

the sea not less than 300,000,000,000,000,000 tons of calcium carbonate, which they have temporarily utilized as structural material. Whether this estimate be correct or not, the process is certainly the cause of the most considerable change wrought by life upon the face of the earth.

The relative quantities of the several saline constituents of the ocean are hardly at all subject to variation. Chlorine, for example, makes up never less than 55.21 per cent and never more than 55.34 per cent of all the dissolved inorganic substances, so that the total salinity may be readily estimated with considerable accuracy by titration of the chlorides. Such constancy is due to the elaborate mixing of the waters resulting from ocean currents. There can be no doubt, however, that the relative amounts of the different acids and bases have slowly but steadily changed during the progress of geological evolution. Many substances, like calcium carbonate, have been steadily removed, a few, like sodium chloride, have steadily accumulated without loss.

The total salinity of the ocean, as stated above, is subject to slight variation. Along the North American coast, in the polar current, upon the coast of Norway, and toward the south of South America, the concentration