

membranous capsule, each of which produces from 3 to 8 young, which, on escaping from the egg, are of various sizes, and very active.

But the most singular part of the history of these animals is, that they not only perpetuate their species as above described, but also by a natural division of their body into two portions, the head part reproducing a tail, and the tail a head in about fourteen days. These appearances are represented in annexed drawings, and several experiments are detailed in further illustration of their reproduction, showing that a perfect animal is producible.

*Some Experiments and Researches on the Saline Contents of Sea-water, undertaken with a view to correct and improve its Chemical Analysis.* By Alexander Marcet, M.D. F.R.S. *Honorary Professor of Chemistry at Geneva.* Read June 27, 1822. [*Phil. Trans.* 1822, p. 448.]

At the commencement of this paper Dr. Marcet, after adverting to the conclusions at which he arrived in some former researches communicated to this Society, notices the extraordinary assertions of Rouelle and of Proust respecting the existence of mercury in sea water. By a very careful examination, however, of bay salt, he was unable to detect the smallest trace of that metal; nor did he find it in a sample of Sel de Gabelle obtained from Calais for the purpose of examination.

Dr. Marcet next examined sea water, with a view of ascertaining whether any nitrates are present in it: with this view he added sulphuric acid and gold leaf to the concentrated bittern, and boiled the mixture, but the metal was not in the least acted on; when, however, the smallest quantity of nitre was added, the gold was instantly dissolved. Hence the absence of nitric salts in sea water may be inferred.

In examining some of the same bittern for earthy and metallic salts, the author found that neither alkalies nor their carbonates throw down anything but magnesia, and that no muriate of lime appears in any case to be present. Selenite and carbonate of lime were, however, found in the matters deposited during the first evaporation of the transparent and pure sea water.

When sea water is evaporated to dryness, and the residue submitted to distillation at a red heat, Dr. Marcet found that a portion of sal-ammoniac sublimed. Lastly, he observes, that no sulphate of soda is discoverable in sea water, but that it affords, on evaporation along with other salts, certain rhombic crystals, which are triple sulphate of potash and magnesia.