

improbable, for Baku lies on the line of the Caucasus range, where great disturbances have taken place in not remote geological periods, and where minor movements might expectably be continued into recent time. It should be noted, moreover, that the highest shorelines at Krasnovodsk, 210 feet, and at Jebel, 250 feet, differ by a greater amount than should be ascribed to error of barometer readings, and that both of these levels are decidedly below the undoubtable signs of modern wave work near Baku, at 400 feet. In further confirmation of warping, we may quote Mushketof's statement (1886, I, 692) to the effect that in the southern Caspian the Quaternary Aralo-Caspian shoreline almost merges with the present shoreline. In view of this it is desirable to measure the elevated shorelines of the Caspian at many points before attempting to restore its outline at the time of its maximum extension. It is very possible that the relative dates of the various shorelines may finally be better determined by means of the amount of warping that they have suffered—the latest ones the least—than in any other way.

Further consideration of the eastern extension of the Caspian will be found in subsequent pages.

#### THE PLAINS OF SOUTHERN TURKESTAN.

A great part of Turkestan, south and east of the Aral Sea, is a desert plain connecting southwestward with the lowland bordering the southern Caspian by the Balkhan gateway in the belt of highlands that, farther to the southeast, forms the boundary of the Russian and Persian dominions. A large part of the desert plain is described by some of the Russian geologists as having been covered by the Pliocene Aralo-Caspian Sea, and a smaller southwestern part by the post-Pliocene sea, whose waters have since then gradually withdrawn to their present separate basins. It is evident that the varying area of this great inland sea must have, directly and indirectly, exerted a controlling influence on the distribution of the contemporary human inhabitants of the region, if any such there were; hence the importance of gaining as full a knowledge as possible of Aralo-Caspian history in the course of our explorations.

The following summary concerning the relation of the southern Turkestan plains to the Aralo-Caspian problem, as determined by Russian observers, may serve as an introduction to the record of our own observations. One has frequent occasion, in reviewing the reports of the Russian explorers, to admire the persistence with which they penetrated the desert region, and to perceive in their successful subjugation of this part of the Asiatic wilderness a close similarity to our "winning of the west," except that theirs is the greater task; for the deserts of Asia are broader and more barren than those of North America, and the mountain ranges are higher there than here. The settlers of the United States had a continent of moderate width to cross and found within it only a scattered native population, and on its Pacific side only a slightly resistant offshoot of Spanish power, while the Russians are expanding into the broadest of the land masses, where the people of the interior are well established, where the British occupation of the populous peninsula of India is more aggressive than the Spanish occupation of Mexico, and where the enormous populations of the Pacific border find no American analogy.