

shells when the deposit was treated with dilute acid. In these deposits there was much green-coloured amorphous matter, some of it not unlike vegetable tissue, which, when heated on platinum, charred like an organic substance, became black, then red. In these Green Sands the mineral particles formed a large percentage, being 40 and 20 respectively, and the remains of siliceous organisms including the green-coloured casts were estimated at about 6 per cent. (see Pl. XXIV. fig. 1 for glauconitic particles).

On the 19th a sounding and dredging were obtained in 1900 fathoms (see Chart 18). The deposit was a Globigerina Ooze, containing 90 per cent. of carbonate of lime, which consisted almost entirely of pelagic Foraminifera. In the dredge were several irregular brown-coloured phosphatic nodules from 1 to 4 cm. in diameter, containing 49 per cent. of tricalcic phosphate.

On the 24th, a sounding and temperatures were obtained in 1570 fathoms. The deposit was a Globigerina Ooze containing 92 per cent. of carbonate of lime, and a few Diatoms, Radiolaria, and mineral particles chiefly of volcanic origin. The pelagic Foraminifera in this sounding belonged to the small and thick-shelled varieties peculiar to colder waters, although they were not of the typical Arctic or Antarctic varieties. Probably many of the finer particles were washed out of the sounding tube.

*Off Marion Island.*—The dredgings between Marion and Prince Edward Islands (see Chart 19), showed that the bottom, in depths less than 100 fathoms, was overgrown with great masses of Polyzoa, the dredges and swabs being filled and covered with them. Mr Busk records thirty species of Polyzoa from this locality, fifteen of which are new. In 140 and 310 fathoms there was a Volcanic Sand containing 15 to 20 per cent. of carbonate of lime shells, many Diatoms, and many volcanic minerals and lapilli of vitreous basaltic rocks.

*Marion Island to Crozet Islands.*—The deposit at 1375 fathoms (see Chart 18) was a Globigerina Ooze, containing 86 per cent. of carbonate of lime, the residue being almost wholly remains of Diatoms and Radiolarians. At 1600 fathoms there was 35 per cent. of carbonate of lime, 35 per cent. of minerals and amorphous and clayey matter, and 30 per cent. of Diatom and Radiolarian remains, and this deposit was in consequence called a Diatom Ooze. There were a few rounded quartz particles in each of the deposits, but the great majority of the mineral particles were of volcanic origin. The carbonate of lime in these deposits consisted chiefly of *Globigerina* shells and Cocoliths. *Orbulina* shells were not observed in the deposits, nor at the surface, and Rhabdoliths were not observed in the deposits since leaving the Cape, so that these stations are probably beyond the southern limit of these organisms.

*Off Crozet Islands.*—The deposit at 600 fathoms (see Chart 20) was a Diatom Ooze with 36 per cent. of carbonate of lime, chiefly made up of shells of pelagic Foraminifera, the residue consisting principally of Diatoms and other siliceous organisms with many fragments of volcanic minerals. At 210 and 550 fathoms the bottom was hard ground, gravel and shells.