cuttings made in the dome[2]. The undoubted rise in the level of the ground adjoining the mound also adds to the difficulty.

Rise in level of surrounding ground.

A careful examination of the ground shows that the lowest courses of masonry remains traceable on the western and southern faces of the mound are situated fully fifteen feet below the level of the flat ground, partly under cultivation, which adjoins the foot of the mound on the other sides, and which has been marked with zero in the plan. The difference in the levels of the lowest remains exposed on the several sides is clearly due to erosion, which on the western and southern faces has created small ravines approximately from 25 to 42 feet broad, and lined by steep banks on the sides opposite to the mound. That this erosion itself mainly proceeds from the action of water, was manifest on examining the formation of these small ravines. The greatest portion of the mound drains towards the west and south, and the rainwater collected from its slopes would have quite sufficient force to wash out the loose soil at the foot of the less soluble brickwork or to prevent its accretion. It is possible that the action of wind has to some extent aided the erosion; but as in the cultivated areas of the Tārīm Basin the force and prevalence of the winds are neither so great nor their effect on the configuration of the ground so striking as in the great desert region which those oases fringe, this co-operation of wind erosion is not easily gauged at present.

It is possible to speak with far greater assurance on the subject of the accumulation of soil which has raised the surface of the flat ground adjoining the northern and eastern faces of the Stūpa by at least fifteen feet above the original foot of the latter. I found here the first indication of that remarkable rise in the general ground-level of the cultivated areas of Eastern Turkestān of which my subsequent observations in the region of Khotan furnished such unmistakable evidence. The close examination I made of the Yōtkan site, where the 'culture-strata' of the ancient capital of Khotan lie buried under a layer of alluvium to a depth of nine to twenty feet, together with Professor Lóczy's microscopical analysis of specimens of this soil, clearly demonstrates that this rise of level in ground kept under cultivation for many centuries is largely the result of silt deposit from the water used for irrigation. The evidence in support of this view will be found detailed in the chapter where I have discussed that important and instructive site[3]. There, too, the question of the extent to which the accretion of soil on irrigated areas is aided by sub-aerial deposit, i.e. the retention of the dust so plentifully present in the atmosphere of Eastern Turkestān for the greater part of the year, has been duly considered.

Irrigation of adjoining ground.

The analogy of the local conditions, as observed at Kurghān-Tim and the ancient sites within the Khotan oasis, in regard to the accumulation of soil above the original ground-level, is complete in all essential points. The whole of the fertile alluvial land of the left bank of the Tümen river is kept under intensive cultivation. The water needed for this is plentifully supplied by canals which take off from the river-bed some distance above the town. This water, by an elaborate network of channels, is conducted at frequent intervals during the spring and summer to each of the carefully terraced fields which extend along the high river bank and for a considerable distance northward. Owing to the masses of fine detritus which the river washes down in its rapid course through the disintegrated outer hill ranges, its colour, whenever I saw it, was a rich reddish brown or chocolate. Most of this silt remains suspended in the water during its passage along the 'Üstangs' and 'Ariks' of the irrigation system, and is not finally deposited until the water holding it has soaked into the soil of the field to which

[2] Such fallen masses of masonry may, perhaps, be recognized in the foreground of the photograph showing the northern face of the mound (Fig. 14).

[3] See below chap. VIII. sec. ii.