

toward the present condition of aridity—a trend that was interrupted by oscillations, in some of which the aridity may have exceeded that of to-day—a process in which the seas, while responding to the oscillations, have in the main shrunk gradually to the volumes compatible with the present equilibrium between precipitation and evaporation. Parallel with this progress toward aridity, under the diminished precipitation and lessening to disappearance of the ameliorating climatic reaction of the once-expanded water areas, was the shrinkage of the loess zones. The grassy steppes, which had once teemed with life and permitted the distribution of ruminants and the horse across all Asia to Europe, gradually became broken up into disconnected areas by the increased intensity of desert conditions. The expanding deserts cut off the connection between the faunæ of southern Turkestan and Persia on the one hand and those of Europe on the other, and allowed the evolution of regional varieties. And there must have been a similar reaction upon the distribution of man.



Fig. 2.—Beginning Work at the North Kurgan.

After this, a continued progress towards extreme aridity advanced the desert sea of sands till its dune-waves, rolling ever nearer to the mountain, completely submerged long stretches of the narrowed loess-zone between the now restricted deltas at the mouths of mountain streams. The teeming herds of ruminants and horses disappeared over vast areas, and life was restricted to the mountains and to the borders of the few remaining streams and the deltas.

When this stage had been reached, in early prehistoric time, and long before the introduction of irrigation, the condition of southern Turkestan and northern Persia may be summed up as one of deserts, relieved only by oases in high valleys and on the deltas at the mouths of streams emerging from the mountains, or where larger rivers died out on the plains or entered the shrunken seas. The delta-oases have been the home of man from early prehistoric time till now, throughout Turkestan and northern Persia. On one of these, at Anau near Askhabad, 300 miles east of the Caspian, we made, in 1904, excavations and physiographic studies.