

westwards. Between them and the Lower Astin-tagh intervenes a broad latitudinal valley or kakir. Thus in this locality there are four parallel chains of the Astin-tagh, unless indeed the chain which borders our self-contained basin on the south is not rather a branch of the great southern range that is broken through, though this is I think scarcely likely.

From the spring of Lap-schi-tschen our main valley stretches straight towards the N. 48° E.; at any rate the bends it makes round the projecting parts of the mountains are quite small. In the same direction we saw the chain of foothills already alluded to. It appeared to bar the valley; but the latter really pierces it, while its watercourse continues towards the north, and finally disappears in the sandy desert. On this side of the range of foothills, that is to say in the broad Kakir valley, the transverse glen of the Lap-schi-tschen is said to unite with another glen coming from the spring of Ku-schui-cha, and it was in the end of this latter that we formed Camp CXII. How far the conjoint watercourse, formed by the confluence of these two glens, is able to penetrate towards the north my men did not know; but to judge by the relations that exist at Anambar, it cannot be very far. The men were however of opinion, that it was a good day's journey to the beginning of the drift-sand desert, and they knew for certain, that in the sandy desert there actually is a *partscha-tagh*, or small detached mountain, or butte. I doubt this statement however, and consider it more likely that there too, as farther east (see vol. II p. 471 ff), there is an expanse of steppe at the northern foot of the Astin-tagh, that this zone of steppe is bordered on the north by stretches of low hills, forming the westward continuations of the mountains which we crossed over in the Desert of Gobi, and that the actual drift-sand desert only begins on the north side of these small desert mountains. Full certainty upon these points can only be gained after the Astin-tagh and the desert to the north of it have been further explored. Littledale's map contains too few details to be capable of throwing any light upon the matter.

The spring of Toghrak-bulak is said to lie to the N. 70° W. from Lap-schi-tschen; from it it is reckoned a day's journey to the spring of Ku-schui-cha, the greater part of the road traversing the broad Kakir valley. The only water accessible is however that of the wells of Ku-schui-cha, and Lap-schi-tschen up in the mountains. I was told that there was formerly one spring in the Kakir valley, surrounded by kamisch and marked by a solitary poplar; but this subsequently dried up completely.

Close beside the little pass and in the sides of the glen running north the rock consisted of a hard green schist, close-grained and generally severely weathered; it dipped at first 26° towards the S. 25° E., then 82° towards the S. 60° W., and finally 89° towards the S. 40° E. Near to the spring we had red granite, though it did not extend very far, for the mountains which we saw at some distance to the north again exhibited a green tinge.

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