

to separate any organisms it might contain, we put it into jars to settle, it remained for days in suspension.

In indicating the nature of the bottom on the charts, we came from experience, and without any theoretical consideration, to use three terms for soundings in deep water. Two of these, "gl. oz." and "r. cl.," were very definite, and indicated strongly marked formations, with apparently but few characters in common; but we frequently got soundings which we could not exactly call either "globigerina ooze" or "red clay;" and before we were fully aware of the nature of these we were in the habit of indicating them as "gray ooze" (gr. oz.). We now recognize the gray ooze as, in most cases, an intermediate stage between the globigerina ooze and the red clay; we find that on one side, as it were, of an ideal line, the red clay contains more and more of the material of the calcareous ooze, while on the other the ooze is mixed with an increasing proportion of red clay.

When the section from Teneriffe to Sombrero was taken we had not fully recognized the importance of the transition stage, and the bottom was marked on the chart "globigerina ooze," or "red clay," according as one or other gave a distinct and marked character to the sounding. The soundings at Stations V. and VI., for example, might have been labeled "gray ooze;" for although its nature has altered entirely from the globigerina ooze, the red clay into which it is rapidly passing still contains a considerable admixture of carbonate of lime.

The depth goes on increasing to a distance of 1150 miles from Teneriffe, when it reaches 3150 fathoms; there the clay is pure and smooth, and contains scarcely a trace of lime. From this great depth the bottom gradually rises; and, with decreasing depth, the gray color and the calcareous composition of the ooze return. Three soundings in 2050, 1900, and 1950 fathoms on the "Dolphin Rise" gave highly characteristic examples of the *globigerina* formation. Passing from the middle plateau of