carried water to the town of Hauzdar. Even now extreme floods of the Helmund rise high enough to trickle into it on rare occasions. All along the Shila and at the head of the God-i-Zirrah are abundant ruins, all of which seem to date from Mohammedan times. It is evident that the lakes of Sistan and Zirrah and the rivers of Helmund and Shila have undergone a series of changes intimately associated with the human history of the region. These changes seem to be explicable only on the theory that the climate of Eastern Persia has been growing gradually drier during historical times. Before considering this question further we will examine certain phenomena which seem to indicate extensive climatic changes in earlier times. Having examined these, we shall be in a position to judge whether there is an adequate basis for the working hypothesis that the last pulsations of the series of climatic changes known as the glacial period are still in progress.

THE QUATERNARY ERA IN SISTAN.

THE DEPOSITS OF THE LAKE OF SISTAN.

In the preceding pages the conclusion has been reached that while the more northern countries of the world were passing through a glacial period, Persia was passing through a fluvial period due to the same causes and characterized by a similar series of climatic oscillations. The record of the dry and wet or warm and cold epochs composing this fluvial period seems to be preserved in a series of terraces, lacustrine and fluviatile, which occur in all parts of the country. These terraces are unsatisfactory, because the record which they preserve is incomplete, and a single, strong, terrace-making impulse may destroy the record of all that have gone before. The best possible record would be one preserved in the bottom of a basin which contained a lake during pluvial epochs, but was dry or contained merely a playa during interpluvial epochs. Such basins abound in Persia, but the bottoms of most of them are not exposed for study. In Sistan, however, several volcanoes broke out during the latter part of the fluvial period, and parts of the lake bottom were warped upward to a maximum height of over 600 feet above the present lake level. These have since been undercut by the waves and form the bluffs which surround the lake. A proper interpretation of the sections exposed will disclose the history of the lake far back toward the beginning of the Quaternary era.

From a scenic point of view the most notable feature in Sistan is the lava-capped mesa of Kuh-i-Khoja (Mountain of the Teacher). From whatever direction one approaches Sistan he sees a flat-topped hill, low and black, and nearly a mile in diameter. From the encircling reeds and water, steep slopes of dark talus mantling red clay rise 200 feet to the base of cliffs of basaltic lava, over 200 feet high. The uneven upper surface of the lava is covered with many-chambered tombs, or is roughened with great pits, dug as reservoirs perhaps, or for some other unknown purpose. On the edges the lava is being undermined by the retreat of soft underlying clays, and huge blocks are continually falling off, thus preserving the steepness of the cliffs and hiding the strata below. Enough of the latter are seen to show that they are for the most part red, with some bands of green, and belong to the lacustrine series so well exposed elsewhere. At its contact with the lava the clay