Foraminifera, fragments of Polyzoa, Echinoderms, and Molluscs. At the greater depth farther from the reef, the fragments were smaller and the pelagic shells more abundant than in the depth of 18 fathoms nearer the reef. Mineral particles constituted about 3 per cent. in both cases; the fragments were volcanic, with a mean diameter of about 0·5 mm. The general appearance of these deposits in 240 and 18 fathoms is represented in Pl. XIV. figs. 1 and 2.

Off the Fiji Islands.—Off the Fiji Islands (see Charts 29 and 30) the deposits were, with one exception, Coral Muds and Sands containing from 86 to 90 per cent. of carbonate of lime, principally composed of calcareous Algæ and Polyzoa with a large proportion of Foraminifera. In the Coral Sand from 12 fathoms, off Levuka, there were no pelagic Foraminifera, while the minerals were comparatively numerous and large, having a mean diameter of 0·5 mm. In the Coral Muds from greater depths the percentage of pelagic Foraminifera increased, while the minerals were few and small, rarely exceeding 0·08 mm. in diameter. The exception referred to above was that of the deposit from 610 fathoms —a Globigerina Ooze with 80 per cent. of carbonate of lime (see Pl. XIV. figs. 3*a* and 3*b*). In this instance the major part was composed of pelagic Foraminifera, while nearly all the organisms of the shallower deposits were present, though in minute fragments and relatively less abundance. The mineral particles and siliceous organisms were more numerous than in the shallower depths, while there were fewer particles derived from the reefs. Rhabdoliths were observed only in this deposit, and a few brown casts of calcareous organisms remained after treatment with dilute acid. Several pieces of pumice were obtained from 210 and 610 fathoms.

Fiji Islands to the New Hebrides.—The deposits at 1350 and 1450 fathoms (see Chart 27 and Pl. XII. figs. 4*a*, 4*b*) were Globigerina Oozes of a reddish colour, and closely resembled in that respect the Red Clays. They contained 44 and 62 per cent. of carbonate of lime, consisting of Rhabdoliths, Coccoliths, the shells of *Globigerina*, *Orbulina*, *Hastigerina*, *Pulvinulina*, *Sphæroidina*, *Pullenia*, and some bottom-living species. A few of the *Globigerina* shells had still the delicate spines attached as in the specimens taken on the surface. The absence of Pteropod, Heteropod, and other pelagic Mollusc shells from these deposits is somewhat remarkable, for they were very abundant on the surface, and at a similar depth and latitude in the Atlantic they were usually present in considerable numbers. The Foraminifera shells were in some instances quite white, or had a rosy tinge as if lately fallen from the surface, but the great majority were brown coloured, and in some instances black from a deposit of oxide of manganese on their surface. When one of these dark coloured shells from 1450 fathoms is broken three zones can be distinguished, at the centre an internal cast of the shell, then the white carbonate of lime shell itself, and outside this an external cast of the same nature and aspect as the internal one, to which it is connected by little red pillars which have been formed in and fill up the foramina of the shell. These casts do not appear to be formed