

MATURITY.

As youth advances toward maturity the difference between the physiographic forms of a moist country and of a dry country increases apace. At the beginning of maturity in a land of sufficient rainfall the lakes have for the most part been drained, and the topographic forms are almost universally due to erosion guided by the structure and texture of the rocks. In Persia, the typical dry country, on the other hand, almost none of the lakes have been drained, and the proportion of the surface where topographic forms produced by erosion prevail, has reached and passed a maximum. Indeed, the process of decreasing the area subject to erosion goes on from early youth until old age, and is perhaps the most prominent characteristic of the activities controlled by an arid climate. The streams which come from the mountains laden with detritus are compelled to deposit much of their load on reaching the foot of the mountains and changing from a steep to a gentle grade. Even a small stream can flow a long distance in a very arid region, provided it is confined to a small rock channel where there is little opportunity for evaporation. As soon, however, as a region of deposition is reached, the stream begins to spread into many channels, which reduces the already diminished velocity and causes further deposition. Moreover, the stream itself quickly comes to an end, for much water is lost by reason of the larger area exposed to evaporation in the many channels, and even more sinks into the thirsty gravel. For this reason the small running streams of Persia are almost entirely confined to the higher mountains and are continually growing shorter. Each new addition of gravel to the fan of a stream represents a decrease in the height of the mountains which in the course of ages is sufficient to cause a decrease in rainfall. It also raises the height of the fan itself, and compels the stream to divide and to lose itself in the gravel at a higher elevation than formerly. Both these processes tend to shorten the streams and cause them to deposit their loads higher and higher, building up the fans indefinitely. Everything tends to increase the areas of deposition until finally basin coalesces with basin; the lower hills are buried out of sight; those of greater height rise as islands in vast expanses of gravel; and even the highest mountains are half-buried in great fans of the same material. Thus in full maturity only the mountains present forms due to erosion, and even of the mountains the lower portions are buried by constantly increasing products of deposition.

This is the condition which has been reached in Eastern Persia south of Binalud Kuh. One of its prominent characteristics is the isolation of the mountains, which is well seen in the basin of Nemeksar. One of the most striking examples is in the playa of Kulberenj, south of the main playa of Nemeksar. From the very floor of the playa rise several small, dark islands, whose roots seem to descend beneath the plain as though these were the pointed tops of what once were high hills or mountains.

The erosion of the mountains.—Another prominent characteristic of the mature mountains of Persia is their nakedness, roughness, and sterility. In a young country it is to be expected that there shall be large areas of naked rock, but in a mature country, if the rainfall is abundant, most of the surface, except the imme-