sand, more rarely mixed with gravel. The bottom of the North Sea, for example, which between Britain and the continent of Europe lies at a depth never reaching 100 fathoms, is irregularly marked by long ridges of sand, inclosing here and there hollows where mud has been deposited. In the English Channel, large banks of gravel extend through the Straits of Dover as far as the entrance to the North Sea.²⁰⁹ These features seem to indicate the line of the chief mudbearing streams from the land, and the general disposition of currents and eddies in the sea which covers that region, the gravel ridges marking the tracts or junctions of the more rapidly moving currents, while the muddy hollows point to the eddies where the fine sediment is permitted to settle on the bottom. The more prominent features on the floor of the North Sea, however, are probably of much older date than the deposits now accumulating there. Some of them are doubtless relics of the time when the floor of that sea was a broad terrestrial plain. The Dogger Bank, for instance, is probably a prolongation of the Jurassic escarpment of the Yorkshire coast. Other minor submarine features may be partly due to irregular deposition of glacial drift.

During the course of the voyage of the "Challenger," the approach to land could always be foretold from the character of the bottom, even at distances of 150 and 200 miles. The deposits were found to consist of blue and green muds derived from the degradation of older crystal-

²⁹⁹ For information as to the English Channel and other parts of the British seas, see J. T. Harrison, Min. Proc. Inst. Civ. Engin. vii. 1848, p. 327 (where a map of the submarine deposits will be found); R. A. C. Godwin-Austen, Quart. Journ. Geol. Soc. vi. 1849, p. 69—a paper of singular interest and importance; Lebour, Proc. Geol. Assoc. iv. p. 158; John Murray, Min. Proc. Inst. Civ. Engin. xx. 1860-61, where a map of the North Sea floor is given.