Rapid Glacial Advance in the Hindu Kush.

By Dr. ARTHUR NEVE.

SOME years ago, in 'Picturesque Kashmir' and in some notes about Nun Kun in the 'Alpine Journal,' I suggested that in the Himalayas a period of glacial advance had set in. Last year two cataclysms took place, one of the upper Shayok, the other of the Gilgit River, both due to glaciers blocking high valleys.

I have just visited Nanga Parbat and Hunza, and find very full evidence of glacial increase.

In 1887 I saw and sketched the snout of the Tarshing glacier of Nanga Parbat, 74° 7′ E. long., 35° 2′ approximate N. lat. It had already advanced, judging by the careful description of Drew, since he saw it fifteen years earlier. Now I find that the whole mass of the glacier is some fifty feet higher than in 1887, and at the point where the snout crosses the valley, and is tunnelled by the Rupal River, it is now some 300 feet high, and it has turned down to the east for about 100 yards. Similarly the other Rupal glaciers are now far more prominent than formerly.

Coming to the Hunza-Nagyr group, the advance there signalled must be quite unique. This year there was a flood caused by the Shimshal valley being blocked by ice and the dam giving way after about a fortnight. The flood wave rose to about thirty feet above the ordinary level at the Tushot bridge, and continued at nearly that height for eight or ten hours, causing much damage to the road in places and many landslips.

The Minapin and Pisan glaciers have advanced for the last three years, but the most remarkable by far is the Mutzazil glacier, which now comes down to within a quarter of a mile of the main road on the west side of the valley close below Aliabad, Hunza. From three independent witnesses, two on the spot and the third the Wazir Humayun in darbar, I ascertained that three years ago that glacier was five or six miles up the valley (one man said three days' walk !). They all agreed that it had advanced two miles or so during the summer months of the present year, but not since the end of July. Their chief grazing ground is up that valley, and also the heads of two important irrigation canals, upon which depend the very existence of two villages, so there has been every reason for careful observation of the icy inroads. I was

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also told that fifty or sixty years ago the glaciers were almost as low as at present.

The Government of India has sent Mr. H. H. Haydyn to survey and report upon the Hindu Kush glaciers, and surveyors have also been at work this year in Kumaon, so before long detailed reliable information will be available. Last year there was a flood in the upper Shayok, due to the advance of the lower Kunduz glacier, which caused a similar catastrophe sixty years ago.

IN MEMORIAM.

GEORGE CHEETHAM CHURCHILL.

In George Cheetham Churchill, who died at Clifton on October 11 of last year, the Club lost a member who added to a love of the Alps a remarkable knowledge of their flora. Born at Nottingham on September 25, 1822, and educated as a solicitor, he followed that profession, first in his native town and afterwards at Manchester. An ardent naturalist from boyhood, he gradually gave his chief attention to botany, devoting his holidays to the enrichment of his herbarium, while an early interest in geology and agriculture had led, through William Gilbert, afterwards knighted in honour of his researches in agricultural chemistry, to a friendship with his artist brother Josiah. The two, with their wives (Churchill married in 1853), were gradually drawn to the Alps, and in 1856 obtained their first glimpses of the Dolomites, then all but unknown to English travellers. They were fascinated at once, though some time elapsed before a really close acquaintance became possible. In 1860 Churchill, unaccompanied, visited the Fassathal, and the four together carried out a systematic tour in the following summer. Starting from Atzwang in the Eisack valley they worked their way through the now well-known Dolomite mountains to the Gailthal in Carinthia, and thence through the Terglou district to the Sulzbacher Alp in Styria. In the summer of 1862 they again traversed the same region, mostly by different routes, in the opposite direction (Churchill and his wife starting for botanical reasons a month before the others), and completed their knowledge by a supplementary journey in 1863. The outcome was 'The Dolomite Mountains,' published in the following year. Gilbert's sketches illustrate the volume and he apparently wrote much of the text, but Churchill contributed the scientific remarks, the account of his journey in 1860, and the concluding chapter on the physical geography of the region, his wife's letters describing their wanderings in the early summer of 1862. Well written, with a certain sense of humour and a keen appreciation of natural beauty, the book attracted much attention, opened a new region to Alpine travellers, and is now numbered among their classics.

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