

ferous and Makrán beds is not clear, but it is evident that in later tertiary times the shores of the Indian Ocean were further north than they are at present, and it is probable that the north-east coast of the Persian Gulf was also under water. Up to a very late period also the Gulf extended far into Mesopotamia. It is probable that this extension of the Persian Gulf was contemporaneous with existence of a great inland lake covering the Aralo-Caspian plain north of Persia, and extending west to the Danube, and it is only reasonable to conclude that Persia and the neighbouring countries enjoyed a much damper climate than at present.

„It is probable that at this time the plains of Persia, now flat deserts, were covered by lakes, some and perhaps all of which were salt or brackish. It is the deposits in these lakes which have formed the deep accumulations of sand and clay, the surfaces of which now form the desert plains occupying so large a portion of the country. Previously, however, to the formation of these lakes, the plateau of Persia must have been cut into river valleys, for the rocks which once filled the depressions of the present desert basins must have been cut out by the action of rain and running water and the detritus carried to the sea. It may perhaps have been the same elevatory movements, which converted the seas of the Makrán period into dry land and clammed up the outlets of the river valleys, and it is far from improbable that already a diminution of the rainfall, to which the valleys owed their origin, had taken place, and that the water flowing down the river channels no longer sufficed to cut down the obstacles presented by the elevation of the lower portion of the stream beds. The outburst of volcanoes in Northern Balúchchistan was perhaps synchronous with the elevation just mentioned.

„As the rainfall farther diminished, the lakes gradually dried up and the streams which had formerly carried down the detritus of the hills now only transported such debris as rain and frost detached from the surface to the base of the incline, where it formed a long slope of gravel and sand such as we now see on the edges of the deserts. That a paucity of rainfall is the cause of these enormous slopes of gravel appears probable from the fact similar accumulations appear throughout the world to be characteristic of comparatively dry climates. But the regions in which such accumulations are found must once have engaged a larger rainfall, or the valleys and basins now being filled up could never have been formed.“

Diese Beschreibung gibt ein summarisches Bild der geologischen Geschichte Persiens seit der Kreidezeit, und man kann sagen, daß sie die Konturen der fortschreitenden Forschung gibt, wenn auch mehrere Punkte sehr anfechtbar sind, zum Beispiel die Entstehung der großen Wüstenflächen. Blanford steht hier auf der alten Auffassung von der Entstehung der Wüsten; er meint, ihre Flächen seien vorher große Seen gewesen, bei Hebungen der persischen Plateaus seien die früher nach dem Meere offenen Flußtäler in geschlossene Becken umgewandelt worden. Später habe sich der