

absence or scarcity of rivers. The central parts of the desert flats consist usually of pale-coloured loam, often covered with blown sand. "These fine deposits may be of lacustrine origin, for it is probable that lakes have once existed in the enclosed plains without outlets, which are now deserts. The surface appears flat, but there is probably in all cases an imperceptible slope towards the middle of the plain."¹ Blanford does not exclude the possibility that the coarse gravel found in the higher regions may be of glacial origin. It should, however, be mentioned that Tietze and other geologists deny that there are any signs of an ice age in Persia.

In another place Blanford rightly remarks: "We have yet to explain the origin of the vast deposits which fill the plains themselves; and the only probable explanation appears to be that these extensive basins were formerly lakes, most of them probably brackish or salt, like the Caspian and the Aral Seas, lakes of Van, Urumiah, Niriz, etc., the fine soil of the plains consisting of silt deposited in such lakes. . . . But for inland seas and lakes to have occupied the interior of Persia, and for large deposits to have formed in them, it is evident that the climate must have been much damper than at present."²

F. von Richthofen is opposed to Blanford's theory that the Iranian depressions with their alluvial deposits were shut in during the latest epoch of the Tertiary period by the upheaval of ranges and the introduction of a drier climate. "We cannot accept the theory that sediments of fresh-water lakes constitute the last superficial formations. Even if lakes still existed at the end of the Tertiary period, which then gradually dried up, yet the subaerial forces have been constantly at work during the long ages that have since elapsed, separating by chemical and physical processes loose fine particles and larger fragments from the rocks, and wind and running water have carried them into the basins. Lakes could at most reach up to the lowest pass in each basin; but the deposits extend much higher up the sides, where they could certainly not be laid down by

¹ *Eastern Persia*, vol. ii. p. 465.

² *Quarterly Journal of the Geological Society*, vol. xxix. (1873) p. 498.