

Observation of the powerful rôle which wind-erosion has thus played in this region, as a geological factor sculpturing the surface on a big scale, makes it easier for us to appreciate its effects upon the work of man. Again and again, in the course of my surveys on the Limes, I had occasion to note how relatively well preserved the wall, built fully 2,000 years ago, still rose along those sections which lay parallel to the prevailing direction of the winds. This was specially noticeable where the wall passed through depressions, as near T. III and T. XIII, which afforded some shelter from the gales sweeping across the 'Sai'. On the other hand, where the line had been drawn across on exposed ground and thus presented an obstacle, or rather an object of attack, to the driven sand and fine gravel, wind-erosion had badly breached or practically effaced the rampart, as e. g. to the north of T. VII. Yet it is well at the same time to bear in mind the relatively slow progress of wind-erosion on the soil itself, as gauged e. g. at the foot of the towers, where it rarely was more than two to three feet. The archaeological evidence here available is of special value to the geographer, as it offers a definite chronological scale for estimating the vast lengths of time necessary for the changes in the configuration of the surface which have already been discussed.

Effect of  
wind-  
erosion  
upon Limes  
wall.

My explorations along the Limes were, both in 1907 and in 1914, carried on during the months of March, April, and May. Though this added to the physical trial, it also helped me to note that in the spring, when the force of the winds probably approaches the annual maximum, the most violent gales came mainly from the north-east and east. With this my observation fully agrees that the trees, whether in the riverine belt of the terminal Su-lo Ho or within the oases of Tun-huang and An-hsi, invariably have a westward bend. The force of the winds sweeping down the lower Su-lo Ho basin, and also towards it across the Pei-shan desert from the side of southern Mongolia, is dreaded by all travellers proceeding to and from Hāmi. The Chinese appropriately couple the name of An-hsi with them. That they also make their effect fully felt in the Lop desert and in the easternmost portion of the Tārīm Basin may be considered certain in view of the observations I have already had occasion to record.

Prevailing  
winds from  
E. and N.E.

A very likely explanation of the main direction of these desert winds is supplied by 'aspiration', the atmospheric movement resulting from the higher average temperatures which the low-lying desert plains around Lop-nōr, and further away to the east and west of it, must attain in the spring while cold still prevails on the great barren uplands of stone and gravel north-eastwards. An exactly corresponding atmospheric phenomenon is observed in the regular winds blowing down from the mountainous north-east of Persia into the low Seistān basin, the well-known *bād-i sad-ū-bīst rōz*, or 'wind of hundred and twenty days', which prevails there during the greater part of spring and summer. The terminal basin of the Helmand presents, in most physical respects, so strikingly close a parallel to the basins of Lop and the Su-lo Ho that, even in the absence of exact data for the latter, such as only meteorological stations established hereafter in these trying regions could supply, I feel justified in putting forward that conjectural explanation.

'Aspiration'  
explaining  
prevailing  
winds.

The tower T. VI. a was reached from the last one described after crossing two wide inlets of the basin and a much-broken clay ridge between them. It occupied, as seen in Fig. 169, a very conspicuous position at the north-eastern edge of a narrow ridge falling off with steep cliffs. Much of the masonry on the north face had come away, and the heavy posts and beams of Toghrak wood inside it were exposed. Thus the tower was in appearance strikingly different from those at other stations. Originally about eighteen feet square at the base, it still rose to a height of close on fifteen feet, though its top, too, was much broken. It was built of sun-dried bricks, measuring fifteen by seven and a half inches and five inches thick, with layers of reeds after every three courses. Unhewn Toghrak trunks, still over thirteen feet in height, were embedded in the masonry as vertical supports, and to them others, even longer, were fixed

Watch-  
tower  
T. VI. a.