In the preserved samples of the ooze it was believed that there was evidence of the existence of sheets of living protoplasm—a shell-less Rhizopod named *Bathybius*[1]—covering the bottom of the ocean everywhere. The Naturalists of the Challenger failed to detect *Bathybius* in freshly procured samples of the ooze, and have shown that the protoplasmic appearance arose from the great excess of alcohol used in the preservation of the samples of the ooze, producing a gelatinous-like precipitate of calcium sulphate.

The voyage of the "Bulldog" in 1860, under Sir Leopold M'Clintock, is especially noteworthy amongst the cruises of surveying ships. The "Bulldog," which was sent to examine a proposed northern cable route, took soundings from Færöe to Iceland and thence to Greenland and Labrador. Though bad weather prevailed for a great part of the cruise, a large number of soundings and many samples of mud were taken; as the expedition had the good fortune to be accompanied by Dr. G. C. Wallich as naturalist, these were carefully examined as they were brought up. The invention of the "Bulldog" sounding machine—a combination of Ross's deep-sea clamm with Brooke's detaching weight—made it possible to obtain larger samples of the bottom than had been usual before.

On one occasion a depth of 1260 fathoms was indicated. "That single sounding," says Dr. Wallich, "I may be permitted to say compensated for every disappointment that weather and accident may have previously engendered. At the eleventh hour, and under circumstances the most unfavourable for searching out its secrets, the deep has sent forth the long-coveted message."[2] That message was conveyed by thirteen Starfishes which had attached themselves to a portion of the sounding line that had been allowed to lie on the bottom for some time. This haul raised a storm of controversy. Dr. Wallich was firmly convinced that it was proof beyond question of the existence of highly organised animal life at great depths, but many eminent zoologists argued that it was quite probable that the Starfishes had "convulsively embraced" the line somewhere on its way up. The idea of a life-zero was far too firmly fixed in the zoological mind of that period to be readily displaced.

In the same year, 1860, a telegraph cable which was being raised for repair in the Mediterranean under the direction of Mr. Fleeming Jenkin, now Professor of Engineering in the University of Edinburgh, was the means of definitely deciding the fact of highly organised creatures living at great depths.[3] Parts of the cable which had been lying under 1200 fathoms of water for many years were found covered with animals that had fixed themselves at a very early stage of development and had grown to maturity there. Some of these were examined and described by Professor Allman of Edinburgh, others by M. Milne-Edwards of Paris.

[1] Huxley, *Quart. Journ. Micr. Sci.*, N.S., vol. viii. p. 210, 1868; Haeckel, Studien über Moneren und andere Protisten, p. 86, Leipzig, 1870.

[2] North-Atlantic Sea-bed, p. 68, London, 1862.

[3] Depths of the Sea, p. 26, 1874.