our way down a fairly steep slope to the ice

below. It was quite easy for us, but not at all for the porters. The hand-rail expedient is not scientific mountaineering, and is decidedly risky with ignorant men who have no idea of the use of a rope, but we could not climb up and down five or six times escorting batches of three. So with over 100 ft. of rope paid out the long line of porters started off, Barton cutting steps and guiding, while, with crampons and ice axe firmly embedded, I held up the rear. Several men slipped, and with their loads sprawled out on the ice, clinging all they knew to the rope. Once or twice the strain was terrible, and I wonder the good Alpine rope did not give way. We halted the line while I got down to another standing-place, and as the slope eased off the porters let go and slid down on their own account to the more level ice, from which they soon made their way across the moraine to *terra firma*. A very rough descent of 2,000 ft. brought us into the head of the Barra Zoj Nai, where we pitched our camp during a sharp hail storm. We lived in hopes of meeting goatherds to replenish our empty larder, but the valley we were in was discovered to be uninhabited and pathless, so for two days we followed it down almost expecting to be stopped and turned back by the swift bridgeless rivers. The snow bridges marked in the map proved to be non-existent. All day long we were fording side streams of troublesome dimensions, and camped the first night in a wretched place with no good water and little fuel; but next day by midday we reached the rocks marked Sangam, and to our great relief found a bridge, a path, and a goatherd. He acted as our guide through the drizzle next day to the foot of the Mongil Pass. Owing to the breaking away of the snow bridges it was an unmade and somewhat dizzy track over a sheer cliff, but he informed us that he had lately taken a pony over it.

From here it took us only three days *via* Inshin and the Margan Pass to the valley of Kashmir.

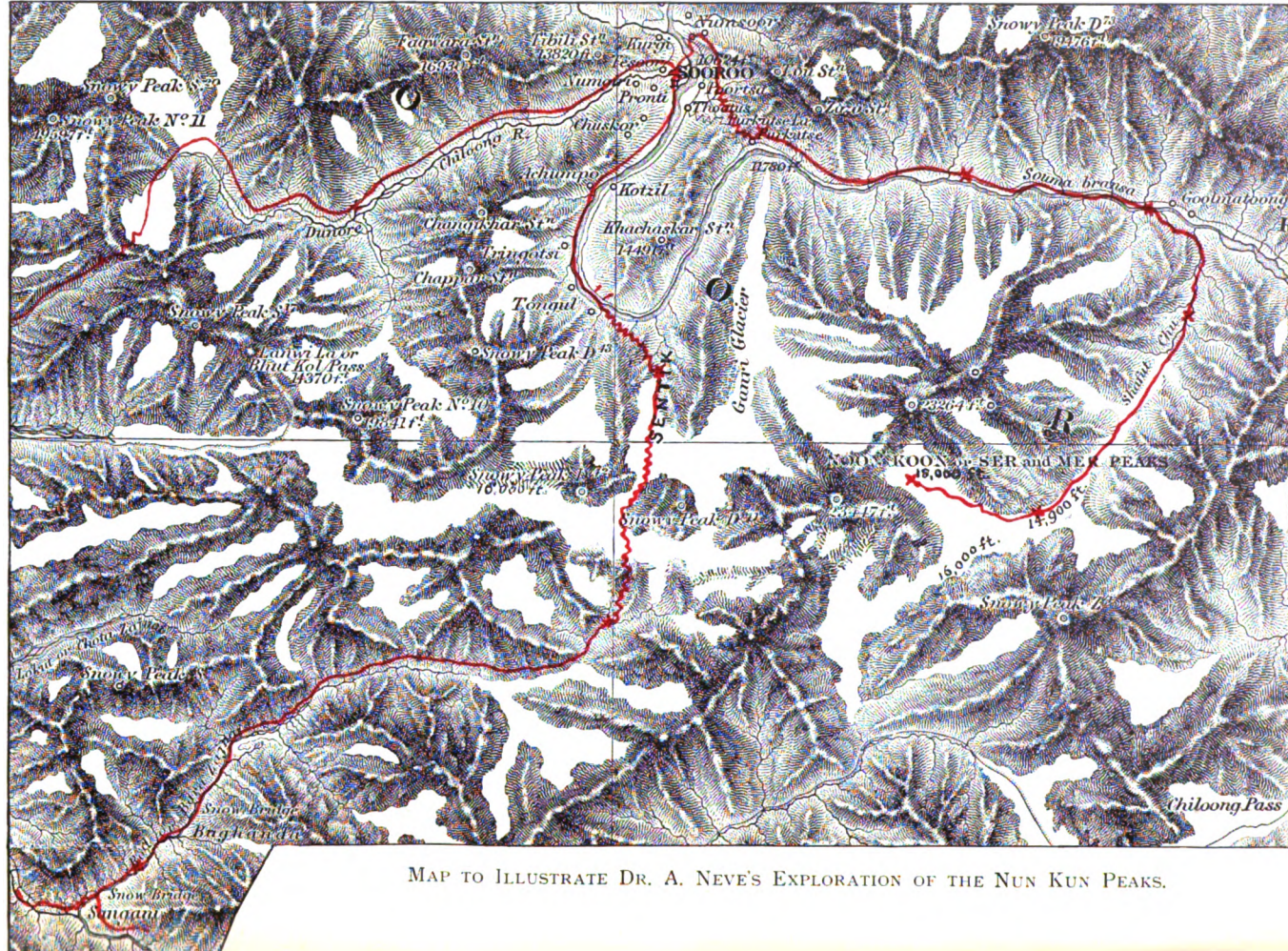
A word, in conclusion, about our transport and commissariat. We started with seventeen Kashmiri coolies, stalwart hillmen from Pailgam. Men from the same villages did excellently with me last year on the mountains near their own home; but when these got away from the country with which they were familiar they soon showed the white feather and left us on the first opportunity. But we replaced them without difficulty at Suru by Ladaki porters. These are hardier than the Kashmiris, though less able to carry heavy loads. From Suru 50 pounds was our maximum load. They supplied and carried their own rations, which the Kashmiris



