

intervals. They would occur most frequently in the spring and early summer, that being the rainy season, when the storms are frequent, and the rain-wetted surface is covered by the sand which is blown over upon it; if this were not so, the different strata would not be distinguishable from one another. The summer would probably show one, possibly two, thin laminae, of very moderate extent, and the winter one thick lamina, or two laminae less thick, likewise of very moderate extent; whereas the beginning of spring, the windy season *par excellence*, would be represented by a large extent without any harder lamina, though the latter part of the spring would yield several of these, equal in number to the frequency of the precipitation, and likewise reaching over a large extent. In saying that the winter would produce only one lamina of harder consistency, I have also in mind the experience which I had in the winter of 1899—1900, and which fully bears out this theoretical conclusion. At that time the snow, renewed as it was by frequent showers, remained on the ground for a long time, and occasioned a complete cessation of the general advance of the sand-dunes, even when the wind blew. But whenever the interval between two falls of snow is sufficiently long for the first fall to disappear entirely before the second comes, and a strong wind then sets in, we in that way get two strata of harder consistency.

But as in the meantime (fig. 275) a sheet of snow covers both the north-east and the south-west slopes of each individual dune, when it melts on the former face it ought to produce a harder lamina of the same kind as that on the south-west slope, where we have the ribbing I have spoken of. The harder surface on the north-east face ought also to prevent the wind from sweeping away the sand which lies there; and possibly it does do so to some extent, so that the movement of the dune is checked, be it ever so slightly. But, as I ascertained, there is a great difference in this respect between the windward and the leeward faces. For after a copious fall of snow, sufficient to enshroud the dunes entirely, and fine weather then followed with sunshine, I noticed how quickly the snow melted on the slopes which were directly exposed to the sun, making the sand moist, whereas on the opposite or north-east slope it continued to lie a long time. As we gazed south-west, the entire desert appeared to be white; but when we turned our eyes to the north-east, we could see no snow except a few thin strips. Hence the difference between the two slopes is this, that while the snow melts on the south-west face, on the north-east face it evaporates, without to any appreciable extent moistening the sand. And even though the latter does in any degree cement together, it is soon softened again by the conjoint action of deflation and corrasion.

The threshold between bajirs No. 37 and No. 38 was exceptionally low and modest; its individual dunes were not even connected together, but were separated by small patches of level ground, studded with dead tamarisks on their conical mounds.

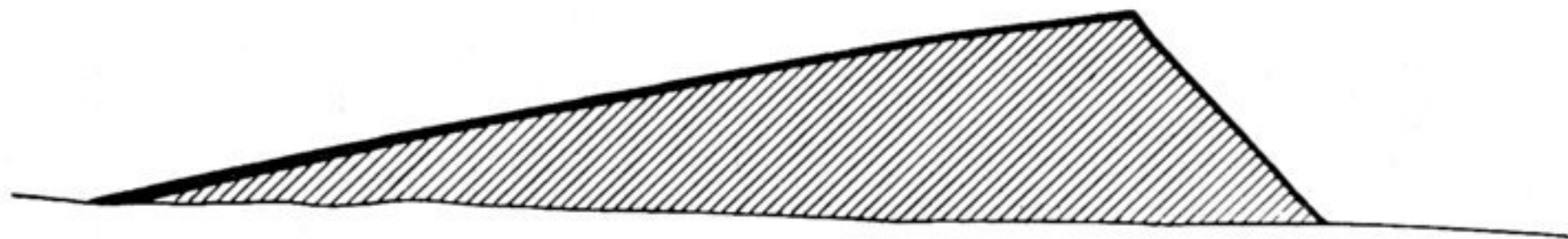


Fig. 275. THE BLACK IS A LAYER OF SNOW.

Hedin, *Journey in Central Asia*.