playa" of Khaf (B, fig. 152), at the center of an important subsidiary basin. Farther south a steep east-facing escarpment, which suggests a fault scarp, limits the Persian basin, which stretches away in normal fashion westward from the summit, while on the east, at the foot of the escarpment, the smooth "Desert of Despair" (C, fig. 152), strangely broken by buried mountains, spreads its harsh gravels far southward to the lake and swamp of Sistan (D, fig. 152). Onward in the same direction the desert continues to the swamp of Mashkel (E, fig. 152), still bounded by the escarpment which swings somewhat eastward south of Sistan and bears upon its top the cone of Kuh-i-Taftan (G, fig. 152), the only active volcano of Western Asia. South of all these features the low mountains of southwestern Baluchistan bring the depression to an end (F, fig. 152). The streams flowing into the depression from the east are long and large; those from the west are so short as to be little more than mountain torrents.

GEOLOGICAL HISTORY OF THE BASIN.

The age of the basins of Iran can only be determined by a study of the geology of the country, but of this, unfortunately, we know merely the bare outlines. Not only is the country remote and difficult of access, but the aridity obliges the traveler to hold closely to the roads which usually traverse the gravel-strewn plains. If he makes detours to the mountains, his caravan may be obliged to spend the night without water. Geological study is at a disadvantage. The work of Blanford (A, p. 468) and the geographical map of Mushketoff show that the mountains bordering the Persian portion of Iran consist for the most part of a main mass of Cretaceous limestone bordered on the inside by a smaller amount of Paleozoic or ancient crystalline strata, and on the outside by concentric bands of Tertiary strata, each of which is less warped than the one below it. The inference is that at the end of the Cretaceous era the mountain borders of western Iran began to rise and have continued to be uplifted throughout a large part of Tertiary time. Throughout the Eocene period the sea (Blanford, A, p. 468, and Vredenburg, p. 168) covered the region which is now occupied by the low mountains of Baluchistan, and also much of the interior, judging from the nummulitic limestone which Blanford mentions as being reported from Yezd and Kohrud, and which I found abundantly in the mountains northwest of Sistan. It also probably covered the northwestern corner of Afghanistan, for the mountains there consist largely of Tertiary formations which seem to be of rather late date. Apparently there was oceanic connection between the Arabian Sea and the Samartian Sea which covered the Caspian region, and the interior of the Iran basin was covered by a marine embayment. When or how the sea retreated or when the eastern borders of Iran were uplifted we do not know. It is clear, however, that during the latter half of the Tertiary era Iran had been divided into basins in which subaerial deposition took place, as is shown by the silty and sandy strata of a prevailingly red color which overlie more uniformly bedded shales of marine or estuarine origin.