

still less numerous fauna of the Caspian Sea, as far as that fauna is known, which sea, or brackish lake, was, it is believed, once connected with the northern ocean, as the fauna seems to testify. My belief is, that these Permian waters were also of an inland, unhealthy nature, and, like those of the Caspian, had previously been connected with the open ocean.

Besides the poverty in number and small size of the mollusca, the chemical composition and lithological structure of the Magnesian Limestone, seem to me to afford strong hints that it was originally deposited in a large inland salt lake, and not that it was entirely derived from calcareous organisms, and subsequently altered into dolomite by chemical changes. I am well aware that there are such masses, occasionally, for example, in the Carboniferous Limestone which was formed in an open sea. Some modern atolls are known to become dolomitised, as described by Dana, but in the Magnesian Limestone corals are chiefly conspicuous by their absence. I repeat that the Permian Magnesian Limestone was not, as used to be supposed, formed in the sea, but in an inland salt lake, under such circumstances that carbonates of lime and magnesia were deposited simultaneously, probably, by concentration of solutions due to evaporation. In an open sea, lime and magnesia only exist in solution in very small quantities, and limestone rocks there are formed, as in coral reefs, by organic agency.

In some of the lower strata of the Magnesian Limestone, when weathered, it is observable that they consist of many curious thin layers, bent into a number of very small convolutions, approximately fitting into each other, like sheets of paper crumpled together. These dolomitic layers convey the impression that they are