

quantity of clayey matter. This fine clayey or detrital matter appears always to be less abundant than in a characteristic Blue Mud. These Green Muds and Sands do not occur in very deep water; deposits which may be classed under this head are usually met with between the depths of 100 and 900 fathoms. It is true that glauconite is found in both lesser and greater depths than these, but not in sufficient abundance to constitute a Green Mud or Sand. Along coasts where Green Muds are laid down pelagic conditions appear to approach much nearer to the shores than where the Blue Muds prevail; to such an extent is this the case, that were it not for the presence of glauconite and the nature of the mineral particles, many of the Green Muds might equally well be called Globigerina Oozes.

Whenever there is a large quantity of ferric hydrate in a terrigenous deposit, as off the Brazilian shores, or whenever the deposit is chiefly made up of river detritus that bears evidence of having accumulated at a rapid rate, glauconitic matter is either absent or only developed to a very small extent, and, as has already been pointed out, it is rare or absent in pelagic deposits. On the other hand, when there is a large number of the fragments of ancient rocks that have apparently been for a long time exposed to the action of sea-water, and have consequently undergone much alteration, then glauconitic grains and glauconitic casts of the calcareous organisms are usually abundant; phosphatic concretions are also found in the same positions, and there is always evidence of other organic matters. These conditions are as a rule met with along high and bold coasts removed from the embouchures of large rivers, as has already been stated.

Green Muds.—In the Tables of Chapter II. there are described 22 samples of Green Mud. The depths range from 100 to 1270 fathoms, the average being 513 fathoms.

13 are from less than	500	fathoms.
6 „ depths between	500 and 1000	„
3 „ over	1000	„

In the majority of cases the colour is green, or a tinge of green; two samples are described as of a grey colour.

The carbonate of lime ranges from a trace in several cases to 56·18 per cent., the average being 25·52 per cent. In depths under 500 fathoms the mean percentage is 23·92, from 500 to 1000 fathoms it is 25·77, and in depths over 1000 fathoms, 32·73, so that there is an increase of carbonate of lime with increasing depth and distance from the shore. The carbonate of lime derived from the shells of pelagic Foraminifera ranges from 1 to 35 per cent., the average being 14·59 per cent.; that derived from bottom-living Foraminifera ranges from 1 to 15 per cent., the average being 2·94 per cent.; that derived from the remains of other organisms ranges from 1 to 31·18 per cent., and averages 7·99 per cent.