

that certain foraminifera were surface animals, in opposition to Dr. Carpenter and myself.* I had formed and expressed a very strong opinion on the matter. It seemed to me that the evidence was conclusive that the foraminifera which formed the globigerina ooze lived on the bottom, and that the occurrence of individuals on the surface was accidental and exceptional; but after going into the thing carefully, and considering the mass of evidence which has been accumulated by Mr. Murray, I now admit that I was in error; and I agree with him that it may be taken as proved, that all the materials of such deposits (with the exception, of course, of the remains of animals which we now know to live at the bottom at all depths, and which occur in the deposit as foreign bodies) are derived from the surface.

Mr. Murray has combined with a careful examination of the soundings a constant use of the tow-net, usually at the surface, but also at depths from ten to a thousand fathoms; and he finds the closest relation to exist between the surface fauna of any particular locality and the deposit which is taking place at the bottom. In all seas, from the equator to the polar ice, the tow-net contains *Globigerinæ*. They are more abundant, and of a larger size, in warmer seas: several varieties attaining a large size, and presenting marked varietal characters, are found in the intertropical area of the Atlantic. In the latitude of Kerguelen they are less numerous and smaller, while farther south they are still more dwarfed; and only one variety, the typical *Globigerina bulloides*, is represented. The living *Globigerinæ* from the tow-net are singularly different in appearance from the dead shells we find at the bottom (Fig. 46). The

* "Mr. Jeffreys desires to record his dissent from this conclusion, since (from his own observations, as well as those of Major Owen and Lieutenant Palmer) he believes *Globigerina* to be exclusively an *Oceanic* Foraminifer inhabiting only the superficial stratum of the sea."—*Preliminary Report of the Scientific Exploration of the Deep Sea*, "Proceedings of the Royal Society," No. 121, page 443.