

of a dark brown colour which proved to be Red clay, with only 25 per cent of calcium carbonate, though the mass of the sample was a Globigerina ooze with 64 per cent of calcium carbonate. At Station 100, in 835 fathoms, the sounding-tube brought up a section about nine inches in length, which was extremely interesting because of the great difference between the upper and lower portions, the upper portion, to the extent of three or four inches, being a Globigerina ooze with 58 per cent of calcium carbonate, while the lower portion was a Blue mud with only 26 per cent of calcium carbonate. At Station 88, in 1703 fathoms, the sounding-tube brought up a section about fourteen inches in length, which showed little difference to the naked eye, although the colour was darker in the lower portion, the upper portion being rather lighter in colour, less coherent, and more granular; the deposit was a Globigerina ooze, containing 83.79 per cent of calcium carbonate in the upper portion, 73.66 per cent of calcium carbonate in the middle portion, and 62.1 per cent of calcium carbonate in the lower portion. It is curious that at this station the trawl brought up a large quantity of empty pteropod shells (chiefly *Cavolinia trispinosa*), while in the samples from the sounding-tube submitted to examination no pteropods were observed. It is possible that the trawl may have worked over shallower depths than where the sounding was taken. Similarly, at Station 23, where the depth was 664 fathoms, the Petersen net sent down with 820 fathoms of line and towed throughout the night of 5th and 6th May brought up a large amount of empty pteropod shells (principally *Cavolinia inflexa*); indeed, the pteropod shells at this station differ strikingly in general appearance from those taken at Station 88, ten degrees farther north. At Station 34, in 1185 fathoms, the middle portion of the section from the sounding-tube, about six inches below the upper surface, showed dark-coloured patches containing a large proportion of volcanic glass splinters, to which the dark colour was due; the volcanic glass was quite fresh and unaltered, as though the products of a volcanic eruption (probably submarine, since the glassy fragments showed no trace of friction or decomposition but were perfectly angular) had been overlain by new material to the depth of six inches.

We append the detailed description of a typical Globigerina ooze taken by the "Michael Sars" to the south of the Azores:—

"Michael Sars" Station 55. 10th June 1910. Lat. 36° 24' N., long. 29° 52' W.; depth, 3239 m. (1768 fathoms).