

geological epoch. This great landlocked area is divided into two basin-systems; one is the higher-lying Gobi on the east, inclosed on the west between the mountain masses of the Kuen-Lun and Tian Shan.

The western system of landlocked basins covers a great part of Western Asia. Extending west from the Tian Shan ranges, it is limited on the south by the Persian plateau and the Caucasus, and on the north by the low Siberian elevation that forms the water divide toward the Arctic Ocean. On the west, from a hydrographic but not from a climatic point of view, this system includes the Black Sea, with the areas drained by the Volga, Don, and Dnieper (a large part of Russia), and by the lower Danube. The Persian plateau itself forms an independent high-lying system of arid landlocked basins.

Of this great western system a part near the Caspian Sea lies below the level of the ocean. A large part of the whole system is so situated in reference to the barriers that separate it from the oceans that, given a sufficient quantity of water and the closing of the Bosphorus Channel, there would be a landlocked sea several hundred feet deep and larger than the Mediterranean. It is potentially a sea, of which the Black Sea, Caspian, and Aral remain as three larger residuary bodies of water. This is due to climatic conditions, under which the precipitation over the region, together with the water brought by the streams from without, is offset by the intense evaporation over the heated arid surface. With a sufficiently long-continued inflow of water in excess of evaporation, and a restoration of the barrier at the Bosphorus, the Black Sea and the Caspian would coalesce, and, after extending to include the Aral, would rise till an overflow should be reached, either into the Mediterranean or into the Arctic Ocean, and our potential sea would become a reality. If, on the other hand, there should exist a sufficiently long-continued condition in which evaporation should be in excess of inflow of water, then a time would come when, instead of a sea, there would be only a region of barren deserts. Our basin is, therefore, potentially both a sea and a desert. At present the two controlling factors—water and evaporation—are about in a state of equilibrium.

The existing residuary seas are, therefore, in the rising and lowering of their surfaces, gages recording the cyclical climatic changes as they occur over the great catch-basins that supply them with water. Of these catch-basins, the northern and western ones are the great hydrographic systems of European Russia and the smaller river systems, chiefly of the Caucasus. The rest lie almost wholly in the lofty mountain chains that stretch with increasing height and area as they go eastward to High Asia. The vast masses of snow and ice, constantly accumulating on these heights, feed perennially the few larger and countless smaller streams that flow toward the central basin region. Without these Turkestan would be an absolutely desert and practically lifeless region.

I imagine that the general trend of the climatic conditions over the central continental area was from the beginning toward aridity. The mountains that separated it from the ocean were of slow growth, and mountains of moderate altitude are compatible with a moderate amount of precipitation over the interior region beyond them. The grassy plains of Mongolia and of the Central Western