

CHAPTER XLIX.

MR. AND MRS. WORKMAN.

Of great importance for the knowledge of this world of icy mountains are the several journeys undertaken by Dr. HUNTER WORKMAN and Mrs. BULLOCK WORKMAN. In 1898 and 1899 they visited parts of the High Kara-korum which had been explored by Sir MARTIN CONWAY, and they had made some new ascents. Their experiences were published in different Journals, amongst others in the *Annuaire du Club Alpin Français*, 27^e Année, 1900, Paris 1901, p. 320, under the title *Dans les neiges du Baltistan*, accompanied by a little map of the route and of the whole length of the Biafo Glacier. In 1902 and 1903 they explored the unknown upper portions of the Chogo Lungma, Hoh Lumba, Sos Bon and Alchori Glaciers.¹ Of the Dras and Indus valleys Dr. Workman says:

Not only near the present level of the rivers, but at all elevations, even to the mountain-tops several thousand feet above, the granite rocks are smoothed, rounded, eroded in every conceivable manner and dented with pot-holes, showing that at some distant period they were subjected to the action of moving water carrying stones.

From Skardo they went up the Shigar and Basha Rivers to Arundo near the snout of the Chogo Lungma Glacier. South of Arundo the Tippur Glacier »formerly reached considerably farther down the valley than now». The Chogo Lungma is 9,500 feet high at Arundo, 30 miles long, one mile broad at the lower end, two miles at the upper. The lowest part of the glacier, for 9 miles, was full of detritus, but no end-moraine was accumulated. A good-sized river flows out from under it and joins the river from the Kero Lungma Glacier to the north.

Of interest are the comparisons they made with GODWIN-AUSTEN'S observations in 1862. Since then the Chogo Lungma had dwindled greatly. Godwin-Austen found the ice encroaching on the Arundo terrace. »Now it nowhere touches it, and has receded to a point 1184 feet west of the village.... A quarter of a mile above the end the side of the snout has receded more than 200 feet from the high right

¹ *From Srinagar to the sources of the Chogo Lungma glacier. Geographical Journal. March 1905. Vol. XXV, p. 245 et seq.*