

sediments, it does not enter into the consideration of deep-sea deposits. The samples brought by Captain Brooke, in 1857, from the Kamtschatka Sea, at depths between 900 and 2,700 fathoms, were examined by Bailey, who demonstrated the existence of abyssal pelagic sediments composed of the shells and skeletons of Foraminifera, Radiolarians, and Diatoms. Similar deposits at smaller depths had already been proved by the researches of Ehrenberg, Joseph Hooker, and Pourtalès. In 1857, soundings were commenced in the Atlantic Ocean, when it was desired to establish cable communication between the Old and the New Worlds. Samples of the deposits of the ocean-floor were given to Huxley by Captain Dayman, and the examination of these resulted in an accurate description of Globigerina Ooze. Between 1860 and 1870 many soundings and dredgings were taken in the Atlantic Ocean, and the reports of Wyville Thomson, Carpenter, and Pourtalès added valuable scientific information about the pelagic faunas and sediments.

Oceanography was signally advanced by the results of the *Challenger* Expedition. The English ship *Challenger* sailed for four years (1872-76) on a voyage of exploration of the great ocean basins. The material brought home was investigated and reported upon by the most eminent scientific specialists of the day. The final report by Murray and Renard (London, 1891) contains an exhaustive exposition of the whole field of modern knowledge regarding pelagic deposits. A comparison of this masterly work with that of Delesse, shows what a grand accumulation of new facts had been obtained during the twenty years that had elapsed, and more especially how deep a debt of gratitude science owes to the promoters and enthusiastic workers of the *Challenger* Expedition.

In the *Challenger* Report all deep-sea deposits are classed as "terrigenous" or "pelagic" in origin (*ante*, p. 183). The former are distributed for the most part along the coast-line, upon a shallow submarine platform adjacent to the shore, and a gentle slope descending to lower depths. The pelagic deposits owe their origin partly to the organic world, partly to submarine volcanoes, and cover the floor of the open ocean. All the different kinds of sediment are described in the *Challenger* Report macroscopically, microscopically, and chemically; their exact occurrence is entered upon maps of