

Extinct lakes are a feature of many of the chief playas of the Iran basin. At Mashkel, south-southeast of Sistan, in the continuation of the Afghan depression, the playa seems to be surrounded by terraces in the same way as the playa of Khaf, so far as can be judged from the brief notes of MacGregor (pp. 128, 129, 134) and others. Farther to the east, in the center of northern Baluchistan, the Lora Hamun, as described by Vredenburg (pp. 210-211), "is now a large playa entirely dry most of the time. In it are islands of lava rising to a height of 50 feet, more or less. They are surrounded and even covered by pale-yellow silt of just the same sort as that which forms the floor of the playa. The lower portion of these mud deposits, though ravined by the rain, still presents a terraced outline, and denudation has exposed sections in which strings of angular pebbles from the tuffs of the hills rest upon strata of the buff-colored mud. It is quite evident that this mud, washed down in former times by rivers, was deposited in the still water of a lake, just as the deposit of the same nature which covers the dried-up floor. Moreover, as they are found at all heights along the slopes of the hill, it shows that these were at that time entirely submerged; further, that a large sheet of water then existed whose surface rose to a height of 50 feet or more above the floor of the dried-up lake, and that the Lora Hamun covered a surface three or four times as extensive as the plain which now bears that name."

In the same connection Vredenburg (p. 210) says that throughout all the confusion of the volcanic mountains, interrupted drainage, and smooth playas of northern Baluchistan "there are some curiously regular features. Such are the long lines of terraces formed by the conglomerates (*i. e.*, gravels) stretching over wide areas. It frequently happens that the traveler following the narrow camel-track beaten out of the stone-strewn 'dasht' (*i. e.*, naked gravel slopes), along what seems an interminable plain, suddenly finds himself on the edge of an escarpment and sees another plain below him some 30 or 40 feet lower. This lower ground may again slope gently down to another step-like escarpment, and there may be thus three or four of these superposed terraces. If the country had been more thoroughly examined it would have been found probably that these lines of terraces form concentric belts surrounding at a distance some of the larger lake basins. They admit of only one explanation—they represent ancient shorelines of great lakes, which now have either dried up entirely or are reduced to insignificant shallow marshes or salt swamps." It is not impossible that these gravel terraces of Vredenburg are of fluvial rather than lacustrine origin, and resemble those which I have described along the Bendan stream, for example. Nevertheless, the facts stated in regard to these and to the Lora Hamun are enough to show that the phenomena of Sistan are not isolated, but form part of a record of changes which have affected all the neighboring regions.

SUMMARY.

On the basis of the facts and conclusions set forth in the preceding review of Sistan and of the confirmatory evidence from surrounding districts, we are prepared to sum up the history of this part of Eastern Persia during recent geological times. Changes of climate have been the keynote of that history, although there has been