

the whole time the lead was running out. The depth was 3150 fathoms; the bottom a perfectly smooth red clay, containing scarcely a trace of organic matter—merely one or two minute granular masses. The thermometers indicated a bottom temperature of  $1^{\circ}.9$  C.

The small dredge was sent down at 2.15 P.M. with two hempen tangles; and, in order to insure its reaching the bottom, we attached to the iron bar, below the dredge, which is used for suspending the tangles, a "Hydra" instrument with detaching weight of 3 cwt. Two additional weights of 1 cwt. each were fixed to the rope 200 fathoms before the dredge; 3600 fathoms of rope were paid out—1000 fathoms 2 inches in circumference, and the remainder (2600 fathoms)  $2\frac{1}{2}$  inches. The dredge came up at 10.15 P.M. with about 1 cwt. of red clay.

This haul interested us greatly. It was the deepest by several hundred fathoms which had yet been taken, and, at all events coincidentally with this great increase in depth, the material of the bottom was totally different from what we had been in the habit of meeting with in the depths of the Atlantic. For a few soundings past, the ooze had been assuming a darker tint, and showed on analysis a continually lessening amount of calcareous matter, and, under the microscope, a smaller number of foraminifera. Now calcareous shells of foraminifera were entirely wanting, and the only organisms which could be detected, after washing over and sifting the whole of the mud with the greatest care, were three or four tests of foraminifera of the cristellarian series, made up apparently of particles of the same red mud. The shells and spines of surface animals were almost entirely wanting; and this is the more remarkable, as the clay-mud was excessively fine, remaining for days suspended in the water, looking in color and consistence exactly like chocolate, indicating, therefore, an almost total absence of movement in the water of the sea where it is being deposited.