

the sea, the shape and character of its bed, the nature of the creatures and plants that haunt its depths, the force and set of its currents, the figure and dimensions of the great ocean basins, and the temperature of the water at various depths.

Interesting as were the results of the various early sounding expeditions, it was not until 1868 that anything like a systematic examination of the ocean's bed was undertaken in connection with natural history and physical geography. In that year the Royal Society succeeded in getting H.M.S. *Lightning* placed at their disposal for some six weeks; and though for so brief a period, the results were such as to give great encouragement for further investigation. Although no great depth of water was obtained in sounding, dredging was effected in 650 fathoms, a greater depth than had hitherto been attempted. The next year (1869) the Council of the Royal Society were successful in securing H.M.S. *Porcupine*, which was fitted out for a more extended exploration of the deep sea; and the experience of the previous year was brought to bear on the improvement of the means for the purpose in view.

The first cruise was between the latitudes of Cape Clear and Galway, on the west coast of Ireland, where a series of soundings and dredgings were effected in 1500 fathoms (more than double that of the previous year), and many creatures of great interest obtained.

The second part of this cruise extended to the