

formed. We must therefore look back some hundreds of thousands of years, to the time when these mountains were first upheaved. Whether that upheaval was sudden, as Sir Henry Howorth supposes, or gradual, as seems to be generally the case in the formation of mountains, there would in either case be clefts and hollows between the unevennesses which formed the various ranges of the mountain chain. Snow would fall in the upper parts, collect in masses in the hollows, and gradually form into glaciers. Then these glaciers, each with its burden of *débris* of rocks and stone from the mountain-sides, would come creeping down and gradually fill up the bottoms of the valleys parting the various ranges. In former times, on these Pamirs, glaciers descended much lower than they do now, and in all parts of them the moraines of old glaciers may be seen down in the valley bottoms to which no glaciers now descend. All these Pamirs were therefore in former times filled with vast glaciers, and as the ice of them melted away the stony detritus remained and formed the plains which are seen at the present day. If the rainfall were more abundant, this detritus would of course be washed out by the river flowing through the valley; but in these lofty regions, where the very lowest part of the valleys is over twelve thousand feet above sea-level, the rivers are frozen for the greater part of the year, they are unable to do the work that is required of them, and the valleys remain choked up with the old glacier-borne *débris* of bygone ages. Lower down, however, in the states of Wakhan, Shignans and Roshan, where the rivers have reached a level low enough to remain unfrozen for a time sufficiently long to carry out their duties properly, the valleys have been cleared out, the Pamir country has disappeared, and in place of the broad flat valley bottom, we see deep-cut gorges and narrow defiles.

I hope this description will have enabled my readers to understand that the Pamirs do not form a high plateau or tableland, as has often been supposed, but a series of valleys of