

first originated in the following circumstance:— M. De l'Aigle, commander of a privateer called the Phoenix of Marseilles, gave chase to a Dutch merchant-ship, near Ceuta Point, and coming up with her in the middle of the gut, between Tariffa and Tangier, gave her one broadside, which directly sunk her. A few days after, the sunken ship, with her cargo of brandy and oil, was cast ashore near Tangier, which is at least four leagues to the westward of the place where she went down, and to which she must have floated in a direction contrary to the course of the *central* current.* This fact, however, affords no evidence of an under-current, because the ship, when it approached the coast, would necessarily be within the influence of a lateral current, which running westward twice every twenty-four hours, might have brought back the vessel to Tangier.

What, then, becomes of the excess of salt?— for this is an inquiry of the highest geological interest. The Rhone, the Po, the Nile, and many hundred minor streams and springs, pour annually into the Mediterranean large quantities of carbonate of lime, together with iron, magnesia, silica, alumina, sulphur, and other mineral ingredients, in a state of chemical solution. To explain why the influx of this matter does not alter the composition of this sea has never been regarded as a difficulty; for it is known that calcareous rocks are forming in the delta of the Rhone, in the Adriatic, on the coast of Asia Minor, and in other localities. Precipitation is acknowledged to be the means whereby the surplus mineral matter is disposed of, after the consumption of a certain portion in the secretions of testacea, zoophytes, and other marine animals. But before muriate of soda can, in like manner, be precipitated, the whole Mediterranean ought, according to the received principles of chemistry, to become as much saturated with salt as Lake Aral, the Dead Sea, or the brine-springs of Cheshire.

It is undoubtedly true, in regard to small bodies of water, that every particle must be fully saturated with muriate of soda before a single crystal of salt can be formed; such is probably the case in all natural salterns: such, for example, as those described by travellers as occurring on the western borders of the Black Sea, where extensive marshes are said to be covered by thin films of salt after a rapid evaporation of sea water. The salt *étangs* of the Rhone, where salt has sometimes been precipitated in considerable abundance, have been already mentioned. But if the era of the almost complete separation of the Mediterranean from the ocean be of no higher antiquity than the deposition of the newest tertiary strata found at the northern base of the Pyrenees, it is conceivable that this inland sea, especially if its depth be enormous, may have grown more and more saline ever since its actual basin was formed, and yet there may not have been time, even at great depths, for the acquisition of saltiness approaching that of the Dead Sea.

In regard to the depth of the Mediterranean, it appears that the

* Phil. Trans. 1724.