Photo by A. Neve.]

[Swan Electric Engraving Co.

FROM THE BARMAL PASS, LOOKING DOWN THE GREAT WEST GLACIER OF NUN KUN.
(Discovered by Author's Party.)



MAP TO ILLUSTRATE DR. A. NEVE'S EXPLORATION OF THE NUN KUN PEAKS.

did not do. Though not exactly valorous they followed where led without grumbling, and they proved themselves smart on moraines. One cheerful Ladaki with a broad, smiling face, shod with an old pair of ammunition boots, acted as interpreter, for he had picked up a little Urdu when a navy at Simla. He and a faithful Kashmiri servant—Shabana—accompanied us up the mountain, and when roped were manageable and steady. We were able to obtain flour, sheep, fowls, and eggs at Suru at fair prices, and even four marches further up the valley we were supplied with milk by the monks of Rangdum. So the demand on tinned provisions was small. It is in matters of this kind that a knowledge of the country and the language makes such a difference. The whole cost of the tour for us two for one month was under 7*l*. If any climber wishes any information about our route beyond what is here given I shall be happy to supply it.

GEBEL MUSA—APES HILL.

By H. T. MUNRO.

OPPPOSITE Gibraltar, on the southern side of the Strait, rising abruptly, almost precipitously, from the sea, stands Gebel Musa—the Sierra Bulliones of the Spaniards, or Apes Hill, as we call it in English. From Gibraltar it is the most prominent and striking object in sight, and who that has passed through the Strait is not familiar with its symmetrical outline, its jagged profile, its furrowed sides and limestone cliffs and ridges, which run from the very shores to the summit? Although only 2,808 feet in height it looks quite 1,500 feet more, for, springing direct from the sea on its northern side, it towers to at least twice the height of anything in its neighbourhood, although flanked and backed by hilly and even mountainous country.

But, familiar as is its appearance to many, there are very few of the scores of thousands who annually pass it that have scaled its heights; few even of those who have spent all their days at Gibraltar, within a dozen miles of its base, have so much as set foot on its slopes. To a great extent this is in consequence of the evil reputation which very unjustly attaches to the tribes inhabiting the hilly coast district between Tangier and Ceuta. In a book published as lately as 1899* it is said, 'There is, however, one place

* *Cities and Sights of Spain*, by E. Main, p. 86.