by the erosive force of wind and driven 'sand', i. e. disintegrated loess. At all such points small terraces of fairly hard loess soil, rising to heights of six to thirteen feet above the eroded depressions close by, served as witnesses approximately indicating the ancient level of the ground. Thin layers of pottery fragments on their surface helped to explain why these terraces had withstood the unceasing attack of wind-erosion. The progress of the erosion could be observed on the sides of the terraces, which everywhere showed the effects of under-cutting as plainly as a river-bank which is being washed out by the setting current. What remains of modest dwellings I could still trace on such ground, as at *Kushuk-aste* about a mile to the west of Khādalik, or at *Kök-jigda*, another small 'Tati' about two miles south, consisted of low rush walls or fences which by their very weakness offered less scope to the grinding force of driven sand, and on the contrary were apt to catch and retain it as a cover.

Formation of tamarisk-cones.

The same phenomenon was illustrated by the structure of the closely packed sand-cones which covered most of the ground and encircled all open areas. Their height usually varied from about twelve to fifteen feet above the original ground level; but in places I observed cones rising twenty-five feet and more. Tangled masses of tamarisk scrub, usually dead at the foot but still flourishing on the top, invariably covered these hillocks. There could be no doubt that the latter owed their origin to the tamarisk bushes, which had first overrun the fields when cultivation slackened and ceased, and had then served to catch and collect the drift sand passing over the ground with the winds of the spring and summer. The low tamarisk thickets I saw spreading over the fields of 'Old Domoko' and Ponak, abandoned during the nineteenth century,[4] fully illustrate this initial stage of the process. The struggle for light and air, which the tamarisk bushes, once rooted on level ground, have to carry on against the sand steadily accumulating around them, forces their head branches to rise ever higher and higher. The sand, the smothering embrace of which they try to escape, naturally follows this rise, and the cones formed by it thus grow correspondingly in size and height.

Rate of growth of tamarisk-cones.

The structural process here briefly indicated must have been essentially the same wherever the great desert of the Tārīm Basin is edged by this characteristic zone of tamarisk-cones. But the rate of growth may have varied considerably according to local conditions connected with climate, sub-soil water, prevailing winds, and the like. Hence it was of considerable interest that an archaeological observation enabled me to determine with quasi-chronological exactness the time which this building-up process here took. At the edge of a small area of open eroded ground about half-way between Khādalik and Balawaste my guides showed me a few fragments of small relievos in hard white stucco emerging from the slope of eroded loess soil immediately at the foot of a big tamarisk-covered sand-cone. Such slight digging as the masses of sliding sand permitted us to make into the side of the hillock, brought to light more stucco fragments which once formed part of the relievo decoration of some big halo in a Buddhist shrine. That this dated from the same period as the temples of Khādalik was made certain by the style and technique of these fragments of which specimens will be found described in the list below.

Relievos at foot of tamarisk-cone.

The abraded condition of the relievo fragments representing small standing Buddhas and floral borders left no doubt that they had been exposed for a long time to corrosion by driven sand, until the expansion of a neighbouring sand-cone came to provide protection for these humble remnants of a shrine otherwise completely destroyed. The level on which they were found was about three feet higher than the top of the nearest 'witnesses', while the witnesses themselves rose six to ten feet above the bottom of the eroded depressions adjoining them. This difference of about three feet agrees with that noted at Balawaste and clearly represents the progress made by erosion since the relievo

[4] Cf. *Ancient Khotan*, i. pp. 458 sq.; *Desert Cathay*, i. p. 238.