

Among the Challenger deposits described in the Tables of Chapter II. there are 58 examples of Blue Mud. These range from 125 to 2800 fathoms, the average depth being 1411 fathoms.

	12 are from depths less than	500	fathoms.
6	„ from	500 to 1000	„
15	„ „	1000 „ 1500	„
6	„ „	1500 „ 2000	„
20	„ „	2000 „ 2500	„
9	„ over	2500	„

27 of these examples are called blue-grey in colour, and 18 grey.

The carbonate of lime ranges from the merest trace in 2650 fathoms and lesser depths to 34.34 per cent. in 500 fathoms, the average being 12.48 per cent. This would seem to indicate a gradual decrease in the quantity of carbonate of lime with increase of depth, as in the case of purely pelagic deposits, but arranging the percentages in groups of 500 fathoms, it will be seen that there is a marked departure from this rule, as might indeed be expected, considering the varied origin of these coast deposits and the varying amount of river detritus and organic remains in different situations.

Under 500	fathoms,	10.61 average per cent. CaCO ₃ .
From 500 to 1000	„	10.85 „
„ 1000 „ 1500	„	18.94 „
„ 1500 „ 2000	„	9.41 „
„ 2000 „ 2500	„	10.86 „
Over 2500	„	10.53 „

Of the organisms which yield the carbonate of lime in these Blue Muds the pelagic Foraminifera make up on an average 7.52 per cent., the bottom-living Foraminifera 1.75 per cent., and other carbonate of lime remains 3.21 per cent. In some cases the pelagic Foraminifera make up as much as 25 per cent. of the whole deposit, while in others no trace of them can be detected. The bottom-living Foraminifera may make up 10 per cent., and, again, the other calcareous remains 16 per cent. of the deposit. The shells of pelagic species, which make up so large a part of a Globigerina Ooze, are not abundant nor universally distributed in the Blue Muds, the remains of shallow-water or bottom-living organisms predominating in many cases. The organisms most frequently mentioned are the shells of Globigerinidæ, Rotalidæ, Lagenidæ, Miliolidæ, Textularidæ, Nummulinidæ, Lamelibranchs, Gasteropods, Ostracodes, Echinoderm fragments, Coccoliths, and Rhabdoliths.

The residue left after treating the deposits with dilute hydrochloric acid is chiefly brown or grey; in 19 cases it was a shade of brown, in 15 a shade of grey, in 7 it was green, and in 5 it was blue. In 9 cases there was no carbonate of lime or only traces, and consequently no residue apart from the deposit itself. The mean percentage of