

in volume, and the salt deposits steadily accumulating in its shallow offshoot called the Karaboghaz.

Gilbert arrived at a similar conclusion with regard to the Great Salt Lake of Utah. The surface of this lake is now at a height of 4,250 feet above sea-level, but old lacustrine terraces are present at higher levels round its margins, the highest being 940 feet above the present surface-level. Gilbert explains the shrinkage in the size of the lake as a result of local meteorological changes. Owing to the diminution in the rainfall and in the volume of inflowing rivers, the surface of the lake sank below its former outlet, and the lake-water became more and more saline until it arrived at its present degree of concentration.

The most complete accounts of the Dead Sea and its salt formations are those given by O. Fraas and L. Lartet. The deposition of salt and gypsum takes place every summer, when evaporation is rapid, and a layer of mud is deposited during the intervening period of diminished evaporation.

Geologists early recognised the agreement of the chief products of super-saturation of existing sea-water and salt lakes with the layers of rock-salt in ancient geological formations of the crust. Fichtel (*ante*, p. 88) had expressed the view that the Transylvanian salt-deposits represented evaporation products formed from sea-water, which had found ingress into underground cavities after the consolidation of the crust. The upright position of salt-veins at Bex, in the Rhone Valley, led the younger Charpentier to the conclusion that the salt must have originated from sublimation in crust-fractures.

Several geologists about the middle of the nineteenth century suggested the probability of a plutonic origin of salt-layers after the manner of the massive crystalline rocks. This view was warmly repudiated by G. Bischof, who rightly argued from his knowledge of the recent deposits in the Dead Sea and the North Caspian depressions, that the salt-deposits within the earth's crust had taken origin in the same way from ancient basins of water as they became desiccated. The salt-layers of Stassfurt and Kalusz remained for a long time an unsolved problem, since no direct comparison could be found between them and any natural deposit in present course of formation. At Stassfurt, thin beds of highly deliquescent salts succeed the main salt-layer; first, a thin band of anhydrite, then a bed of deliquescent chlorides, including some sodium chloride, then a bed of potassium and magnesium sulphate, and lastly an upper