

the samples, as shown of the determinations of organic carbon and organic nitrogen, and the proportion of organic carbon to organic nitrogen. For the purposes of comparison, I have appended the results of analyses of Thames-water and of the water of Loch Katrine, the former representing probably about a fair average of the proportion of organic nitrogen reaching the sea in the rivers of this country, but being presumably considerably greater than that contributed by rivers in other parts of the world. If this be so, it follows either that soluble nitrogenous organic matter is being generated from inorganic materials in the sea, or that this matter is undergoing concentration by the evaporation of the ocean,—the rivers and streams continually furnishing additional quantities whilst the water evaporated takes none away.

The amounts of carbonate of lime given in the table are obtained by adding the number three (representing the solubility of carbonate of lime in pure water) to the temporary hardness which denotes the carbonate of lime thrown down on boiling. As the determination of temporary hardness in water containing so much saline matter is not very accurate, the numbers in the columns headed 'Temporary Hardness' and 'Carbonate of Lime' must only be regarded as rough approximations to the truth; moreover, a small proportion of carbonate of magnesia is mixed with the carbonate of lime and estimated with it.

In all their peculiar features these analytical results agree with those which I have previously obtained from numerous samples of sea-water collected by myself off Worthing and Hastings.

Yours very truly,

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