

wards the north-east, but vertically sinks downwards. The net result is shown in profile in fig. 179, the firm substratum forming a level and gently sloping plain, the lower edge of which reaches down to the *pro tempore* shore-line. In consequence of this downward slope, the southern dunes may appear to the eye to be higher than those to the north, but in reality it is the fact of the substratum being distinctly higher than the lake which in the first instance makes the dunes appear higher. It is conceivable, that it is the shrinking of the lake which renders it possible for the dunes to advance rather than any actual movement of their own that carries them to the north-east. Every step, no matter how small, that the shore-line takes towards the north or north-east, it draws after it the leeward side of the nearest dunes. In the course of time the storm-driven drift-sand has without doubt formed relatively shallow sub-aqueous banks, upon which the forerunners of the advancing dunes establish themselves.

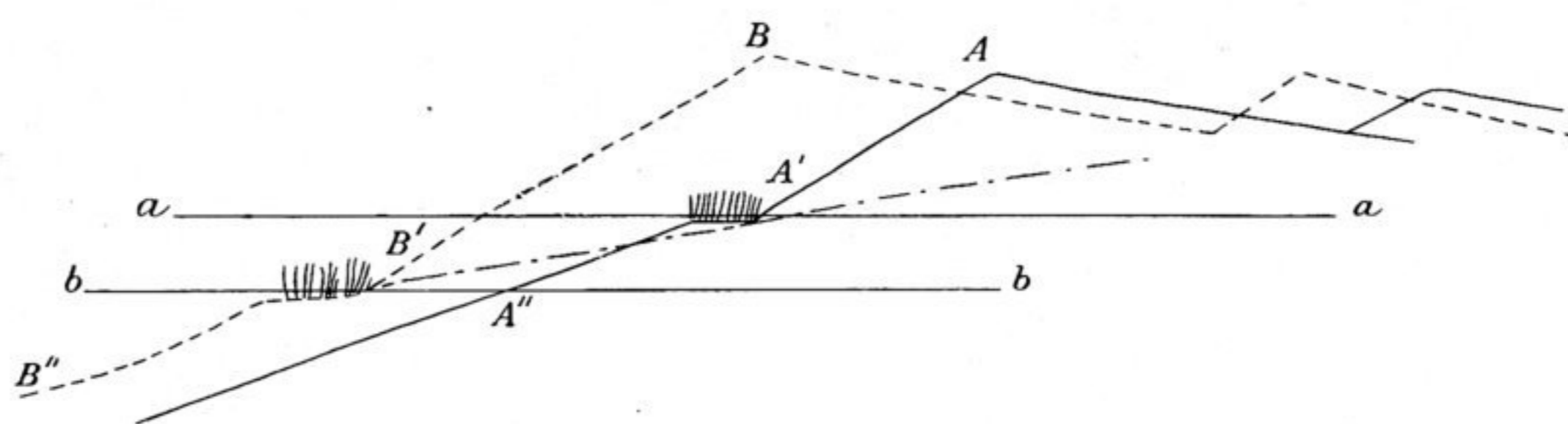


Fig. 178.

In consequence of the negative displacement of the shore-line narrow strips of the lake-bottom are of course successively exposed, and from these strips a certain amount of sand is blown up and added to the dunes. Nevertheless the amount of sand derived from this source is infinitesimally small as compared with that which is derived from the disintegrated products of the circumjacent mountain-ranges. And it is to this conclusion that the whole of the above reasoning points, namely that the dunes of the Ak-bel-kum are not derived from lacustrine sediment, but are continental dunes, maintained by the continuous disintegration of the mountain-range. As such they will not only retain their existing positions, but will also overwhelm the former lake-basin on the north and north-east of the existing Ak-bel-kum after the lake has totally disappeared. When that occurs, the sand-filled basin will belong to the same category as the Kum-tagh does now.

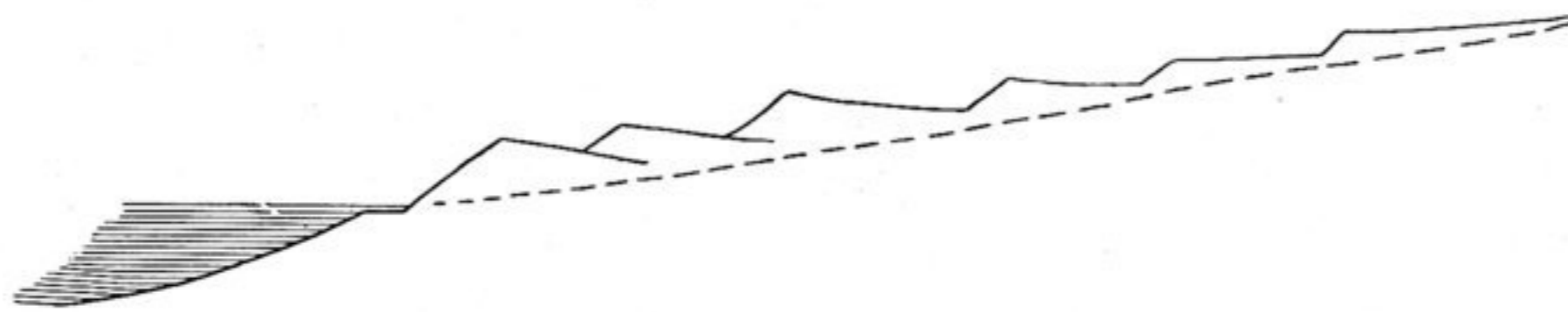


Fig. 179

I have purposely discussed this little desert by itself because of the special position it occupies in consequence of its proximity to the lake, and because it does not directly touch the questions which I am now about to consider. But before I proceed to discuss them, I will add yet two other passages taken from Loczy's