

their maximum development there is again a decrease in thickness which can be traced only through a few stages because the clays soon give place to gravels. The thickness of the layers is probably proportional to the length of time consumed in their accumulation. Therefore where the red layers are thin, epochs of desiccation must have been short, and epochs of lake expansion must have prevailed for relatively long periods. Where the red layers are thick, on the contrary, the epochs of desiccation must have been longer and more important, and those of lake expansion must have been short. The meaning of the clays, the overlying gravels, and the terraces seems to be that the Quaternary era in Persia consisted of a long series of *increasingly* strong climatic oscillations, followed by a nearly equal series of *decreasingly* strong oscillations. The latter appear to correspond to the series of oscillations which we know as the glacial period in more northern countries. Furthermore, there is evidence, based on physiographic, archeological, and historical observations, which indicates that the last of the climatic oscillations may have been in progress during historical times."

Über das gegenwärtige Klima meldet Huntington, daß die herrschenden Winde von N oder NW kommen, also von dem großen Kontinentalgebiet. Dieses hat ein kaltes Klima, und wenn der Niederschlag vorher ausgefällt ist, kann er nicht in dem heißen Persien eintreffen.

Über die sämtlichen persischen Becken gibt Huntington auch eine summarische Übersicht¹: „The facts set forth above, so far as they warrant any conclusion, suggest that in Eastern Persia the lower strata of the basins are generally greenish shales, which are now exposed along the edges of the basins where they have been extensively warped and compressed. Above them occur reddish silts containing more or less sand and gypsum and warped like the underlying shales, although to a less extent. In certain places toward the top of the series the red strata alternate with green clays. Above all lie the deposits of silt and gravel which are to-day accumulating. Although these different strata show varying degrees of warping along the edges of the basins, it is noticeable that toward the centers they approach the horizontal position. It is probable that in the centers of many of the basins an uninterrupted series of strata has been deposited from the time of the post-cretaceous uplift of the country until now. At first a shallow sea or large lakes probably occupied the central portions of Iran and allowed the deposition of the green shales. Later, as the great basin was broken into smaller basins, the larger bodies of water gave place to smaller ones, and these, under the influence of a dry climate, gave place to playas or shallow salt lakes where the prevailing deposits were reddish silts. Still the process of deepening the basins and decreasing their area went on, with the result that the green shales were

¹ HUNTINGTON, a. a. O., S. 245.