

courses. Across the middle of the valley runs a belt of rudimentary dunes. We pitched Camp CIX beside some small detached clay hills. All day the country that we marched through was absolutely sterile, a perfect desert region. The tracks of the wild camel were few and far between, counting old as well as recent. The altitude here was 3104 m.

We observed hard rock in two or three places, but it was weathered to such a degree as to be unrecognisable. At Camp CVIII its dip was  $85^{\circ}$  towards the N.  $35^{\circ}$  W. and at the third secondary pass  $30^{\circ}$  N. The only rock which we found capable of resistance was an excessively hard greenstone, dipping  $64^{\circ}$  towards the S.  $20^{\circ}$  W.

The wind blew very violently all day from the north-east. Possibly the same wind relations obtain here as those that are characteristic of the Desert of Lop. During the next succeeding days too it blew from the north-east, often with annihilating violence. In the eastern Kuruk-tagh I noted north-east storms as occurring in the middle of February. Here in the Astin-tagh they seemed to begin as early as the New Year. The direction of the latitudinal valley is thus especially suitable for this wind, and we found it in a high degree wearying and enervating.

The gale continued until midnight and then abated; but early on the morning of the 26th December a violent tempest sprang up from the north, though it quickly veered round to the east. Quite unexpectedly it brought with it some snow, as fine as flour and yet so thin that it was invisible on the ground except under the leeward shelter of the watercourses and ravines. On the mountains however it fell more copiously, and here and there the slopes gleamed out white from under the masses of cloud by which the crests were all day hid.

There exists a great difference between these mountain crests and those which we subsequently became acquainted with on the high plateau of Tibet. Here in the Astin-tagh the mountains, like those in the Kuruk-tagh, are indeed severely weathered, but they always consist, from base to summit, of hard rock, bare and barren, most frequently piled up in eccentric rugged masses, denticulated, pinnacled crests and peaks. On the Tibetan plateau on the other hand most of the ranges are distinguished for their rounded outlines and soft consistency, and their striking poverty in hard rock, which in the best cases only crops out near the summits. Here too disintegration has been to a remarkable extent operative. This gives rise to the great morphological difference, that in the former region, the Astin-tagh and the Kuruk-tagh, the products of disintegration are almost always carried away by the wind and so disappear; no matter how powerful or how active the disintegration may be, none of the loosened material ever succeeds either in gathering amongst the mountains or in accumulating at their foot. The climate is so arid, and precipitation so extremely rare, that the fine powdery material falls a helpless prey to the winds. On the other hand the precipitation on the Tibetan plateau is so copious and so uniformly distributed, that it is able to keep the loosened material *in situ* and causes it to heap itself up in rounded masses on the flanks of the mountains that are its primitive source of origin, these projecting in great part like skeletons from the midst of their own ruins. The violent wind which also prevails there is unable to effect anything against the binding power of the moisture.