

While it may be desirable later to make as precise a determination as possible of the geological date and of the physiographic surroundings of human monuments or artifacts, it did not seem advisable to combine detailed local observations with a general reconnaissance during our first season in the field. My work was therefore directed to gaining a broad view of the region and its development, from which it should be possible to plan and direct a series of more thorough studies regarding the subdivisions of later geological time, in case such studies are to be undertaken in the coming years. It is a matter of regret that, owing to the deficient representation of Russian material in our libraries, it has not been possible to make as full a study of the work of earlier observers as was desired in the preparation of this report.

THE CASPIAN REGION.

The region traversed naturally divides itself into three parts: The sea on the west, the mountains on the south and east, and the plains between the two. The waters of the Caspian are gathered in an area of relative depression; the mountains are the scene of active erosion because of their relative elevation; the rivers strive to carry the waste of the mountains down the very gentle slope of the plains and deposit it in the sea. The climatic changes, well proved to have taken place over other parts of the world in later geological times, may be believed to have had their effect in this region also. The Caspian is known to have stood at a greater height and to have covered a much larger area in Quaternary time, especially to the east and north, as is attested by its abandoned strands and shell deposits; the existing glaciers of the eastern mountains have been longer than they are now, as proved by their abandoned Quaternary moraines, reported by various explorers; the rivers between the mountains and the sea must have, in some way appropriate to themselves, responded to these varying conditions at their two extremities, and hence even in the strata of the plains some record of Quaternary climatic variations may be discovered.

There can be no question, however, that the record of Quaternary climatic variations on the plains would be of much more difficult recognition than in the mountain valleys on the east, or around the great sea basin on the west. It was for this reason that my reconnaissance was directed chiefly to the Caspian shorelines and to the extinct glaciers of the Tian Shan, and that the study of the plains was left to a later year.

THE TERTIARY AND QUATERNARY CASPIAN.

The existing Caspian Sea is the successor of the expanded water body of late Tertiary time which made the Black, the Caspian, and the Aral basins confluent and which laid down a series of stratified deposits, known as the (Tertiary) Aralo-Caspian formation, apparently the equivalent of the Congerian or Pontic stage of Europe. These deposits are now more or less deformed and eroded; for example, near Baku and next eastward in the Apsheron peninsula, where the Caucasus range