

lateral moraine.» Six parallel front moraines showed that the glacier has been receding since a long time back. Evidence was found that the ice must have been 150 to 200 feet thicker than now. At one place at the side of a lateral moraine the action was livelier in 1903 than in 1902. Six medial moraines were seen. The Haramosh Glacier is the largest branch of the Chogo Lungma.

»The Chogo Lungma Riffelhorn» mainly consists of granite with a wide band of black slaty rock superimposed. The medial moraines contain granite. Mount Haramosh is given as 24,270 feet high, and just north of it is a pass, 17,412 feet, leading to the Indus. The col of the Chogo Lungma Glacier is nearly 20,000 feet high. On its other side the mountain slopes down to Nagar. The Chogo Lungma Glacier is formed by several branches.

Colonel GODWIN-AUSTEN said after this paper:

The portion of the Indus valley, from the junction of the Dras river down to Skardo, is a wonderful gorge. You see there the action of former glaciation and beds of gravel and sand at an enormous height above the present level of the rivers; in fact, the glacial scenery you have been looking at this evening is only the remnant of the great glaciers that once filled those valleys.

About the end of the Arandu Glacier he added:

It is evident, from the photographs shown us this evening, and from Dr. Workman's description of it that it has very much changed in the forty years since I was there. I have brought up with me a water-colour sketch of the end of the glacier, which I made in the year 1861. It shows quite a different outline from what it is at present. Again, the north bank of the glacier all the way up shows it has receded very much from the side of the mountain from what it was in 1861. At that time it abutted against the mountain-sides the whole way down, cutting off the drainage of the side valleys and formed a series of small lakes, all of which have disappeared since that time.

On the same occasion Colonel WAHAB pointed out that detailed surveys of the higher Himalaya had never been regarded as within the scope of the Indian Survey, and that, while so much work of importance elsewhere remained undone, it is not to be expected that they should. Mr. DOUGLAS FRESHFIELD believed that the absence or rarity of great terminal moraines might best be accounted for by the action of floods in carrying away all but the heaviest blocks. To his paper Dr. WORKMAN adds a good map of the region from the Haramosh Glacier in the west to the Hispar and Biafo Glaciers in the east.

As an appendix to this lecture Mrs. WORKMAN a year later published *First Exploration of the Hoh Lumba and Sosbon glaciers*.¹ From the junction of the Braldoh and Basha Rivers they went up the narrow valley of Hoh, filled by old glacial débris. GODWIN-AUSTEN had seen the glacier from a distance but the Workman party was the first to ascend it. Its length is 12 miles, its greatest width one mile.

¹ *Geographical Journal*. February 1906. Vol. XXVII, p. 129 *et seq.*