white."[1] He concludes that these glauconitic casts have not been transported from ancient formations, but have been formed where they were found in the same manner as in geological formations. He states that his own and Ehrenberg's researches prove that other organisms, besides Foraminifera, may serve as moulds for the greensand, and he notices that with the well-defined casts are associated green grains less regular in form, "having merely a rounded, cracked, lobed, or even coprolitic appearance."[2] The phenomena accompanying the decomposition of organic substances, he says, are closely connected with the formation of this mineral—a green or red silicate of iron or almost pure silica.

MAURY'S TABLES OF SOUNDINGS IN THE DEEP SEA.

Maury gives tables of soundings obtained up to 1857, showing those of the "Albany" (1850–51), the "Dolphin" (1851–52, Captain Lee), "Dolphin" (1852–53, Lieutenant Berryman), "Jamestown" (1851), "Plymouth" (1851), "Janey" (1849), "Saratoga" (1850), "Congress" (1851), "John Adams" (1851), "Susquehanna" (1851), "St. Louis" (1852), and "Saranat" (1853). He notes the rate of descent for each 100 fathoms, as observed in each of the principal expeditions, discussing the results of the soundings and making use of them in the construction of his bathymetrical map.[3]

TELEGRAPH PLATEAU OF THE ATLANTIC.

In 1856 Lieutenant Berryman, in the steamer "Arctic," sounded across the North Atlantic, the principal object being to verify the discovery of a long submarine ridge between Newfoundland and the British Islands, to which the name of Telegraph Plateau had been given, and along which a company was preparing to lay a cable. He obtained samples of the deposit from thirty-four points between St. John's, Newfoundland, and Valentia. These deposits were described by Bailey,[4] who, from the fact that the mineral particles were angular, concluded that there is little movement at the bottom in deep water, otherwise the mineral fragments would be rounded. This confirmed what was already known as to the relative immobility of very deep water, and was of considerable importance with reference to the cable about to be laid, as it showed the small chance of displacement through bottom currents. He observed the abundance of calcareous matter due to the accumulation of microscopic shells, which fall to the bottom after the death of the organisms. Bailey also observed the presence of volcanic ashes in the deposits, and remarked that the Gulf Stream had spread these "plutonic tallies" over thousands of miles; this most important discovery was to receive further confirmation and generalisation from the subsequent observations of Maury. Some doubt having arisen as to whether these ashes might not have been thrown overboard from passing steamers, Bailey compared the two, and arrived at the conclusion that the substances found on the bottom of the Atlantic were really of volcanic origin. Maury supposed that this dust might have been carried by the wind from volcanoes in Central America or from extinct volcanoes in the Western Islands, though admitting the difficulties in the way of account-

ABSENCE OF CURRENTS IN DEEP WATER.

VOLCANIC ASHES.

[1] *Proc. Boston Soc. Nat. Hist.*, vol. v. p. 367.
[2] *Ibid.*, p. 368.
[3] Maury, *op. cit.*, pl. xi.
[4] *Amer. Journ. Sci.*, ser. 2, vol. xxi. pp. 284–285, 1856.