

Mr. Lucas on board the S.S. "Scotia," and on portions of the cable recovered in 1903 being submitted to Mr. Lucas, he was quite convinced that no deterioration had taken place during the interval of fifteen years. This is ascribed to the fact that the cable when lifted in 1888 was covered by Globigerina ooze, which is believed to act as a preservative upon cables in contact with it. As in 1888 the cable had been submerged for thirteen years, this implies a rate of deposition of one inch of the deposit in some period less than thirteen years; but as the deterioration noted in the cable, especially in the hemp serving, had probably taken some years to effect, it is perhaps fair to assume a period of ten years for the accumulation of a layer of the deposit one inch in thickness, in the position referred to. Another cable lifted from the bed of the equatorial Atlantic (lat. $2^{\circ} 47'$ N., long. $30^{\circ} 24'$ W.) from a depth of 1900 fathoms in 1883, after having been submerged for nine years, was found to be in much better condition than the North Atlantic cables examined after having been laid for a similar period, and this is supposed to be due to the more rapid deposition of the Globigerina ooze in the warmer waters of the equatorial Atlantic than in the colder waters of the North Atlantic, so that the cable became more rapidly covered over by the Globigerina ooze.¹

While, therefore, it may be assumed that the Globigerina ooze accumulates at the rate of about one inch in ten years in the central part of the North Atlantic in lat. 50° N., and at a still more rapid rate in the central part of the equatorial Atlantic, it would appear from the recent observations of the "Michael Sars" Expedition that the rate of deposition of sediment may be almost *nil* even at depths of 1000 fathoms in certain parts of the North Atlantic, where glaciated stones have been dredged in considerable quantities. Possibly, however, these glaciated stones may have been deeply covered by the ooze since the close of the glacial period, and may have been subsequently exposed by the action of deep tidal currents sweeping away the Globigerina shells from the top of a low ridge perhaps recently elevated by earth-crust displacements in the deep sea. We now know that tidal currents prevent the formation of muddy deposits on the top of the Wyville Thomson Ridge in depths of 250 to 300 fathoms, while just below the summit of the ridge on both sides mud is deposited.

¹ See Murray and Peake, *On Recent Contributions to our Knowledge of the Floor of the North Atlantic Ocean*, extra publication of the Royal Geographical Society, London, 1904, pp. 21 and 22.