Sir John Murray & Johan Hjort, The Depths of the Ocean: Scientific Researches of the Norwegian Steamer Michael Sars (1912)

present state of our knowledge, is shown in Map III. On this chart the soundings in depths greater than 1000 fathoms are indicated by the first two figures, and they show that the North Atlantic is now well sounded — in fact, probably the best sounded of all the ocean basins. The recent soundings by the "Michael Sars" did not bring to light many new facts as to depth, and it is not likely that any great changes in the contour-lines will be revealed by future soundings, though it is possible that further submarine cones, like the Seine Bank and Dacia Bank and the Coral Patch, may yet be discovered.

Depths of the North Atlantic.

A comparison of this map with the depth map published by Maury in 1854, which is reproduced in Map I., brings out at a glance the strides that have been made in our knowledge regarding the depth of the North Atlantic since that time—a progress from comparative simplicity to great complexity. Maury's 4000-fathoms area in the North-West Atlantic, based upon some doubtful soundings (two of them exceeding 5000 fathoms and another in 6600 fathoms), has disappeared, though the existence of very deep water in the neighbourhood is evidenced by the soundings in the Suhm Deep. These deep soundings laid down by Maury were among the early attempts at deep-sea sounding, and the records of such depths as 6600 fathoms, no bottom, were due to the uncertainty as to when the sounding-tube touched bottom. The only part of the North Atlantic where the depth is now known to exceed 4000 fathoms (in the Nares Deep north of the West Indies) is blank on Maury's map, but the northern portion of the mid-Atlantic ridge, on which the Azores plateau is situated, is correctly indicated, though since modified in outline; the continuation southward of this ridge was, however, unknown in Maury's time.

Maury's depth map.

Reference has already been made to the relatively large area occupied throughout the world by the continental shelf, which is equal to about 7 per cent of the entire ocean-floor. The continental shelf apparently attains its maximum development in the North Atlantic basin, if we include the tributary seas (Arctic Ocean, Mediterranean, etc.). The total area of this basin may be estimated at about 23 million square miles, and of this area no less than about 6 million square miles (or 26 per cent) lies between the shore-line and the 100-fathoms line. While the gentle gradients of the continental shelf cover such an extensive area, the continental slope beyond the 100-fathoms line seems, on the other hand, to be relatively very steep, for

Continental shelf in the North Atlantic.

Continental slope in the North Atlantic.

http://19thcenturyscience.org/HMSC/HMSC-Reports/1912-Murray/README.htm