

CHAPTER I.—EVOLUTION OF THE ENVIRONMENT OF CENTRAL-ASIAN CIVILIZATIONS.

The beginnings of Central Asia, as part of the Great Continent, lie far back in the Tertiary period, during a time when Mother Earth was in travail, giving birth to her last-born—the new order of continental and organic forms. In the throes of the contracting terrestrial crust there had been slowly born great mountain masses, ranges whose ice-capped giants now mark the boundary between north and south, extending half-way around the earth, through the Pyrenees, Caucasus, and Himalayas to China. The Eurasian continent was born, but in its infancy a great sea extended from the Atlantic through the Mediterranean to southeastern Asia. Later, during the Middle Tertiary, this connection was broken, leaving a great interior sea called the Sarmatic, which once extended from Austria to beyond the Aral. In the progressive development of land and climate, during Pliocene or late Tertiary time, this sea in turn broke up into separate landlocked basins of fresh and brackish water, the deposits and faunæ of which are designated as belonging to the Pontic Stage.

In these changes we see the evolution of Central Asia as an interior region. Differentiated from the periphery of the continent by mountains that intercepted the moisture from the ocean on the south, and otherwise climatically at a disadvantage on account of its geographical relation to the laws of atmospheric circulation, this vast region entered upon an independent course of development.

When this inner-continental area ceased to send its waters to the ocean, it was predestined to a course of evolution whose progress must inevitably culminate in the desert-waste conditions ruling there to-day. Each of the geological periods mentioned had its characteristic land and water organic life, among which were prophetic ancestral forms in the genealogy of the mammals of to-day.

The cause of this differentiating evolution is as simple as it is fatefully majestic in its progress. The moisture, carried by the high currents of air in their course from the equator to the pole, is largely condensed in rising over the great altitudes of lofty mountain ranges. To the north of the highlands, the plains receive but a slight annual precipitation, and this is so distributed in the seasons as to produce the minimum of vegetation in respect to the amount of precipitation received during the year. Under these conditions a forest growth is impossible, and the surface must be more or less grass-covered or bare according to the amount of effective precipitation, which in turn may perhaps have varied during different periods with a possible varying in height of the intercepting mountains.

Under such conditions the region would vary in character between semi-arid and arid. Whether semi-arid or arid, the hot air rising from plains, barren of