

we are able to prove by other means that vegetation did exist. According to Aminoff, the specimens found in the Desert of Tschertschen are as strongly calciferous as the specimens which De Geer examined from the Western Takla-makan.

Unfortunately these specimens of sand which I brought home with me are all too few to warrant perfectly trustworthy general conclusions being drawn from them as to the changes the drift-sand may undergo in the course of its journey towards the west. And the difficulty is further enhanced by the specimens having been taken at such widely scattered and irregular points all over the desert. Apart from this, specimens which should, properly speaking, be compared with one another ought to be taken from the corresponding sides of the dunes, and these again ought to exhibit the same disposition with regard to the direction of the wind; that is the specimens ought to be all taken from the west-south-west leeward face or all from the east-north-east windward face. The most conspicuous properties, and those which prove most clearly the occurrence of such a progressive metamorphosis in the sand, would naturally be the shape and size of the grains. The following general summary gathers up the results of these characteristics in the case of the specimens above described.

- (1) The sand-grains of the Etek-tarim region have not generally been rounded.
- (2) Those of the Tus-alghutsch are not round.
- (3) Most of the grains from Camp. No. III in the Desert of Tschertschen have sharp edges.
- (4) The grains from between bajir No. 32 and bajir No. 33 are not especially rounded.
- (5) Those from Tschapan-kaldi have been beautifully rounded.
- (6) Those from the western Takla-makan are also beautifully rounded.

Now it cannot be pure chance, that the alteration in shape which these six typical specimens exhibit agrees so well with the law which would *a priori* be expected to obtain throughout the desert. The nearer the grains lie to their primary source, the Kuruk-tagh, the sharper are their edges; and in proportion as they travel towards the west, they become increasingly more rounded in consequence of the filing, friction, and rubbing to which they are there subjected. Still, as I have already said, it is difficult to derive any clear conception of the extent to which the law obtains; for if it really does hold, we should expect to find in the Desert of Lop, across which the greater part of the drift-sand has been swept that now fills the western deserts, nothing but sharp, angular grains. But, as we shall see presently, when I come to describe the specimens taken from the Desert of Lop, perhaps most of the grains there are also rounded. For instance, while the grains in one specimen taken on 1st April 1900 to the north of the Kara-koschun are not rounded,

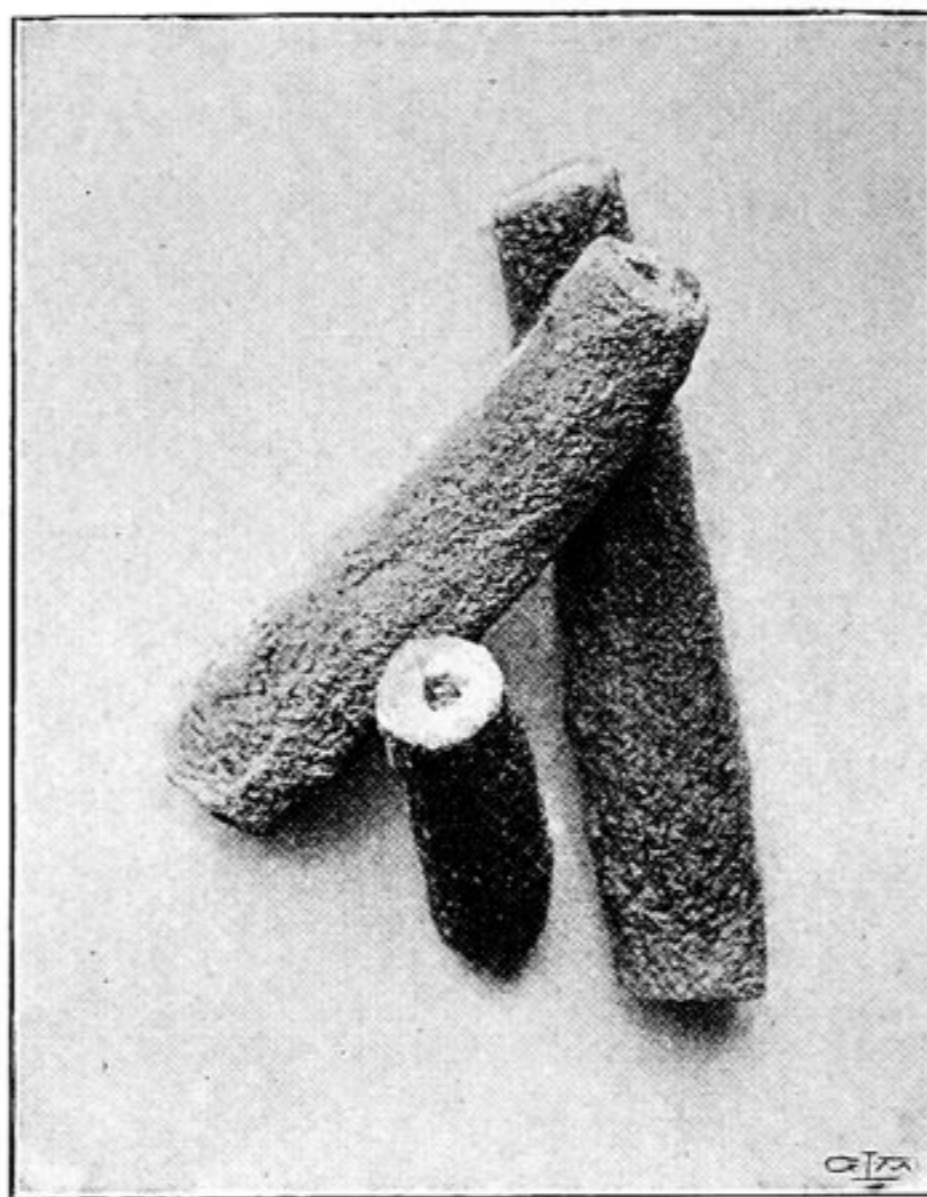


Fig 199.