

the Atlantic into the western trough, with depths a little over 3000 fathoms, the red clay returned in all its purity; and our last sounding, in 1420 fathoms, before reaching Sombrero, restored the globigerina ooze with its peculiar associated fauna.

This section shows also the wide extension and the vast geological importance of the red-clay formation. The total distance from Teneriffe to Sombrero is about 2700 miles. Proceeding from east to west, we have

About 80 miles of volcanic mud and sand,		
" 350	"	globigerina ooze,
" 1050	"	red clay,
" 330	"	globigerina ooze,
" 850	"	red clay,
" 40	"	globigerina ooze,

giving a total of 1900 miles of red clay to 720 miles of globigerina ooze.

The following table, taken from the chart, gives a good general idea of the distribution of the two formations with regard to depth; it being understood, however, that while in all the soundings marked "red clay" the characters of that formation greatly predominated, in several of the more shallow of these the change was by no means complete. The table gives an average of 1600 fathoms for our soundings in this section in the globigerina ooze: this is a datum of no value, for we sounded only once in shallow water (450 fathoms), and we know that this formation covers large areas at depths between 300 and 400 fathoms; but the mean maximum depth at which it occurs is important, and may be taken at about 2250 fathoms. The mean depth of the red-clay soundings is about 2750 fathoms. The general concurrence of many observations would go far to prove, what seems now, indeed, to stand in the position of an ascertained fact, that wherever the depth increases from about 2200 to 2600 fathoms, the modern chalk formation of the Atlantic passes into a clay.