

species would be found there. These rational conclusions received some support from Forbes' brilliant researches, and have been partially confirmed by recent investigations.¹

Forbes' name is inseparably associated with the bathymetrical distribution of marine life, and his clearly-defined zones—the Littoral, Laminarian, Coralline, and the Region of the Deep-Sea Corals—enormously facilitated the work of descriptive naturalists. The region of deep-sea corals extended from 50 fathoms to an unknown depth, and Forbes points out that vegetable life is entirely absent from it, and “as we descend deeper and deeper in this region, the inhabitants become more and more modified, and fewer and fewer, indicating our approach towards an abyss where life is either extinguished, or exhibits but a few sparks to mark its lingering presence. Its confines are yet undetermined, and it is in the exploration of this vast deep-sea region that the finest field for submarine discovery yet remains.”²

THE FAROE
CHANNEL.

In his Report³ to the British Association in 1850, Forbes says: “A more difficult task, and one which can be hardly hoped for fulfilment without the help of a steam vessel and continued calm weather, is the dredging of the deeps off the Hebrides in the open ocean. Much of the deep sea area around the Zetlands is sure to reward the explorer. . . . And lastly, though I fear the consummation, however devoutly wished for, is not likely soon to be effected, a series of dredgings between the Zetland and Faroe Isles, where the greatest depth is under 700 fathoms, would throw more light on the natural history of the North Atlantic, and on marine zoology generally, than any investigation that has yet been undertaken.” He saw with a prophetic eye that field of exploration which, twenty years later, became the scene of the investigations of Carpenter, Thomson, and Gwyn Jeffreys, and still more recently of Murray and Tizard.

ZERO OF LIFE IN
THE OCEAN.

The disciples of great men tend to assert dogmatically what their master suggested hypothetically, and it was so with the followers of Edward Forbes. They viewed the life-zero, not as a probability, but as a certainty, building their belief more on the *à priori* absurdity of creatures being able to live in the absence of light and air, and under the great pressure which must prevail in the depths of the sea, than on any direct evidence. The impulse had now been fairly given to the study of the marine zoology of the deep

¹ Wilhelm Fuchs (*Die Venetianer Alpen*, p. 43, 1844) remarked that fossils had been looked upon as representing the organic forms of geological periods, but he could not accept that view as correct, for it was not at all impossible that, as on the earth certain organisms live at various heights above the sea, so in the ocean animals and plants might live at different levels; each species is not so much the representative of the period as of the level at which the layer was deposited. When the layers approached the surface the creatures which could live only at great depths disappeared, but continued to live in the deeper parts of the basin. Were any rapid and considerable action (as that of an earthquake) to affect the bottom of the sea, there might be found abnormal mixtures of organisms; thus he explains the mixture of fossils in the Alpine sediments. It will be seen from this that the facts observed by Forbes were destined to give a considerable impulse to marine investigation.

² *Natural History of European Seas*, p. 26; this classification was given as early as 1839 (see *Memoir of Edward Forbes*, p. 255).

³ Report on the Investigation of British Marine Zoology by means of the Dredge, Part I., (*Brit. Ass. Report for 1850*, pp. 192–263).