bringing up eight species of Mollusca, including *Pleurotoma maritima*, a species belonging to the coralline crag, which was supposed to be extinct. They were examined by Gwyn Jeffreys, who found them to be identical with species dredged subsequently at considerable depths in the North Atlantic by the "Porcupine." Spratt was of opinion that life existed at much greater depths, though the general character of the Ægean Sea tended to limit the depth to 300 fathoms.[1] In his survey of the Mediterranean between Malta and Crete, he afterwards procured fragments of shells, &c., from a depth of 1620 fathoms.[2] Like Lovén, Spratt proved that temperature influenced the distribution of marine organisms. He found in the six upper zones of Forbes summer temperatures of 30°, 23°, 20°, 16°·6, and 13°·3 C.; thus it might be said that different depths corresponded to different latitudes.

MICHAEL SARS.

Before 1850 the attention of the Norwegian naturalist, Michael Sars, had been directed to the bathymetrical distribution of life on his native coasts, and he published in that year a list of nineteen species which lived at depths greater than 300 fathoms. His son, G. O. Sars, afterwards assisted him in the work of deep-water dredging, and the result was, in 1864, a list of ninety-two species, which lived between the depths of 200 and 300 fathoms. A few years later these untiring investigators found abundance of life at the bottom under 450 fathoms of water.

MACANDREW'S OBSERVATIONS.

In his Report to the British Association on the marine testaceous Mollusca of the north-east Atlantic and neighbouring seas,[3] MacAndrew refers to the distribution of Mollusca along the coasts of Europe and Africa from the North Cape to the Canary Islands, showing of what the fauna consists over this extent of ground, how it becomes modified towards the south, and pointing out the species found also on the coasts of North America. He gives a table of 750 species obtained in his dredgings, which extended over 43 degrees of latitude, showing the horizontal and vertical distribution of each, the locality of their greatest development, the nature of the bottom, &c. A second table shows the geographical distribution of these species, among which are recorded 275 Acephalæ, 14 Pteropoda, and 460 Gasteropoda. He asserts that the Acephalæ have a greater bathymetrical and horizontal extension than the Gasteropoda, several species being found at all depths down to 100 fathoms and even more. As a general rule, the deeper species are smaller, their colours less bright, and the test less robust than the shallower species. MacAndrew's work proves that the exact distribution of marine Mollusca into provinces or faunæ is far from being so precise as was at one time imagined.

WOODWARD.

In his well-known book, Manual of the Mollusca (1851–56), S. P. Woodward gives much interesting information on the distribution of the Mollusca, valuable alike to the palæontologist and zoologist.

The influence of the work carried out by the United States Coast Survey on oceano-

[1] *Brit. Ass. Report* for 1848, Trans. of Sections, p. 81.
[2] Spratt, Travels and Researches in Crete, vol. ii. p. 329.
[3] *Brit. Ass. Report* for 1856, pp. 101–158.