

HISTORY OF OUR KNOWLEDGE OF THE FISH-FAUNA OF THE DEEP SEA.

Isolated examples of Deep-Sea Fishes had fallen into the hands of zoologists at an early period of systematic ichthyology; thus, specimens of *Trachypterus*, *Regalecus*, *Saccopteryx*, *Stylophorus*, *Plagyodus*, and other genera were known to and described by zoologists of the last century. But, having been captured whilst floating on the surface or near to the coast, they were regarded merely as extremely scarce creatures, without any clear idea being entertained that they were stray individuals from the unknown depths of the ocean. RISSO was the first to distinguish a bathybial fish-fauna, assigning to it certain fishes and stating the depths at which they habitually live. In enumerating¹ the various regions of the Gulf of Genoa he states—"Les grands abimes de la mer ne sont fréquentés que par les alépocephales, les pomatomes, les chimères et les lépidolèpres. Les profondeurs moindres sont la demeure habituelle des merlans, des molves, des phycis, des soldados, des citules, des serioles, des tétragonures, des castagnolles, etc." He states exactly the depths inhabited by several fishes: thus *Alepocephalus rostratus* occurs at a depth of 2000 feet or more (350 fathoms), *Trachyrhynchus trachyrhynchus* and *Macrurus caelorhynchus* at a depth of 1500 or 1800 feet (250 or 300 fathoms) "ou parait constamment régner une température de dix degrés," *Uraleptus maraldi* at a depth of 1000 feet (170 fathoms), and *Gadus minutus* (*Morua capelanus*) at a depth of 300 metres (150 fathoms).

During his numerous and prolonged visits to the Island of Madeira the Rev. R. T. LOWE² paid special attention to the wonderful variety of the fishes of the sea surrounding that island. He discovered a number of new forms, the bathybial habits of which were ascertained, either by himself at the time of their discovery, or subsequently by others who studied the subject after him. In his History of the Fishes of Madeira, the five parts of which appeared at irregular intervals between the years 1843 and 1860, and which unfortunately remained unfinished, he gives the precise depths at which several species occur, viz., *Beryx splendens*, "which begins to be met with, of small size, at a depth of 150 or 200 fathoms, but is scarcely ever taken in full size and abundance, except with its congener, *Beryx decadactylus*, the Alfonsin a caste larga, at the enormous depth of from 300 to 400 fathoms, and from one to two leagues from shore"; *Scorpæna kuhlii*, the "Requeime," which is "caught with lines of from 100 to 250 fathoms"; *Thyrsites*

¹ Histoire naturelle des principales productions de l'Europe méridionale, vol. iii., Paris, 1826; Introduction, page x.

² He left England with his wife in April 1874 for his last journey to Madeira, which he never reached again. The steamer "Liberia," in which he had taken his passage, foundered in the Bay of Biscay, not a soul being saved of the passengers and crew. To him and to his successor in the field of Madeiran ichthyology, Mr. J. Y. Johnson, I owe a debt of gratitude for the encouragement and help they gave me at an early period of my ichthyological studies.