verse deflection of the atmospheric currents which ensue therefrom. At all events the layers of powdery sand are always met with on the western and southern slopes, while the compact sand faces east and north. In the depressions the sand is often hard for several paces, but otherwise soft. In some localities compact sand occurs also on the western and southern slopes, a few paces below the crest, and does so even when the slope is 30° to 35°; but higher up, close under the crest, the sand is nearly always powdery.»

»I then climbed to the top of the second ridge of one of the barkhan mountains, and found its absolute altitude to be 630 m.; that is to say, its relative altitude above the belt of sandy eminences at the northern foot of the mountains was 130 m., and above my camp 200 m. The adjacent heights approximated to the same absolute elevation, though in the south I observed some which appeared to be higher; others in the west, at a distance of 1 to 2 versts, appeared to be 30 to 50 m. higher. In all probability the very highest summits of the Kum-tagh reach an altitude of 200 m. above the northern foot of the mountains. On the south side of the first ridge of the barkhan mountains there is a string of broad depressions, crossed by barkhan ridges 2 to 3 sashen high, though seldom as much as 5 sashen, and extending west-north-west, i. e. parallel to the high ridges. The surface, both in these depressions and on the east and south slopes of the barkhan mountains, consists of a layer of dark grey sand, in the form of a small ridge 2 to 3 inches in height. The bulk of the mountains consists on the other hand of fine sand of a dark greyish yellow colour. On the very top of the mountains I found lying on the sand various small objects, blown thither by the wind, such as feathers and fragments of reed-stalks. In the depressions flotsam of that kind is much more abundant, embracing even fragments of mollusc-shells, probably *Cathaica* or *Limnæus;* and there too on the surface of the sand there is in some places a thin sprinkling of fine, rounded gravel. In other localities we perceived salt crystallisations, not only in the depressions, but pretty high up on the slopes where the dark grey sand lies. The sand amongst the salt crystallisations is not only coarser of grain, but is cemented together by salt. These probably represent survivals of old barkhan mountains, over which the sand has subsequently been spread and then been welded together by the salt solutions, which have filtered down through masses of younger sand after being saturated with heavy atmospheric downpours. In the depressions of the first barkhan ridge we frequently came upon small patches of clay, forming a thin crust; these probably owe their origin to the solution of small quantities of clay contained in the sand by atmospheric precipitation, or by the rain and snow bringing down with them the clay dust floating in the atmosphere. Amongst this sand there exist no traces whatever of vegetation . . . From the top of the barkhan mountains I was able to see in the south yet another chain of similar barkhan mountains.»*

This account may be supplemented by the following passage taken from G. E. Grum-Grschimajlo.** »The sandy masses of the Kum-tau present this remarkable feature, that they are at one and the same time perfectly barren and yet immovable. The natives of that region are unable to recall a single instance of these

* *Op. cit.*, vol. II. pp. 598 ff.
** *Opisanie Puteschestvija v Sapadnij Kitaj*, I. 283.