

glomerates, very slightly consolidated, and to all appearance of comparatively recent origin. The shales are rather brightly colored, greenish-white, red, etc. . . . The beds near the river are contorted and sometimes vertical; farther away they become more horizontal and appear to pass up into the alluvial beds of the great plain to the northward."

Elsewhere (*b*, pp. 493-494) Blanford speaks of red shales, or ferruginous shales and sandy beds, sometimes banded red and white, and often much decomposed, which lie in tilted positions against the limestone of the mountains on the edge of the basins west of Kirman and seem to have been brought to their present positions by faulting and folding. From the description it seems as though these beds must closely resemble those of Bajistan.

SUMMARY.

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 more highly warped and the red deposits were also uplifted along the borders of the basin and were exposed to erosion. Meanwhile the superficial deposits which now cover the plains were laid down and the country assumed its present form. It is not to be supposed that every basin has gone through exactly the same process, or that a single process has everywhere taken place at the same time. Accidents have intervened. At Zorabad the damming of the Heri Rud formed a lake and greatly altered the course of events. At Sistan, and probably elsewhere, a series of lakes appears to have occupied the basin during the glacial period. Nevertheless the general course of events was a gradual progress from larger basins to smaller basins, and from subaqueous to subaerial deposition.