

snow far exceeding the present deposit, and this accumulation then yielded, under the influence of the summer's midday heats, those mighty torrents which *must* have existed to do the work which has been done.

Volcanic action has not been of wide extent. Indeed, one sees so little of it along the whole line traversed by us over the Alai, Kuen Lun, Karakoram, and Himalaya ranges, that I was the more forcibly struck by the two areas in which this action is unmistakable. One is near Lake Sarakul, and is about five miles square. Within that area one may see several true craters and numberless black, tortured masses rising about seventy-five feet above the surrounding coarse sand. On the edge of this area was another smaller one showing petrification of all the stems and roots of a hardy grass. There was nothing to indicate the continuation of any process of infiltration to account for the petrification, though possibly the area, which lay four miles from a sulphurous lake, may at times be flooded.

The second volcanic region was about forty miles south of the first. Here the surface of the narrow valley was covered, for a distance of several miles, with characteristic volcanic boulders, and outcroppings of lava in mass showed in the sides of the confining heights. In the great east-and-west valley, however, nothing is seen save what may be attributed to the ordinary effects of erosion. That which is particularly noted here, however, is the marked difference in material and appearance between the two chains limiting the valley. That on the north is a sort of double chain, presenting toward the valley a front of foot-hills, black or dark greyish in colour, and showing the rounded forms that have been subjected to erosive action for a period relatively long. Behind them, and sometimes concealed by them if the intervening distance were considerable, rose the main